

Grizzly Comment Response Brainstorming Meeting Notes

July 14, 2016

Comment topics related to population parameters

- Issues regarding current pop estimate:
 - **Public Comment:** Chao2 = accurate population estimate?
 - **Highlights from Public Comments**
 - Rebuttal paper in 2014
 - Study team is confident but there is question out there
 - Further explain “model-averaging”
 - **DISCUSSION OF SOLUTION:**
 - **IGBST** will add clarifying language to the rule
 - Population trend
 - **Highlights from Public Comments**
 - Also based on Chao2
 - Trend sensitive to how long time period use
 - Rate of increase is slowing (“population trend is declining”)
 - **DISCUSSION OF SOLUTION:**
 - ***Make sure this phrasing is very simple (eighth grader can understand)
 - Won’t do additional modeling but **IGBST** will add clarifying language to build confidence in trend
- New population estimator:
 - Mark-resight
 - **Highlights from Public Comments**
 - Less biased
 - More accurate estimate of how many bears on ground
 - PROBLEMS: based on number of collared bears and can’t get enough bears on the air. So, does not have power needed to detect population trend. Can be really accurate in detecting population that year but not good at detecting a population decline or trend (the delay in detection is dependent on the level of decline)
 - IGBST wants to investigate a new method
 - Will need to consider calibrating new estimator
 - **Highlights from Comments**
 - States don’t want calibration language
 - Park Service and peer reviewers say we have to add calibration language
 - **DISCUSSION OF SOLUTION:**
 - In Appendix C of Conservation Strategy → current content not appropriate
 - Too specific about how calibrate; ties our hands in creating a new method
 - Calibration is not in body of Conservation Strategy
 - Study Team proposed some good language for discussing calibration
 - *Option 1:*
 - Remove paragraph on calibration from Appendix C

- Add language to Chapter 2 of Conservation Strategy to discuss calibration (compromise language)
 - o Seth: Can't keep floor of 600 if population estimate doubles with new estimator. Need stronger language
 - o ADD: whatever 95% confidence interval for new method will be the floor
 - Jennifer and Jodi continue to work with IGBST and steering committee
 - Option 2:
 - Don't discuss calibration at all
 - o BUT if don't commit to re-calibrating, public and peer reviewers concerned this could allow a massive reduction that Dan would not tolerate
 - BRING TO MATT?
- Carrying Capacity
 - o DISCUSSION OF SOLUTION:
 - IGBST will draft response to comment and maybe add additional explanation to the rule
- Mortality
 - o Exceeding total allowed mortality limits for independent females two years in a row prior to delisting (exceeded in 2015; have not exceeded in 2016 but may exceed)... (public commented on mortality numbers from 2015)
 - Discussion:
 - Provide materials to help landowners bear-proof (need materials and an outreach person) → not possible
 - Late August-October is period of highest mortality
 - (not in our control)
 - o Hunters don't have to carry bear spray!
 - o Modify elk hunting units
 - o Public Comment: More bears/approaching carrying capacity → more conflictual interactions → more control/human-caused mortality
 - Potential response: Bears will start to expand outside DMA and those mortalities don't count so we've already accounted for that. In theory shouldn't be exceeding mortality
 - o Possible public concern: Not having human-caused mortality under control could be symptom of issues with threats-based criteria, not adequately addressing listing factors → Possible response: we have "sufficiently minimized so won't cause species to be on brink of extinction in near future" (doesn't need to be absolute certainty having completely alleviated these threats)
 - o Public Comment: Adding additional mortality is a huge concern
 - o DISCUSSION OF SOLUTION:
 - Jennifer will continue to work with IGBST to develop response to this issue
 - Standard response of the Service: Recovery plans are not binding, possible roadmap, many routes to recovery. Possible to meet some criteria and not others and still consider population recovered
- Vital rates
 - o DISCUSSION OF SOLUTION:
 - IGBST helps draft response

