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**Bulleted summary of peer review and public comments, organized into issues that need assistance from YES SC or the Agencies who are part of YES.**

**Green = agency and public comment**

**Blue = peer review**

**Purple = both public comment and peer review**

#### **General**

- Who is responsible for tasks, preparation, and what is the timetable for completion
- Need to consider how implementation and management of the CS will adversely impact private landowners within the DMA. The CS may adversely impact land owners and the process for satisfying a damage claim for/on both real and personal property will be difficult. **ASSISTANCE FROM YES SC**
- The USDA Sheep Experiment Station in Dubois, ID is absolutely not needed for grizzly bear management. **ASSISTANCE FROM USFS.**

Commented [JB1]: Tied to CONSERVATION STRATEGY. ALREADY BEING ADDRESSED?

#### **Executive Summary**

- The Conservation Strategy should be evaluated and reviewed every 5 years (currently every 5 years or as necessary) **YES SC ASSISTANCE**
- Object to the CS objective to maintain grizzly bears “inside and outside the PCA in biologically and *socially acceptable* habitats” Social acceptance will change with time, people, and location (also in Chapters 1, 2, and 3). **YES SC ASSISTANCE**
- Clarify that the CS is a cooperative agreement and that the Service’s role is not to oversee management but evaluate the five factors under the ESA should it be necessary. **YES ASSISTANCE (CHAPTER 6 ADDRESSES SOME OF THIS)**

#### **Chapter 1: Introduction and Background**

- **ISSUE:** Implementation period of the Conservation Strategy **(YES)**
  - CS should be in effect beyond 5 year minimum
    - The Conservation Strategy must be implemented beyond the minimum 5-years of the ESA. The Service has a history of implementation for longer than 5 years.
    - Say “the 2016 Conservation Strategy will remain in effect beyond the 5-year monitoring period” instead of “in perpetuity” or “indefinitely”
    - Even if states are cautious during the first five years of federal oversight that follows delisting, over time management will reverse gains made over the last 40 years of endangered species protection.
    - Should be in effect for at least 18 years. The post-delisting monitoring for the peregrine falcon was every 3 years for 15 years and every 5 years for 20 years for the Hawaiian hawk.
  - CS should be in effect for only the 5 year minimum
    - The CS should only be in effect for the 5 years required by the ESA and then management should become the full responsibility of the states (all “references to “indefinitely” or “in perpetuity” should be removed).

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- The Service inappropriately links mandates to grizzly bear's "conservation reliant" status, such as having the CS in effect "in perpetuity" (States).
- Since the three demographic recovery criteria have been met, post-delisting should not require management but only monitoring. Management drives up costs and depletes state resources without a biological or scientific need.
- There should be a commitment to continue robust monitoring and research post-delisting

Commented [JB2]: YES SC. Think already being addressed in previous themes.

## Chapter 2: Population Standards and Monitoring

### GYE Grizzly Bears Recovery Criteria and management objectives

- It states that the mortality rates are adjustable, when will these rates be adjusted and how? They are the foundation of the regulatory mechanisms. YES SC. NEEDS EXPLANATION
- 
- **ISSUE:** Confusion about the population management objectives and their scientific basis:
  - Concern that the population goal is unclear (i.e., 500 or 600 or 674) and the states would decrease the population by more than 100 bears.
  - Concern that post delisting management allows for managed population decline
  - It should be clear that population will not be managed down to a minimum population size of 500, that this is not a population goal.
  - The Service references a management objective of 674 bears within the DMA. The states have agreed to a "management objective for the DMA of at least a range between 600 and 747 (based on the 95% confidence interval of the estimated average population size between 2002-2014) and upon mortality rates to keep the population within this range".
  - The population should be managed for stable to increasing because some lands within the DMA are currently unoccupied. Should not be managed to the lower end of the population estimate confidence interval of 600 bears.
  - Managing to a target population size is counter to the goal of continued population expansion into all suitable habitat and connectivity with the NCDE and possibly the Bitterroot.
  - Unrealistic to manage a population to a single number when the confidence intervals are large and do not account for all sources of variation so are actually even larger than reported.
  - There is no scientific basis for the population lower limit of 500 bears.
  - Population goals should be re-evaluated periodically to consider natural and anthropogenic changes in the ecosystem.
- Females with cubs-of-the-year
  - Figure #3 currently shows actual FCOY but the criterion is the model-averaged FCOY. Recommend showing the Chao2 estimate and the trend line on the same graph as actual FCOY.

Commented [JB3]: FWS PROPOSED SOLUTION. RECOMMENDATION THAT WE USE CHAO 2 ESTIMATE OF 674 AS POPULATION GOAL AND OTHER REFERENCES TO OTHER NUMBERS BE REMOVED, UNLESS THOSE NUMBERS ARE EXPLAINED (IE. 500 GENETICS). NEED CS TO BE CONSISTENT WITH FR. CHANGES TO CS PRIMARILY

