

NPS REVIEW COMMENTS
FINAL DRAFT 2016 CONSERVATION STRATEGY
FWS DOCKET ID: FWS-R6-ES-2016-0042

#	Page Number	Approx. Line	Comment
1	GENERAL COMMENT		Recognition of grizzly mortality on National Park Service (NPS) jurisdiction. We request the US Fish and Wildlife Service (FWS) explicitly acknowledge in the Conservation Strategy (CS) and in the delisting rule that NPS jurisdiction accounts for approximately 21% of the Demographic Management Area (DMA). Grizzly bear mortality on NPS lands includes periodic grizzly bear removal for human safety and occasional vehicle collisions. From 2005-2014, there was an annual average of 1.4 human-caused grizzly bear mortality per year (range of 0-5 per year) on NPS lands within the DMA. These included management removals, vehicle collisions, and one elk hunting-related grizzly bear mortality at Grand Teton National Park (GRTE) (NPS 2015, unpubl. data). Under delisting, it should be recognized that some non-hunting, human-caused mortality will continue to periodically occur under NPS jurisdiction and authority.
2	GENERAL COMMENT		We request that the CS also identify the John D. Rockefeller, Jr. Memorial Parkway (JODR) as one of the three national park units in the GYE where hunting of grizzly bears will not be permitted. The CS should denote JODR in addition to Yellowstone NP (YELL) and Grand Teton NP (GRTE), as another separate NPS unit wherever NPS units are referenced.
3	GENERAL COMMENT		We request that the CS and the delisting rule address/discuss spatial context for expected distribution of grizzly bear survival and mortality across the Primary Conservation Area (PCA) or DMA. We also request that the CS and delisting rule address/discuss focusing potential grizzly bear hunting on lands away from NPS boundaries and where human bear conflicts are managed through hunting.
4	WHOLE DOCUMENT		We have reviewed and provided comments separately to Wyoming on their current Draft 2016 Grizzly Bear Management Plan. The other state management plans (Appendix I and K) contain some outdated information (e.g., area of DMA, mortality limits, conflict data and distribution, etc.), yet the CS relies heavily upon them and acknowledges they are important components of the conservation strategy. In addition to outdated information, there are terms and concepts used in some state management plans that conflict with the CS. For example, some state plans refer to a 10-mile buffer around the PCA and not DMA which is inconsistent with the CS. Ideally, all three of the state management plans should be updated but, at a minimum, the CS should acknowledge the outdated information in the older plans and other inconsistencies and provide updated information and/or corrections in the CS itself.

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5	WHOLE DOCUMENT		The CS (pg. 3. & pg. 21) describes the Primary Conservation Area (PCA) as a secure area for grizzly bears, "...with population and habitat conditions maintained to ensure a recovered population is maintained..." Since the original CS was released, grizzly bears have expanded their range and now occupy all of GRTE and adjacent US Forest Service (USFS) lands. Although only the northern portion of the park is within the PCA, the NPS is obligated to manage and conserve bears wherever they occur within the park. Because expansion of grizzly bears into the southern portion of GRTE represents a changed condition relative to the last draft of the CS, we request that the CS address how the State and the NPS will need to work together to ensure conservation of bears within the park, share information, and discuss issues related to grizzly bear population conservation and management on an ongoing basis.
6	2	16	Statements imply state management plans, forest plans, and others <u>only</u> apply OUTSIDE of PCAs which is not correct, please clarify.
7	2 and 18	23 and 2	Clarification is needed whether the Yellowstone Grizzly Bear Coordinating Committee (YGCC) will review the CS every 5 years? If not whom?
8	3	15	We request details as to how issues will be approved and resolved by YGCC (such as a majority vote by YGCC members?).
9	3	23	The intent of the PCA to serve as a "secure area" which implies they are safe from being harmed – including hunting. Excluding hunting is not currently being proposed in the CS. The CS states that " <i>the PCA will be a secured area or grizzly bears, with population and habitat conditions maintained to ensure a recovered population is maintained for the foreseeable future and allow[s] bears to continue to expand outside the PCA</i> ". This statement needs better definition and clarity whether it is referring only to habitat and/or <u>populations</u> as well and how allowing hunting inside the PCA provides a secure area for grizzly bears.
10	4	30	We request inserting a summary table depicting how bears will be managed similarly or differently within different "zones" addressed in the CS (National Park units, PCA, DMA, Distinct Population Segment (DPS), and outside DPS) – what will occur and how will it occur within each zone? For example, management emphasis, hunting, population goals [female/male], monitoring, habitat, etc.). A summary table would help the reader understand differences between these areas identified in the CS.
11	5	19	This standard is confusing given that Demographic Recovery Criterion 3 indicates " <i>Maintain the population around the 2002-2014 Chao2 modeled average (\bar{X} = 674; 95% CI = 600-757 ...</i> ". The USFWS should clearly state the minimum number of bears that could be realized under the CS. We recommend stating the following: " <u><i>The population will be maintained conservatively between at 600 – 757 bears to ensure the genetic minimum of at least 500 bears is needed to maintain genetic diversity</i></u> ".
12	5	28	We request inserting the following underlined text: " <u><i>or other method as approved by the YGCC</i></u> " at the end of the sentence.
13	6	19	We request that in addition to "recurring helicopter flight line", is intended for resource extraction activities, that " <u><i>wildland fire or search and rescue operations</i></u> " also be exempted.