- Will re-evaluate vital rates every 5-10 years
 - **Public Comment:** should be 5 years, not 5-10 → **SOLUTION:** change in content (definitely Conservation Strategy, maybe rule)
- Density
 - **DISCUSSION OF SOLUTION**
 - Not going to do more modeling
 - Response (maybe tweaking language in rule)
 - We painted ourselves into corner: we've been saying population stable and that range increased by 40% (implies lower density). But population has increased slightly and a lot of occupied range outside the DMA
 - We do not believe that there is lower density; the bears are not leaving the core of the ecosystem. We count more females with cubs
 - Scientists disagree with each other on this point
 - **Work with IGBST**
- Population management triggers
 - **Highlights from Public Comments**
 - Confusion over various triggers in the rule and conservation strategy
 - Option proposed in **public comments and Park Service comments:**
 - Change triggers to alleviate confusion
 - If worried that states will manage towards lower end of 600-674 range, make our status review trigger 600 for 3 consecutive years. Will never be a problem if really managing to 674 (tempting fate if states managing to 600) → disincentivize the bottom. How are two sides interpreting management flexibility
 - BUT study team kicks off review at 612; too close? Study team should be higher so they can give recs to states to fix problem before we do a review
 - 3 consecutive years creates more separation
 - How handle having triggers in Conservation Strategy? Need to be transparent and upfront
 - Triggers tie to recovery criteria. Might look awkward if they all tie to recovery criteria except one
 - Right now 500, huge buffer between our bottom and when we act, encouraging states to manage at lower end?
 - **DISCUSSION OF SOLUTION**
 - Remove 48 females with cubs
 - In Trigger 3: "or" instead of "and" and add "600 in 3 consecutive years"
 - Remove Trigger 2 (= Recovery Criterion 1)
 - **TALK TO MATT**
 - Add more figures and tables
 - **IGBST** is making figures, we can roll those in

Comment topics related to recovery

- Pro/con meeting recovery criteria → debate about whether species recovered or not in public comments
 - **DISCUSSION OF SOLUTION:**

- Address in comment response (look at Wyoming wolf rule, 2007 final grizzly rule) (this is our view and why we think the species is recovered)
 - Jennifer will write
- Demographic recovery criterion 1
 - o Highlights from Public Comments
 - Is this still the best available science for genetic concerns?
 - o DISCUSSION OF SOLUTION:
 - Don't have to change recovery criteria if changing basis for delisting
 - This criterion is for genetic health. Because it says 500, confuses as management objective. Removed "genetic health clarification" in revised recovery criteria; now a footnote
 - 500 or 48 females with cubs → 48 females with cubs now translates to 600 bears because of a new sex ratio in the population
 - Option 1: get rid of whole criterion
 - Rationale
 - o Genetics not an issue (basis for criterion is a threat that isn't real so don't need criterion → we argue hard in rule that genetics not an issue)
 - o Public is confused by use of 500 when real threshold is 600 (and 48 females with cubs now translates to 600 bears because of a new sex ratio in the population)
 - o Is 500 really the best science for genetic health?
 - o 48 females with cubs redundant to population of 600 (48 females with cubs now translates to 600 bears because of a new sex ratio in the population). 600 is a better indicator than 48 anyway → already covered biologically by other criteria
 - 48 females with cubs criterion was met in 2015 and we may meet in 2016 (I incorrectly noted this statistic while typing and was corrected; sorry all!)
- o TALK TO MATT
- Recovery criterion 2
 - o DISCUSSION OF SOLUTION:
 - Clarify language
 - 6 year window measured at 3 different points (covers 8 years, not 18). Moving window
 - Figure?
 - Jennifer with IGBST
- Commenters asked why monitoring in whole DMA while criteria only address PCA?
 - o DISCUSSION OF SOLUTION:
 - IGBST will write comment response
 - Developed for different reasons
 - PCA = primary conservation focus area, source population
 - DMA = larger so that we don't write off mortalities that occur outside PCA
- Recovery criterion 3
 - o DISCUSSION OF SOLUTION:
 - Explain in comment response