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- Figure 3, Page 38 reads FCOY model average minimum of 48 but page 21 reads entire population was 58 but does not include the FCOY in the DMA (Beaverhead county commissioners)
- 
- **ISSUE:** Pros/cons of using new population estimator and method (rather than Chao2)
  - Challenges with new methods
    - The Service fails to explain how a new population estimator would be applied, how will deviations between the new population estimate and estimates from Chao2 be reconciled? For example, because of corrections for low bias, corresponding mortality limits may represent a significantly greater number of bears compared to previous years. Harvest levels should not increase in light of a new, less biased estimator.
    - Any new population estimation method needs to be calibrated to ensure long-term comparability of data.
    - The current calculations for total mortality limits are highly sensitive to total population size. Therefore, all aspects of the method used to monitor trend, calculate allowable total mortality, and trigger outside reviews needs to be recalibrated should new methods be adopted for estimating population size. A new method also needs to be made available for public comment.
    - If a new population estimator is used, the number of recovered bears for future management actions should not be re-defined. (Park County Commissioners)
    -
  - Concerns about current levels of human-caused mortality (see Issue 17 in WY wolf)
    - Increase in human-caused mortalities in 2015, 59 known and additional 30+ more unknown
    - Increase in hunter caused mortality in the past 11 years from 3.7 to 10.2 bears/year
    - Total human caused mortality has risen steadily since ~1994 (8.9% per year) and drastically since 2007 (7.0% per year)(Mattson). If the population has stabilized since between 2002 and the present then these rates of increased mortality means the population is actually declining.
    - The Service incorrectly concludes that the reduction of human-mortality is no longer a threat because of reduction through I&E programs. Mortalities have continued to rise despite the heavy implementation of I&E in 2008.
    - Mortalities from all causes in 2015 was 61 bears. Reported mortality is about half of actual dead bears "Start adding in the bears that will be shot in the trophy hunt and you could easily approach 200 dead grizzlies in a single year."
    - Female mortality limit was exceeded in 2015.
    - Mortality limits for males and/or females have been violated during 5 out of the last 7 years

**Commented [JB4]:** ALREADY ADDRESSED YES CS EDITS, FR RESPONSE/CLARIFICATION.

**Commented [JB5]:** Recalibration text provided by YES CS. FWS sharing Alternatives to try to get agreement. YES SC

**Commented [JB6]:** FR notice. But depending upon this year's information may require verbage edits in document.. YES SC  
Information sharing

#### *Human-caused mortality*

- **ISSUE:** Concerns about the boundaries of hunting activities (where hunting will be allowed to occur):

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○ Hunting in the PCA

- There should be no hunting inside the PCA or other densely populated grizzly areas
- Only allow hunting outside the DMA, away from “secure habitat”
- Misconception that there will be no hunting inside the PCA because it is “secure habitat”. The Conservation Strategy states that “The PCA will be a secure area for grizzly bears, with population and habitat conditions maintained to ensure a recovered population is maintained for the foreseeable future and to allow bears to continue to expand outside the PCA.” And “Habitat security requires minimizing mortality risk and displacement from human activities in a sufficient amount of habitat to allow the population to benefit from this secure habitat and respond with increasing numbers and distribution.”
- It is difficult to identify boundaries of the PCA or other “secure habitat”, need to limit hunting to readily defined zones.

Commented [JB7]: YES SC. Needs language to be cleared up to clarify. Define secure habitat.

○ Hunting in the national parks/national forests

- Create a buffer of no hunting around national parks or focus hunting away from NPS boundaries
- No hunting on state and private inholdings within GTNP. The NPS is currently being litigated on its 2014 decision to allow this. The Service failed to assess the impacts hunting on inholdings in the rule.
- There should be no hunting in the JDR. A grizzly bear hunt within the JDR would have a negative impact on public safety and public use and enjoyment. Pub. L. 92-404, Sect 3(b)
- Because the public lands belong to the public, public should have a say in how grizzly bears that originate from public lands are managed. Hunters are the minority.
- Grizzly bear hunting in GTNP must be prohibited

Commented [JB8]: FR response. YES SC help.

○ Hunting and connectivity areas

- Should consider precluding hunting of bears living in suboptimal habitat outside of the DMA in areas of connectivity.
- There should be no hunting in the connectivity areas (e.g., the Gravelly Mountains, the Centennial Range, the Tobacco Root Mountains, the Highland Mountains, etc.)

○ Hunting should occur in conflict areas, like the Upper Green, to potentially address individual bears

○ No hunting should be allowed at food aggregate sites (i.e., moth sites and a 10 mile buffer anywhere in the DPS) as these would be “easy killing fields for trophy hunters to wipe out large numbers of bears at one time and place” (Wild Earth Guardians)

Commented [JB9]: FR response. YES SC help.

• **ISSUE:** Concerns and confusion about proposed mortality limits:

- Discrepancy between the mortality limit tables between rule and CS, footnote in rule of rule to Dan Ashe’s letter – should restructure table for 2 columns – 1 for 674 and 1 for <674, allowing the mortality limit to remain at 7.6% at populations <674 would allow the population to be driven down.