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14	6	19	We request the CS also exclude bison management operations.
15	6	28	We request the CS identifies who will monitor habitat and report to whom.
16	7	3	<p>Depending on where a grizzly bears home range is located, it may have access to all, some, or none of these four monitored foods. Thus, these four foods may not be an accurate indicator of overall habitat quality or condition. Member agencies of the Interagency Grizzly Bear Study Team (IGBST) will need to explore the feasibility of using body condition of handled bears as a surrogate for habitat quality.</p> <p>Therefore, we suggest using body condition to more accurately represent the quality of overall habitat conditions throughout the GYE. This would provide a better measure of the total nutrition provided by the combination of all of the different foods consumed by bears. See comments 35, 56, and 60.</p>
17	7	16	“Outside PCA, state management plans will direct management of nuisance bears” This is true EXCEPT in GRTE/JODR where NPS has final wildlife management authority for bears”. We request that this language mirror that on p. 89: “ <i>Outside Yellowstone and Grand Teton National Parks, <u>and John D. Rockefeller, Jr. Memorial Parkway...</u></i> ” (add underlined)
18	9	8	We request adding: “ <u>or other assigned personnel</u> ” - in some cases agencies have personnel other than public affairs staff assigned as members of the IGBC I&E working group.
19	10	6	We request adding another bullet stating that “ <u>Monitoring and research should evaluate the extent of unintended harvest of females with cubs, wounding loss, whether hunting is being sustained by dispersal of bears from national parks, and any effects of hunting on the demographics and dynamics of bears living within preserves.</u> ”
20	10	11	Add “ <u>John D. Rockefeller Jr. Memorial Parkway</u> ” to the list
21	10	18	We request specific tribes be identified and listed here.
22	11	14	The IGBST currently compiles all mortality and other data regarding grizzly bears in the GYE. Suggest that the CS specify that the IGBST will provide this and other available data to management agencies to conduct their impact analyses.
23	16	19	We request that the CS also include “ <u>existing or future</u> ” to all and also include “ <u>park management plans</u> ”.
24	17	Figure 1	Consider relabeling the green shaded area in this map labeled “suitable habitat”. There is habitat suitable for grizzly bears on public lands outside the DMA. “ <u>Socially acceptable suitable habitat</u> ” would be a better description as the suitable habitat line is based more on human tolerance than biology.
25	17	Figure 1	We request that both JODR and GRTE boundaries are shown on the map.
26	18	24	We request adding the following text: “... <u>adaptive</u> management as environmental <u>conditions</u> change.”
27	19	10	<p>Please add the following underlined text: “... outside the PCA <u>and Grand Teton National Park and John D. Rockefeller Jr. Memorial Parkway...</u>”).</p> <p>Also, we request adding this same language throughout document when regarding the states management authorities (as described in state plans) outside PCA.</p>