- Maybe IGBST raises their 612 trigger for biology review (change text)
 - “or” instead of “and” (3 consecutive years OR 612)
 - Jennifer
 - o TALK TO MATT (all these parts move together)
- Additional criteria
 - o DISCUSSION OF SOLUTION:
 - Respond to comments
 - Jennifer
- IUCN classification
 - o DISCUSSION OF SOLUTION:
 - Doesn’t have bearing on our regulations
 - Wyoming wolf example?
 - Regional office writes (Alex)
- Commenters suggested carrying capacity not an appropriate metric
 - o Public Comment: Basing on carrying capacity is wrong metric, base on effective population size, even if harder (increase habitat/connectivity to allow for larger carrying capacity that more closely matches effective population size, have to try)
 - o DISCUSSION OF SOLUTION
 - Not a criterion, explain away
 - Basis for the management targets, which are a criterion. But measuring recovery by having sustainable mortality limits
 - Explain away in response
 - 674 = biologically recovered population. Some studies suggest that higher numbers are desirable but we believe that based on best available science this is plenty to sustain a viable population that is not T or E
 - Explain why we know it’s biologically recovered, robust
 - o Genetically healthy
 - o Vital rates are good
 - Change language at beginning of notice to address current emphasis on carrying capacity at beginning of rule (not about carrying capacity but about being biologically recovered)
 - Jennifer with IGBST

Comment topics related to delisting

- Pro/con delisting
 - o Address like address recovery pro/con above
- Ohio State Survey (in popular press)
 - o DISCUSSION OF SOLUTION:
 - Approach researchers → Jennifer
 - Summary of conversation in email (do you concur?) for the record
 - We believe not a representative sample because know no one from states, IGBST, etc. responded
 - Don’t know expertise, qualifications of these people. Respondents not necessarily familiar with legal standards of ESA
 - Jennifer/Alex
- Commenters cited Section 4(a)(1) and requested 5 factor threats analysis outside of DMA (for whole DPS)

- **Highlights from Public Comments**
 - No regulations outside of DMA at all
 - May have lost a case because didn't address entire entity in factor analysis...
- **DISCUSSION OF SOLUTION:**
 - **Option 1:** Argue address in SPR section
 - **Option 2:** try to address in 5-factor analysis
 - For each factor, acknowledge that each factor not ameliorated outside DMA?
 - If do not discuss, could be vulnerable to incomplete threats assessment
 - **Option 3:** Address in introductory habitat management section (13178) to set the stage
 - Focused on areas that are biologically capable of recovering species
 - Can't say we don't need to address threats outside DMA
 - Acknowledge higher threat outside but don't need those areas to recover species
 - See issues 9-11 in Wyoming wolf final rule
 - **Need to think more**

General comments

- Trust in data
 - **Public comment:** Don't trust science, lack of transparency, monopoly so don't share data
 - **DISCUSSION OF SOLUTION:**
 - Sensitive data is not shared (e.g. location data)
 - Response to comment
 - Look at 2007 rule
 - **Jennifer writes response**
- Type II errors
 - **DISCUSSION OF SOLUTION**
 - Explain IGBST
 - Best available science response
 - **Jennifer writes response**
- Managed threats?
 - **DISCUSSION OF SOLUTION**
 - We are not claiming these are not threats but rather that they have been ameliorated to the level that they no longer could result in the extinction of the species in the near future
 - **Jennifer writes response**
- Modifying boundaries
 - **Highlights from public comments:**
 - Don't include upper green in DMA?
 - Expand DMA to include wilderness lands adjacent to DMA
 - DPS expanded to whole state of Montana
 - **DISCUSSION OF SOLUTION**