Commented [JB10]: YES SC. Table needs to be fixed

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- Doubts about scientific basis of the mortality limits
  - For mortality limits >7.6% for independent females: What is the biological basis for population decline? Unsustainable, especially with increasing density dependent forces. Need scientific justification for the mortality limits and models used to derive these thresholds, available for independent peer review. Population may continue downward even after reducing mortality to ≤7.6%.
- There is no provision for the NPS in the allocation of 'discretionary' mortality. The NPS should be allocated their fraction for foreseeable mortality under NPS jurisdictions.
- **ISSUE:** Confusion around how total and background mortality is calculated
  - The rule provides definitions and calculations not included in the CS (i.e., total mortality, background mortality, discretionary mortality, Table 3 and subsequent 3 paragraphs) that should be included for clarity
  - Background mortality fails to account for unknown-unreported grizzly bears deaths.
  - Need to discuss the uncertainty in the number of bears that die from natural causes or unreported human-caused mortality, broad credible intervals depending on priors and how unexplained and unresolved cases are dealt with (Cheery et al. 2002). IGBST reports do not show credible intervals and natural deaths are not included in the estimation.
  - The method used to calculate total deaths is biased (biased low – IGBST 2012, Table 2.1) and the degree of that bias is not consistent (e.g., effort expended to locate dead bears) and is unknown.
  - The period over which the moving average of background mortality should be defined and account for uncertainty
  - Fails to address loss by emigration out of the DMA and is not counted towards total mortality limits or background mortality when calculating allowable discretionary mortality
  - Difficult to plan to close hunting seasons when total mortality reaches threshold levels when up to half of individual grizzly bear mortalities are never discovered in non-telemetered bears (McLellan et al. 1999).
  - Cumulative annual mortality should be analyzed on a month-to-month or seasonal basis to be used a better predictor to alert managers if annual mortality is progressing in a "normal" pattern or if it is likely to be exceeded. An additional trigger could be added to stop discretionary mortality for the current year in light of this information.
  - Governor Mead requests the removal of language following Table 3 explaining mortality allocation beginning with "[t]here are mortalities that occur..." through the sentence, "[t]hese examples serve to explain the process..."
- **ISSUE:** Concerns about mistaken identity kills
  - States should prohibit black bear hunting within the DMA, or at the very least the PCA, to reduce mistaken identity kills of grizzly bears.
  - Idaho and WY should have a mandatory bear ID test for hunters to reduce mistake id mortalities

**Commented [JB11]:** Need help from YES CS to explain biological basis. IGBST is modeling this to give us more info.

**Commented [JB12]:** YES CS. Need a draft response

**Commented [JB13]:** Change to CS. Need YES SC review and agreement...See new table....

**Commented [JB14]:** YES SC –State assistance in response. FR response Likely..

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- **ISSUE:** Concerns about mortality from trapping intended for other game (bear as incidental take)
  - A ban on trapping should be a requirement prior to delisting. Even if trapping is banned for grizzly bears, without ESA protection trapping of other animals could be allowed without Section 9 liability for injury and death of grizzly bears as incidental take.
  - State plans do not require that grizzly bears being caught in traps (as a non-target animal) be reported to the fish and game departments
  - Trapping is allowed in Wyoming and the rule does not address non-target trapping incidents of bears and how this will be managed. (i.e., incidence of cub caught in a trap near Cody in October 2015 leading to agitated sow nearby). All trapping should be banned within the PCA and the DMA (trapping of any animal).
- **ISSUE:** Selling of grizzly bear parts not addressed in the proposed rule, how common is trafficking in the US?
  - The state legislation needs to pass appropriate laws to make it illegal to sell bear parts, the rule needs to discuss the current state laws or lack thereof

**Commented [JB15]:** FR Response. Assistance from States YES SC

**Commented [JB16]:** FR Response. Assistance from States YES SC

### Chapter 3: Habitat Standards and Monitoring

#### Habitat management

- General:
  - P.7 identifies four habitat criteria to be measured and reported. Who assembles the information, when is it due and to whom is it reported?
  - p. 57, last sentence first paragraph: "habitat standards in this document are subject to revision...reviewed and updated as necessary" should be defined. Who will review and update and what is the process?
- **ISSUE:** Concerns about use and development in secure habitat (inside the PCA):
  - Projects inside the PCA should not be allowed that temporarily change the amount of secure habitat.
  - Reconsider allowing recurring low-level helicopter flights and temporary road construction during denning season.
  - Misconception that hunting will not be allowed in secure habitat (i.e., inside the PCA) (Habitat cannot be considered secure if hunting is allowed?)
- **ISSUE:** Concerns about stressors outside the PCA:
  - What is the scientific basis for creating 2 management zones: the PCA and outside the PCA? What evidence is there that these are 2 distinct grizzly bear populations and that bears don't overlap the boundary to justify different management proposals for what is likely one population?
  - It is disingenuous to say that suitable habitat outside the PCA will provide additional ecological resiliency and habitat redundancy to respond to environmental changes;

**Commented [JB17]:** YES SC. Timeline questions already being worked on.

**Commented [JB18]:** FR Response. YES SC assistance in providing response

**Commented [JB19]:** Tied to hunting issue above for YES SC States

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however, the same habitat protections do not occur outside of the PCA as inside the PCA.