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28	20	6	Please insert the following underlined language: “Manage grizzly bears as a game animal <u>outside of national parks units</u> ...”
29	20	13	We request replacing “memorializing” with “ <u>documenting</u> ”
30	22	Table 1	NPS requests to be included in the discussions and contribute to the development of recommendations during the annual meetings referred to in the draft Memorandum of Agreement (MOA) among the three states, recognizing that the decisions made during these meetings ultimately inform the discretionary mortality allocation by the states.
31	22	21	Clarify the role of subunits.
32	23	Figure 2	Show boundaries of JODR and GRTE
33	26	24	The Schwartz et al. 2006 published monograph states that 85% of documented mortality of independent bears was human caused for the period 1983 - 2001. The NPS requests using more a recent estimate of 76% for 2002 – 2014.
34	26-27	Food Section	Consider the following additional references regarding food habits of GYE grizzly bears: Costello et al, 2014, Haroldson et al 2013, Mattson and Reinhart 2011, Reinhart and Mattson 1990, Mattson et al 2001, etc.
35	27	1	<p>The CS identifies these four seasonal foods because they are high calorie and relatively easy to monitor. However, requiring monitoring of these four foods gives the impression that grizzly bears need all four to survive, which is not true.</p> <p>Since bears eat so many different foods, and most would not be cost effective to monitor, we suggest that monitoring body condition be used as a surrogate to monitoring these foods. Body condition informs us how bears are responding to the total food picture. We know some bears survive without one or more of these four foods. See comments 16, 56, and 60..</p>
36	28	11-13	Outdated, use current growth numbers and citations on distribution.
37	30	24-27	Recommend that food storage orders in the GYE be year round.
38	31	26-27	“ <i>Must follow strict requirements in grazing permits.</i> ” What are the strict requirements? Standard across USFS? Consider adding an appendix or reference that describes these requirements.
39	32	5-7	Livestock and road-killed carcasses are managed to minimize conflict. Please provide more detail here and clarify if managed means removed or something else.
40	32	16-17	We suggest inserting “ <u>or other</u> ” between “state plans” in last non-bulleted phrase
41	34 - 36	25 and Table 2	In demographic recovery criterion 1, the CS specifies a minimum population size of 500 individuals within the DMA for genetic health. In demographic recovery criterion 3, it then goes on to identify a population objective based on the 2002-2014 Chao 2 modeled average of 674 (95% CI = 600 – 757). Then in table 2 of the CS goes on to state “ <i>if any annual population estimate falls below 600 (the lower bound of the 95% confidence interval), this criterion will not be met and there will be no discretionary mortality, except as necessary for human safety.</i> ” These different population thresholds are confusing and could be interpreted

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			differently by individuals. We therefore suggest the CS specify the minimum size above which the population will be managed and also clearly explain what metric will be used to determine whether or not this minimum population objective is met on an ongoing basis.
42	35	10-20	The public will find this very confusing. Are we managing for 500, 600, 612, or 674 bears? We request the CS clearly state that 600 and 612 are triggers and that the target number is 674 bears. See comment 41.
43	36	Table 2	Have mortality limits of 10, 22, and 10 percent for estimated bear populations above 747 been modeled to see their effects on the population? Suggest the CS address how these levels of mortality meet the CS stated objective of allowing occupancy in acceptable areas outside of the PCA. Also, suggest the CS explain how these levels will affect the potential for connectivity to other populations. We suggest the CS model this level of mortality modeled to see how it would affect the population.
44	36	Table 2	There is a need to model the upper end of proposed sliding scale mortality limits, to determine what those higher levels of mortality (10% for females, 22% for males) will do to the effective population size (Ne). Biologically, it makes sense for the CS to strive for a Ne of approximately 500, the minimum genetic threshold. The lower end of the mortality sliding scale (7.6% for females, 15% for males) would allow that, and would even allow for growth to a Ne of 500. However the upper end of the sliding mortality scale (10% for females, 22% for males) would drive Ne down. We suggest modeling for this upper end of the mortality scale.
45	36	21	As drafted, the CS does not address the possibility of source-sink dynamics and connectivity with other populations. This sliding scale for discretionary mortality could potentially inhibit emigration and connectivity with other populations of grizzly bears. The NPS suggests these issues be monitored and addressed in the CS.
46	37	8	Suggest replacing the population estimate from nine years ago with a more current estimate of population size.
47	37	9	The CS states “ <i>The intent of the CS is to allow grizzly bears to occupy all biologically suitable and socially acceptable habitats.</i> ” Does socially acceptable mean non-grazing land? Suggest defining these terms.
48	38	24	<p>The NPS agrees that the Chao2’s conservative nature regarding population estimation helps to reduce the possibility of over allocation of discretionary mortality. This is important, because recent research suggests that, if not done carefully, managing large carnivore populations in the manner proposed here can present a number of conservation challenges (Creel et al. 2015). Furthermore, it is also important to recognize that the sliding scale outlined in the CS, where increasingly greater percentages of each sex and age class category would be harvested as the population increases, could also act to influence such population processes.</p> <p>Accordingly, the NPS recommends the CS specify monitoring population parameters that could illuminate any issues, or the lack thereof, with the discretionary mortality allocation process. This would enable the YGCC to work towards addressing issues that come to light.</p>
49	41	1	Suggest replacing “ <i>sightings</i> ” with “ <i>reliable observers</i> ”
50	41	3	The CS does not state there is a commitment by any agency to conduct flights or collect ground sightings. It