- Reiterate definition of suitable habitat and how we defined the DMA boundaries
 - Explain that any proposed changes to DMA/DPS in comments inconsistent with how we defined DMA or how you can apply DPS (or is this too much detail?)
 - Jennifer writes response
- Taxonomy
 - Highlights from public comments:
 - Update taxonomic reference
 - Don't change
 - DISCUSSION OF SOLUTION
 - We are keeping the same
 - Scientific disagreement
 - Jennifer writes response
- Wilcox 2016 quote
 - DISCUSSION OF SOLUTION
 - States have developed adequate regulatory mechanisms to maintain a recovered population
 - Jennifer writes response
- Commenters expressed concern that CS and state plans not final
 - DISCUSSION OF SOLUTION
 - CS and state plans now final
 - We gave public opportunity to comment on rule in light of the state plans and federal agency management plans (which together make up the contents of the final conservation strategy; CS not a regulatory doc, just summarizes)
- Commenters expressed concern that there was inadequate public involvement
 - Highlights from public comments:
 - Inadequate time?
 - DISCUSSION OF SOLUTION
 - Provided adequate notice of rulemaking through FR, news articles, public hearings. Could provide comments through regulations.gov, mail, etc.
 - Alex will write
- Section 7
 - Public comment: we say that Bitterroot could be re-colonized by GYE or NCDE
 - DISCUSSION OF SOLUTION
 - WY wolf rule, search for Section 7
 - Not required but even if it were there would be no jeopardy
 - RO will write (Alex work with Doug)
- Tribal concerns: guarantee of government-to-government consultation
 - DISCUSSION OF SOLUTION
 - Quote secretarial order, recognize responsibilities
 - Requires that we consult as early in the process as possible. We feel we complied with this by having multiple consultations (formal and informal) throughout the process including this tribe on XX date (Ivy has info on consultations)
 - Alex will write
- Tribal concerns: Cultural significance and treaty rights
 - DISCUSSION OF SOLUTION

- Considered what tribes had to say about spiritual importance
- Nothing presented superseded the ESA's requirement to make these decisions solely based on best scientific and commercial data available. Sensitive to concerns and willing and able to continue the conversation after the delisting
- Alex will write

Comment topics related to Factor B

- Pro/con
 - DISCUSSION OF SOLUTION
 - Summarize arguments for and against hunting (Trophy hunting)
 - After delisting, hunting is under purview of the states (up to them to make decisions about whether to open a season)
 - Jennifer writes
- Hunting boundaries: PCA as secure area?
 - Public Comment: PCA as "secure area" that minimizes human-caused mortalities, source population → gives false impression that there won't be hunting in PCA
 - There can't be hunting in a secure area; by definition, would not be secure
 - DISCUSSION OF SOLUTION
 - Change statement claiming to be a "secure area"; use different language, be more explicit
 - Jennifer
- Hunting boundaries: JDR, inholdings in GTNP
 - DISCUSSION OF SOLUTION
 - Response to comment → Look at WY wolf for example
 - Jennifer
- Hunting boundaries: food aggregate sites
 - DISCUSSION OF SOLUTION
 - Talk with states about timing of season (not overlap with moth sites)
 - Jennifer
- Hunting boundaries: connectivity areas
 - DISCUSSION OF SOLUTION
 - Response to comment
 - Jennifer
- Mortality limits
 - Public comment: Need to be more conservative to allow for all the sources of error
 - DISCUSSION OF SOLUTION
 - IGBST writes response for how 7.6% is sustainable, explain basis of 7.6% (peer reviewed published paper)
 - Public comment: No biological basis for 9 and 10% mortality and concerns for delay in our ability to respond to population decline
 - DISCUSSION OF SOLUTION
 - Ask states to explain biological basis for 9 and 10%
 - Validate power of detecting declines with study team modeling
 - Jennifer facilitates
 - Public comment: Need limit outside DMA
 - DISCUSSION OF SOLUTION