- It is insufficient that 60% of suitable habitat outside of the PCA is protected by other binding regulatory mechanisms. That means 40% remains unprotected.
- The Service is effectively writing off the 25% of the independent females that occur outside of the PCA because there are inadequate habitat protections outside the PCA, this exceeds the mortality limit for this cohort under all circumstances.
- Habitat outside of the PCA has become a sink for human-caused mortalities
- Displacement from roads is well documented and may result in higher mortality rates and lower fecundity
- p.59, second paragraph “levels of secure habitat and motorized route density are monitored on federal lands outside the PCA to identify and prevent potential habitat threats”. Who will define, monitor, decide and pursue amelioration of the threat? What if that process is inconsistent with the current forest service plan?
- There are discrepancies in FS maintenance of secure habitat outside of the PCA between the proposed rule and the CS
- Is 1998 the right baseline?
  - Population growth was overstated for the 1988-1998 period for which the 1998 baseline was established and has also been associated with the recent decline in population trend.
  - The 1998 baseline was developed under a different population estimator than currently used (nonparametric Chao2 estimator v. model-averaged Chao2 estimator), is it valid?
  - The 1998 habitat baseline fails to account for the distinction between frequency of contact and lethality of encounter in determining risk of human-bear mortalities to grizzly bears. This is a dynamic phenomenon influenced by human attitudes and behaviors and habitat management needs to change to account for social and dietary changes since 1998.
  - Since grizzly bears have expanded their range and increased in numbers, habitat management should be more flexible and not held to the 1998 baseline.
  - “Since bears have successfully recovered based on current conditions of habitat, a much more effective and understandable standard would be to use “current conditions”.” (Park County Commissioners) Or any changes since 1998 should be “grand fathered”.
  - The 3 standards listed on p.6 are problematic, especially “with some exceptions for administrative and maintenance needs”. P.56 does not discuss those exceptions.
  -
- Is everyone really in compliance with the 1998 baseline (and will they stay that way?)?
  - It is unlikely that the habitat remains in the same condition as it was in 1998 (i.e., whitebark pine decline) even if “security” is unchanged.
  - Does not account for increasing use on, off, and nearby the mapped features, increasing encounter rates.

Commented [JB20]: FR Response. May need some assistance from FS, NPS.

Commented [JB21]: FR Response. Informational for YES SC

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- How will the 1998 baseline be achieved? “What will happen to roads and developments that were constructed between 1998 and the present date?” (Wild Earth Guardians)
- Upon delisting, protections that have occurred in conjunction with the 1998 baseline and that will disappear include: the ESA Section 9 “take” prohibition; the ESA Section 7 consultation requirement; the 1986 Interagency Grizzly Bear Guidelines; and the ESA citizen suit provision. Without these, will the 1998 baseline be sufficient habitat protection?

Commented [JB22]: FR Response. Informational for YES SC

- Concerns around phasing out/relinquishment of allotments
  - Phasing out of allotments: include stronger language for mandatory phase-out; work with third parties to buy out allotments where possible.
  - This should be a management priority, especially for sheep allotments and where chronic conflicts have occurred.
  - “Voluntary relinquishments” of livestock allotments is “driven by the inability to withstand the pressure of predation by bears and/or wolves or regulatory constraints imposed by the federal land agencies”
  - The payment of some compensation by the “NGOs does not negate the severe impacts of relinquishments on these ranchers and our industry”
  - Prior to delisting, the US Sheep Experiment Station must be closed, the only sheep grazing operation in the PCA and on federal land. It is in an important connectivity area between the GYE and the Salmon-Selway Ecosystem.
  - Allowing private interests to control the phase out of allotments (i.e., willing permittees) may violate Section 7 of the ESA and other laws
- Explain “appropriate analysis by the agency must be conducted to evaluate impact on grizzly bears.” Evaluation of impacts does not directly translate into ensuring non-detrimental effects on grizzly bears. (Interpretation from Alex: in the rule we say, “appropriate analysis by the agency must be conducted to evaluate impact [of livestock allotments] on grizzly bears,” though we do not specify what we would do if we found impacts.)

Commented [JB23]: FR Response. FS help

- **ISSUE: Concerns with our discussion of oil, gas, or mineral projects**
  - Delisting will lift some of the restrictions on oil, gas, or mineral leases
  - Concern that 4% of suitable habitat inside the PCA and 19% of suitable habitat outside the PCA (inside the DMA) allows for surface occupancy. The impacts of such occupancy can extend beyond the footprint itself. Needs intense monitoring and mitigation.
  - The effects of honoring existing oil, gas, and other mineral leases are unclear. ‘Striving’ to meet the application rules for changes to secure habitat is unclear. Additional clarification on the number of leases, the location and area of leases, and possible range of effects of these leases to grizzly bears is warranted.
  - Not restricted inside the PCA. Do projects that reduce the amount of secure habitat have to replace secure habitat of similar habitat quality (i.e. is there required mitigation?)?



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- No new oil, gas, or mineral projects should be allowed in the PCA.
- No means to limit the number of mines because of the 1872 General Mining Law.
- Currently there are 2 mining operations in the process of development in and near the PCA (the Crevise Mine and the Emigrant Mine). These threats need to be acknowledged in the rule.

Commented [JB24]: FR response. BLM help.

• **ISSUE: Additional concerns/considerations surrounding human recreation**

- Detriments of increased human visitation/human contact with bears
  - Grizzly bears are twice as likely to use an area when human activity is restricted or people were inactive (Coleman et al. 2013).
  - Longer-term exposure to humans can cause habituation and higher mortality risks (note from Alex: references exist for this but they were not provided by the commenter).
- The number of visitors to national parks has steadily increased since 2005 to the present (YNP 2.9 to 4.1 million and GTNP 2.5 to 3.1 million), increasing risk without a change in infrastructure.
- Increasing visitation and recreation is a concern and presumably a limit on visitation will be needed at some point and should be considered.
- Increased visitation should be assessed as take (section 9) as it harasses wildlife and causes displacement from food sources.
- What is the potential impact to bears feeding on army cutworm moth sites of increased human visitation?
- Food storage orders should be in effect for all habitat within the DPS boundaries, especially within the DMA, within extent of the law.