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			just says it will be done. The CS should specify what each agency is committing to do.
51	44	27	Suggest using (add underlined text): “ <i>known and probable</i> ”, not “ <i>probably</i> ”.
52	46	Table 4 Row 5	We suggest inserting the following language: “ <i>NPS representatives will be included in the discussions and contribute to the development of recommendations during the annual meetings referred to in the Memorandum of Agreement (MOA) among the three states, recognizing that the decisions made during these meetings ultimately inform the discretionary mortality allocation by the states.</i> ”
53	47	Last bullet	“ <i>The percent of known male and female deaths in the GYE between 1975 and 1998 is 59% and 41% respectively</i> ”; please update with current data that is available.
54	52	2	Care should be taken to ensure that a secure population of grizzly bears is maintained within the PCA. We believe that hunting mortality within the PCA should also be considered and carefully managed, as is habitat, to ensure the stated goal and function of the PCA remains intact as a secure area for this core population.
55	51	5	Please clarify the phrase “ <i>distribution of collared females by agency will be assigned.</i> ”
56	57	14	We suggest that more cost effective and meaningful methods for monitoring grizzly bear nutrition and body condition be developed and implemented than those identified in the CS. Habitat monitoring objectives are not a good measure of habitat conditions, since they have yet shown changes in white bark pine, cutthroat trout, and some elk herds that have all declined. These methods and triggers are measures of human impacts that relate to access and human-caused mortality. We suggest developing methods to measure carrying capacity or habitat production. See comments 16, 35, and 60.
57	64	12	Suggest that the CS also state that wildland fire and emergency helicopter use are exempted as well.
58	64	12	Sometimes the Montana Department of Livestock uses a helicopter for hazing bison west of YELL within the PCA. In the past, this helicopter use has gone on for 2 or more days in a given spring. Also there are search and rescue operations occurring as needed. Suggest these activities be included as to not restrict our ability to manage bison or conduct search and rescue operations.
59	69	17	Is “ <i>no net decrease</i> ” correct? Please clarify how we would get to net increase of 1.4 percent in secure habitat inside PCA as described in the following sentences.
60	74	26	We suggest the CS considers monitoring grizzly body condition rather than a few specific foods. These four seasonal foods were chosen because they are high calorie and relatively easy to monitor. However, requiring monitoring of these four foods gives the impression that grizzly bears need all four to survive, which is not true. Since bears eat so many different foods, and most would not be cost effective to monitor, we suggest the CS considers monitoring body condition instead, as a surrogate to monitoring foods. Body condition informs us how bears are responding to the total food picture. See comments 16, 35, and 56.
61	78	24	We no longer sample cutthroat trout in streams with gill nets – please revise.
62	79	6	Please explain what constitutes potential or distribution of unknown habitat for moths.
63	84	Table 5	Please update table to include PCA and DMA, not the “old” area (i.e., PCA + 10 mile buffer).
64	86	3	Connectivity can be negatively affected by activities other than roads. For example, development/anthropogenic activities in riparian areas that are used as travel corridors could also adversely

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			affect connectivity. We suggest the CS consider these other factors and stressor to ensure connectivity is maintained.
65	90	1 and 8	Please add the following underlined text: “ <i>Outside <u>national parklands and</u> the PCA....”</i> ”
66	91	11	Given definition of habituation elsewhere in the CS, this could be interpreted as including roadside/recognizable bears in national parks. These bears would NOT be removed if they only demonstrated avoidance of humans and proximity to roadsides. The next statement does give management flexibility to states and NPS. The definition for habituation is good, however, wording on management actions in response to habituation should be modified if possible.
67	116	8; GTNP Bear Mgmt Plan	Suggest adding the following underlined text: “ <u>Outlines information related to management of bears and human safety in Grand Teton NP and the JODR</u> ”.