- Policy decision, not biology decision because population outside the DMA not necessary for recovery
 - Mortality that occurs in those areas doesn't matter to population
 - Look at 2007 final rule for example (14881, Issue 8)
 - Mortality in places where connectivity most likely counts towards mortality limits, is regulated (because they are part of the DMA, specifically just carved them out)
 - Do not expect the rest of areas outside DMA, but in DPS, to contribute towards sustainable population
 - If leave DPS, fully protected under ESA
 - Jennifer writes
- Calculation of total and background mortality
 - **Public Comment:** Total mortality vs. discretionary mortality → still confusing
 - **DISCUSSION OF SOLUTION**
 - Clarify!
 - Provide better definition of what discretionary means (there is discretion in how deal with problem bear)
 - Example background calculation table and calculations
 - Include table from public hearing instead
 - Update explanatory language
 - Make clear what table addresses
 - More verbage on how cohorts calculated
 - Explain how address governor's concerns (Gov. Mead wanted to remove this table and explanation)
 - BUT how calculate background mortality not agreed upon prior to proposed rule
 - Discuss this with Steering Committee
 - Update in rule and add to Chapter 2 of Conservation Strategy
 - Also consistently clarify total mortality in the Conservation Strategy
 - Jennifer consults with Steering Committee and writes
- Public comments expressed interest in buffers around the parks
 - **DISCUSSION OF SOLUTION**
 - Response 25 WY wolf
 - No biological basis
 - We don't have the authority to do that unless compromises viability of entity, which doesn't
 - Jennifer will write
- Public comments expressed interest in moratorium on hunting immediately following delisting
 - **DISCUSSION OF SOLUTION**
 - State's purview
 - Response 25 WY wolf
- NPS discretionary mortality
 - **DISCUSSION OF SOLUTION**
 - Park Service will be allowed to remove bears
 - Will count against total allowable mortality. If exceeded, will be reduced in following year
 - Steering Committee will draft response

Comment topics related to Factor C

- Public comment: Frequency of diseases and parasites increase with climate change
 - DISCUSSION OF SOLUTION
 - Response
 - Jennifer will write
- Human-caused mortality
 - Talk to Matt about projected numbers from IGBST; preliminary data will be reported from IGBST at the fall YES meeting
 - DISCUSSION OF SOLUTION
 - Response
 - Jennifer will write
 - Maybe move to Factor B?
- Poaching: relationship between hunting and poaching
 - DISCUSSION OF SOLUTION
 - Need to address uncited statement that hunting reduces poaching (change rule)
 - Maybe move to Factor B?
- Public comments expressed concern about having adequate resources to investigate poaching
 - DISCUSSION OF SOLUTION
 - Response to comment
- Public comments expressed concerns that natural predation would be underestimated
 - DISCUSSION OF SOLUTION
 - Response to comment
- Public comments expressed concerns about trafficking in bear parts in delisted area
 - DISCUSSION OF SOLUTION
 - We're not concerned about it
 - No data to indicate this will be a problem. Not listed in Alaska so nothing would really change (already have this dynamic and not a problem)
 - Hard to tell where it came from
 - Talk about Alaska?
 - Internationally → still under CITES? Is it under CITES?
- IGBST conflict reduction report
 - DISCUSSION OF SOLUTION
 - Comment response

Comment topics related to Factor D/Post-delisting monitoring plans

- Be clearer/firmer in language
 - DISCUSSION OF SOLUTION
 - Use will instead of may, if we can
 - Remove "anticipated, expected" from references to state plans
- Public comments expressed that we can only consider existing regulatory mechanisms, can't consider expected regs or plans
 - DISCUSSION OF SOLUTION
 - These regs will be final before we publish final rule
- MOA/Strategy DOC
 - DISCUSSION OF SOLUTION
 - Comment response: Case law helps us