Commented [JB25]: Acknowledge issue. YES SC help figure out how to respond...

• **ISSUE: Concerns about our discussion of logging**

- Timber harvest will increase post-delisting because road densities will not be controlled in most grizzly bear habitat. Increased road densities will also increase mortality risk.
- Concern that 11% of suitable habitat outside the PCA inside the DMA allows for timber harvest.
- Impacts of logging:
  - Need to analyze impacts from logging between 2002 and the present to determine real impacts. If there was no logging after 2002 the Service should clarify that. (Currently we only discuss logging from 2000-2002).
  - Grizzly bears avoid recently logged forests (McLellan and Hovey 2001; Apps et al. 2004). Habitat values will likely decrease under short-rotation management regimes (Mattson and Knight 1991). Food availability does not increase in early successional forests in Yellowstone as it does in some other ecosystems.
  - Logging will degrade red squirrel habitat, which are essential to making WBP nuts available to grizzly bears. Most red squirrel populations are at lower elevations than the WBP zone.
  - Aside from the increased risk from roads, there is not enough science to determine the impacts of logging on bears (i.e., displacement, habitat quality, mortality, etc.).

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- Designation of secure areas for grizzly bears during logging should include previously disturbed areas as areas already providing security is not mitigation for increased disturbance. (interpretive note from Alex: when project will disturb or change secure area and thus need to mitigate for it, should not be able to mitigate for it with land that has already been disturbed (e.g. previously logged land))
- **ISSUE:** Forest Service designation of “sensitive species” or “species of conservation concern”:
  - Provide specific statutory and regulatory definitions and the authority that accompanies such a designation.
  - Designation under the 2012 Planning rule does not provide the same protections. The same project-level prohibitions do not apply.
  - Designation by the FS as a “sensitive species” or its equivalent is an important component of ongoing management to ensure that grizzlies remain a management priority.
- **ISSUE:** No mention of BLM’s sensitive species program, its requirements, and how grizzly bears will be classified for planning and management purposes on those lands post-delisting
- **ISSUE:** Wilderness, wilderness study areas, and roadless area designations:
  - These designations not restrictive enough to assume that no impact on grizzly bears exist in those areas. In Roadless areas, energy development or road construction in conjunction with oil and gas leases that pre-date the effective date of the rule, off-road vehicle use, motorized ATV trails, and human recreation may impact habitat. In Wilderness and wilderness study areas, mining claims that pre-date the Wilderness Act may be pursued. Livestock grazing is also permitted on these lands.
  - Cannot assume that changes in the management of roadless areas under the Roadless Rule will not occur as it is currently under judicial review.
  - Some aspects of the FS management of Wilderness Study Areas and Roadless Areas are inaccurately described. “The Service states that the Gallatin National Forest determined that gains in secure habitat resulting from full implementation of the 2006 Gravel Management Plan will constitute a new baseline, but it is unclear why the Service is not enforcing the Gallatin National Forest to decommission motorized routes and develop sites to comply with the 1998 baselines as all other forests have done.” 2006 Gallatin Travel Management Plan not approved?
- **ISSUE:** Concerns with adequacy of our discussion of habitat connectivity:
  - P.7 identifies four habitat criteria to be measured and reported but p.57 only discusses 3 in detail.
  - Road construction and connectivity:
    - The guidelines for road construction to facilitate connectivity are vague. Use of crossing structures, signage, and other aspects that might increase effective immigration would benefit from additional clarity. Use of words such as “should”, “encouraged”, “consideration”, and “can recommend” are inadequate to bring

Commented [JB26]: FR response. USFS assistance

Commented [JB27]: YES SC –Forest Service Response. May changes CS language

Commented [JB28]: YES SC –BLM assistance.

Commented [JB29]: FR Response – USFS assistance. Clarify language

Commented [JB30]: YES SC –add some language about connectivity. Could use MT GB mgmt. Plan, food storage.

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about consistent and effect management responses. There should be a commitment to include habitat connectivity in any new road construction and any reconstruction projects.

- Commenters and peer reviewers emphasize the importance of facilitating connectivity and concerns about lack of effective plans for facilitating connectivity:
  - Additional details of the state management plans (mainly Montana) to facilitate connectivity should be discussed.
  - Wyoming and Idaho plans state/strongly indicate that they will prevent the GYE grizzly bear from re-occupying its historic range.
  - State plans need to manage for connectivity and not towards a minimum population level as they currently do
  - The state management plans will actively discourage grizzly bears outside the DMA
- Erroneous points in discussion of connectivity:
  - Please clarify what food storage orders have to do with connectivity.

Commented [JB31]: YES SC need assistance..

Commented [JB32]: YES SC state help to respond

Commented [JB33]: YES SC State help us respond.

Commented [JB34]: FR response. USFS assistance.

#### Food resources

- Funding:
  - p. 76, monitoring protocols mention that IGBST will monitor “as budgetary constraints allow”. Certainly all the agencies will face similar circumstances but yet it appears that monitoring the four foods is the only protocol with this caveat. What justification can be used to justify this option and why does it apply only to the IGBST and not other agencies?
  - Monitoring of high caloric foods should not be budget dependent and be considered part of adequate funding for the whole strategy and trigger a review
- **ISSUE:** Needed additional monitoring and analysis of food sources
  - Regular review of the complete diet of GYE grizzly bears would provide additional insights of possible dietary shifts beyond the four foods.
  - Analysis of movements and home-ranges of females with cubs would be beneficial because if they are decreasing it would decrease food resources available and support the hypothesis that the population is approaching biological carrying capacity (interpretive note from Alex: this analysis could support our position).
  - The Service needs to employ a matrix that distinguishes high-quality foods with high versus low hazards associated with them and if the hazards are primarily to dependent young, independent bears, or both.
  - Need to continue monitoring the relationship between availability and use of the four main foods and the vital rates and body condition of grizzly bears.
  - The IGBST and the Service “fail to account for potential interactions between spatial distributions of and temporal trends in key food resources”.
  - The three IGBST papers (Bjorn et al. 2014, Costello et al. 2014, and van Manen et al. 2015) failed to account for long-term trends in weather and for major changes in

Commented [JB35]: Already addressed. FR response

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abundance of other key foods (army cutworm moths, cutthroat trout, elk, and bison) besides WBP.

- Food Synthesis Report and Ninth Circuit ruling: The Food Synthesis Report does the minimum to satisfy the requirement of the Ninth Circuit ruling when they should have done a robust assessment of at least all four of the key food sources to detect diet changes.

- **ISSUE: Army cutworm moths**

- May be reduced by pesticides and new farming technologies
- All documented moth feeding sights are alpine fellfields
- Depend on tundra flowers in the alpine that are disappearing with temperature increases
- 90% of alpine and high subalpine environments will be potentially lost. How moths will respond is unknown.
- Grizzly bears increased use from almost zero during the mid-1980s to high, sustained levels since the late 1990s, that has not been accounted for in its effects on birth (fatter females leads to greater fecundity) and death rates (remote locations means less potential for conflict with people)
- Moth sites are spatially correlated with livestock allotments, a major cause of human-caused mortality.
- Moths are a source of concentrated fat and are located in remote locations away from people, an important factor affecting survival (interpretive note from Alex: this comment seems to present the opposite case from the one above. They are from two different commenters so they disagree).
- Bear use of army cutworm moth sites may not be a good indicator of relative abundance of moths as bears may return to areas where food was previously found even though they sometimes may not be present.
- The Forest Service plan needs to address the issue of human activity at moth aggregation sites.

- **ISSUE: Cutthroat trout**

- Have declined with decreased winter snowfalls and reduction in stream flow, which is likely to continue
- Cutthroat trout has stopped spawning in all tributaries of Yellowstone Lake
- The Service asserts that only a small portion of GYE bears used cutthroat trout when it's actually ~15%, and that data is outdated (Haroldson et al. 2005).
- The loss of cutthroat trout has left a seasonal nutritional hole that has been filled by elk calves and lower-quality vegetation (Fortin et al. 2013, Middleton et al. 2013, Ebinger et al. 2016).
- Questions about the disparity in the use of cutthroat trout in quantity and between males versus females by Haroldson et al. 2005 and Felicetti et al. 2004 in contrast to Mattson & Reinhardt 1995.
- The decline has disproportionately impacted females, resulting in them eating more terrestrial meat (esp. calves) and leading to a probable increase in cub and yearling death rates.

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- Warmer waters may mean faster growing trout but also means higher incidents of whirling disease and potentially blocked stream outlets with seasonal drought.
- Carrying capacity has almost certainly declined in the core of YNP with the decline in trout.
- **ISSUE: Whitebark pine (WBP)**
  - Not an issue
    - Will eventually regenerate and help ameliorate the losses that have occurred
    - There has been a 2-fold increase in cone production on surviving trees, probably driven by warmer climates but some believe this is temporary (i.e., masking).
    - If the whitebark decline that has been occurring since 2001 had a negative impact on the grizzly bears then the population wouldn't have continued to increase
  - Bigger threat than we acknowledged
    - The IGBST inadequately represents the extent of whitebark pine loss by using remote sensing and thus wrongly claims that 23-33% of historic bear ranges contained little or no WBP and was unimportant to a corresponding percentage of bears.
    - WBP pine preference only declined at the end of the study (Costello et al. 2015), too short of a time to recognize any population-level feedback in modeled estimates. The worst of the WBP crash is too recent to detect long-term impacts to the population.
    - Concern over the degree of decline in whitebark pine due to mountain pine beetles and potential future loss due to disease, insects, fire, and reproductive failure. Climate projections predict the terminal loss of whitebark pine from the Yellowstone ecoregion from climate change, increased fires, white pine blister rust, bark beetles, and competition from lower-elevation species
    - Whitebark pine cannot adapt rapidly enough to the changing environmental conditions given its long generation length even if climate-adapted and blister rust resistant trees were engineered and planted
    - Cannot conclude that the GYE will adapt to the loss of whitebark just because the NCDE grizzly bear population has continued to increase in the absence of whitebark
    - The Service needs to account for loss to the 1988 fire and the lack of regeneration after the loss in their analysis of availability.
    - The Service overlooks that WBP die-off and vital rate decline occurred simultaneously.
    - Positive lambda does not mean a healthy population or that the threat is not substantial
    - The declining vital rates have not been fully realized because of the slow reproductive rate.
  - Provide a citation for monitoring items "trends in the location and availability of whitebark pine", if old monitoring protocol is what will be continued then it is inadequate
- **ISSUE: Ungulates**
  - Bigger threat than we acknowledge

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- All of the elk herds, but the Upper Madison, have declined because of increased depredation of calves, drought, chronic wasting disease, and human hunters. Hunters are “super-additive” because prime-age breeding animals are taken (Vucetich et al. 2005, Wright et al. 2006, Mallonee 2011).
- Bison have probably become more important to grizzly bears with the increase in meat in their diets but the Service fails to present trends in the bison herds (bison plan and brucellosis) and falsely extends the findings that grizzly bears made little use of bison (Fortin et al. 2013) from the Central herd (which is declining) to the Northern Range herd (which is increasing).
- The Interagency Bison Management Plan and the new bison management plan developed by YNP and MT aim to reduce the migratory bison herd, removing this important food source for grizzly bears in YNP and SW MT.
- Summer forage conditions (i.e., drought) affects female pregnancy and calf survival in ungulates with unknown effects on herd numbers.
- Climate change has reduced winter severity and length and the availability of winter-killed carrion in the spring.
- The Service fails to present its own data that shows a decline in availability of spring carrion (interpretive note from Alex: spring carrion has declined and the Service has data showing this but we did not include this data and analysis in the proposed rule).
- Side effects of grizzly bear reliance on ungulate meat as food source
  - More conflicts occurring with ranchers and hunters as bears eat more meat (livestock and hunter-killed carcasses) to replace traditional food sources.
  - Meat consumption has increased for females with the decline of WBP and trout leading to a decline in cub and yearling survival rates. The difference in consumption of meat between the sexes has diminished. Although the switch to meat is not nutritionally detrimental it has other hazards (i.e., decreased cub and yearling survival rates, hunter-caused mortalities).
  - Cub survival throughout the 2002-2014 time period should be analyzed to assess predator-prey relationships, which may have a lag time in detectability. More meat consumption by adult females with cubs in replace of whitebark pine seeds could be a sink if accessing these resources results in additional cub mortalities during confrontations with other predators or adult male grizzly bears.
- Agencies should manage for higher populations of ungulates to decrease livestock predation.
- Food monitoring needs to be expanded to add numbers of elk and bison in various ecosystem herds
- Ungulate carcasses from hunter kills should be considered an important seasonal food. Monitoring of ungulate harvest where ungulate hunting is allowed by numbers of ungulates killed, species, and mass estimates of typical carcass remains would be a better metric than number of hunters.
- **ISSUE: Huckleberries**
  - Huckleberries are less abundant as a result of warming temperatures and a persistent drought pattern. Bjornlie et al. 2014

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- McLellan (2015) did not see a decline in the grizzly bear population in Canada and northern MT until 11 years after the huckleberry decline.
- **ISSUE:** Hunter Numbers
  - p. 84 first line indicates that there is little evidence of a relationship between hunter numbers and grizzly bear mortality. The next paragraph indicated that the greatest source of mortality is due to interaction with hunters. If the number of hunters has been shown as not relevant, why does the State have to collect the number of hunters for this CS?

**Commented [JB36]:** YES SC group already worked on . FR response and changes to CS.

**Commented [JB37]:** Addressed thru YES SC subgroup. Removed language and study team recommended additions to Chapter 4. NEED THESE RECOMMENDATIONS FROM HBTT GROUP TO BE MADE TO CHAPTER 4

#### Chapter 4: Management and Monitoring of Grizzly Bear-Human Conflicts

- **ISSUE:** Concerns about adequacy and effectiveness of management of human-bear conflict (and the subsequent removal of problem bears)
  - Concerns about lethal responses to problem bears
    - Treatment of conflict bears will likely be less conservative upon delisting.
    - Should clarify how conflict bears will be treated inside versus outside the PCA.
    - Conflict removals do not encourage people to use means to avoid conflicts in the future. Lethal control does not increase tolerance.
  - The nuisance bear standards should be applied throughout the DMA... within the entire GYE DPS

**Commented [JB38]:** YES SC already made some changes to address this. FR note those.

**Commented [JB39]:** YES SC –Assistance on Responding.

#### Chapter 6: Implementation and Evaluation

- **ISSUE:** Role of YGCC
  - What is the role of the YGCC in sponsoring and approving changes to the 2016 CS? Discrepancy in language between the PR and the CS.
  - Question the functionality of YES/YGCC
- **ISSUE:** IGBST Biology and Monitoring Review
  - The timeframe for the completion of an IGBST Biology and Monitoring report need to be stated and a time period for a remedy the issue
  - The generation length for grizzly bears is likely close to 10 years and a frequency of a demographic monitoring review by the IGBST should be 5 years (rather than 5-10 years) to be consistent with precautionary management.
  - Standardize response in the rule, CS, and state management plans

**Commented [JB40]:** YES SC. Already addressed.

**Commented [JB41]:** YES SC. Help with response, What is time line for review.

#### Chapter 7: Existing Authorities

- **ISSUE:** Forest Service plans and implementation:
  - The 2005 guidelines for habitat outside the PCA are not legally enforceable. Standards should include road density, secure habitat, and no surface occupancy stipulations for all federal lands within the DMA.

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- The 2012 Planning Rule requires the Forest Service to consider connectivity, including roads (permanent or temporary, open or closed) and site development in light of how they may increase human-bear conflicts and grizzly bear mortality.
- The 2006 Amendment cannot “simply be resurrected” once a new delisting is finalized. The FS has to do a new planning process and public review to amend their plans because the new CS changes the habitat protection provided by existing forest plans.
- Forest Service plans are not regulatory documents because of the 2012 Planning Rule.
- Forest plans to implement HBRC may not be implemented once listed status, which provides tools and incentives, is removed

Commented [JB42]: FR Response, working with FS. There may be edits to FR and CS.

- **ISSUE:** Concerns about adequacy of state management plans and their ability to appropriately manage grizzlies

- Critical
  - Montana and Idaho do not plan on revising their existing, inadequate grizzly bear management plans
  - The three states “have shown little if any ability to be in agreement when it comes to managing wolves or other species”. “I see grizzly bear management from these states no different. There needs to be uniformity, consistency, and communication among these three states to prevent elimination of the bear from certain landscapes.”
  - Concern that the states will be swayed by political pressure in their management plans as they must go in front of state legislatures for approval, disapproval, or amendments
  - State management “will relegate the bear’s importance to only a few special interest stakeholders” (Cougar Fund)
  - Complications of multiple state management: “allocation among states and tribes, feasibility of enforcement, prevention of exceedance of limits (including gender limits), and subsequent implementation of mitigation (reducing discretionary mortality) in a following year”
  - At least 2 of the states have “clearly demonstrated non-precautionary management of large carnivores, as exemplified by unsustainable harvest levels of the NRM gray wolf (Creel and Rotella 2010; Ausband et al. 2015).”
  - WGFD has not identified all threats grizzlies will face outside of the NP boundaries.
  - Who will be the watchdog for the State fish and game departments if grizzly bear management falls to them?
  - What measures have been put into place to ensure that grizzlies within the DMA but outside the PCA will be managed in a consistent method between the three states ensuring that nuisance bears do not exceed mortality thresholds, Criteria 1-3 are met, and facilitates genetic connectivity?
  - The states do not establish population targets and associated specific harvest criteria but rather a minimum population size leading to concern that the states will overharvest and a lag in management response could drive the population below the desired minimum.



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- “The ESA represents the conscience of the broader public when it comes to grizzly bears and other imperiled species. By contrast, our state wildlife management agencies in the Northern Rockies represent the views of a politically influential minority whose interests focus on extractive uses of the natural world.” Willcox 2016
- The Conservation Strategy needs to be clearer on how states are coordinating with each other

**Commented [JB43]:** FR responsive. YES SC? States? Need to add specifics of State Mgmt Will need help from states to add information to Chapt. 7.

#### Conservation Strategy Appendices

- Appendix I – no basis for the statement that humans will be safer because bears will avoid people after hunting is allowed. “Likenings grizzly bear behavior to herd animals (elk in Yellowstone) is absurd.” (Debra Patla) If this were true would bears be driven from important back country food sites as a result of hunting? Will bears that have adverse experiences with hunters become more aggressive?

**Commented [JB44]:** YES SC-States. MT. From their writeup. Help in responding.

#### MOA

- Refers to the 2007 Conservation Strategy rather than the 2016
- No mechanism by which excessive non-discretionary mortality moderates discretionary mortality nor is there mention of undocumented/unreported mortality (i.e. total mortality estimate). Need to include the example from the PR.
- The maintenance of a minimum population size of 500 bears in the GYE should specify inside the DMA
- Should be clear that the population will not be managed down to a minimum population size of 500, that this is not a population goal.
- The MOA and state plans need to clearly state how a new estimator will be calibrated as directed in Appendix C and undergo public review.
- Is focused on maintaining a minimum number of grizzly bears in the DMA and does not adequately address genetic concerns or connectivity. “Viability” is not the same as genetic quality.
- Does not recognize the loss of genetic material without immigrants or transplants or commit to provide for natural immigration or transplants.
- Does not address the impacts of hunting on population generation interval.
- Misuses Miller and Waits (2003)
- The NPS must be invited/formally consulted to participate in the annual meeting to review population monitoring data
- “The parties may agree to adjust the allocation of discretionary mortality based on management objectives and spatial and temporal circumstances”. The states should not be allowed to move around the percentage of mortality allowed annually as this could lead to population sinks.
- Is inconsistent with the rule, must say that hunting will be suspended within the DMA if mortality limits are reached and not within one state or hunting unit.

**Commented [JB45]:** FR Notice. Added.

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- Says background mortality will be used from the previous year to calculate hunting whereas the rule says most recent 4-year period, only using 1 year could have a significant negative impact if it was below average.
- No commitment to maintain a specific number of radio-collared females or other data collection addressed in the rule and CS. States alone cannot manage all of the data collection and analysis.

Commented [JB46]: YES SC –assistance from State to respond.