- Public comments expressed concerns that the FS, state plans, YNP compendium inadequate
 - **DISCUSSION OF SOLUTION**
 - Comment response: They are adequate and they will be in place
 - Add language that pertains to what BLM will do (send to **steering committee**)
- Public comments expressed concerns that funding not guaranteed so not regulatory mechanisms
 - **DISCUSSION OF SOLUTION**
 - Comment response: see Wyoming Wolf and 2007 final rule
- Public comments expressed concerns about adequacy of hunting reg requirements that Service gave to states
 - **Highlights from public comments:**
 - Timing of hunt
 - Identifying sex
 - **DISCUSSION OF SOLUTION**
 - Comment response
 - Shutting down hunt when female mortality reached; don't need to be able to identify
 - Can't hunt any bear with young
 - **Give to states to answer**
- Public comments expressed concerns that there were missing triggers for Service status review
 - **Highlights from public comments:**
 - No triggers for:
 - Habitat quality
 - Food items
 - Monitoring strategy doesn't have a feedback loop?
 - **DISCUSSION OF SOLUTION**
 - We monitor these things in conservation strategy
 - Don't add triggers
 - Population triggers indirectly cover other metrics: Habitat quality and food items will be reflected in the demographic triggers
 - Also, general trigger covers this, "depart significantly in application of management plans/conservation strategy" (page 105 in CS)
 - If forest service violates, will get sued. No point in having trigger for something where litigation is really likely
- Mortality triggers
 - **DISCUSSION OF SOLUTION:**
 - "routinely violated" would also trigger status review (13225)
- Trigger: "depart significantly"
 - **Public comment:** Define significantly
 - **DISCUSSION OF SOLUTION**
 - Give examples of what would or wouldn't be significant departure that leaves fuzziness in middle
- Public comment: what if states list grizzlies as predators?
 - **DISCUSSION OF SOLUTION**
 - Any change to state management that impacts to bear that leads us to believe required re-evaluation under act will be considered
 - Discussed with wolves in MT

- Other trigger concerns
 - **DISCUSSION OF SOLUTION**
 - Explain away
- Connectivity
 - **DISCUSSION OF SOLUTION**
 - Explain away
- Nuisance/conflict bears
 - **Public comment:** Defining discretionary mortality
 - Already addressed above
 - **Public comment:** Concern that treatment of nuisance bears will be less conservative upon delisting
 - **DISCUSSION OF SOLUTION**
 - As long as within mortality limits, shouldn't be a concern
 - Incentive to be more conservative because then more allowed for hunting
 - **Public comment:** What's human safety?
 - **DISCUSSION OF SOLUTION**
 - No written protocol, some IGCC guidelines but there's precedence from 40 years of experience
 - Been done in a way that allowed for population growth throughout this entire period
 - Incentive to be more conservative because then more allowed for hunting
 - **Public comment:** Grizzly Bear Management Relocation Plan
 - **DISCUSSION OF SOLUTION**
 - No written plan but do have pre-approved states
 - **States respond**
- Service's authority
 - Explain away
- 5-year minimum review period. States don't want monitoring/management in perpetuity
 - **DISCUSSION OF SOLUTION**
 - Issued a final rule once already that explained why needed to managed in perpetuity
 - Law says "monitor effectively *for not less than 5 years*"
 - Add text recognizing that Conservation Strategy may need to grow and evolve and FWS will consider whether is evolution is a significant departure
 - Emphasize that we allow for changes
 - Need for a strategy will stay in place forever
 - **Jennifer writes**

Comment topics related to Factor E

- Genetics
 - **DISCUSSION OF SOLUTION**
 - Will brush up on literature and respond
- Food
 - **Public Comment:** Monitor body condition

- Addresses concerns that diet quality declining → if body condition doesn't decline, it's fine
- Don't monitor other foods → can't monitor everything, if monitor body condition will show us that getting sufficient nutrients

DISCUSSION OF SOLUTION

- Change in rule
- Change in Conservation Strategy
- **Public Comment:** Food sources declining
 - **DISCUSSION OF SOLUTION**
 - Comment response
- Climate change
 - **Highlights from public comments**
 - Food
 - Denning
 - Fire regime change
 - *Jennifer: Reach out to Amy Nicholas (WY FO)*
- Whitebark pine adaptive management
 - **Court order and public comment:**
 - Need to specify triggers and responses
 - What would this look like???
 - **DISCUSSION OF SOLUTION**
 - Not a threat like we thought it was before (cite new info) (somewhat new info, and somewhat changed mind)

Discussion: Forseeable future not defined in delisting rule and we need to define it?

For further discussion with Matt:

- Service status review triggers
 - 500 → 600
 - Dropping Trigger 2
 - Dropping Recovery Criterion 1
- Recalibration/Chao2 triggers
- Lag effect: detecting 10% decline could result in declines too quickly; we're seeking modeling
- Exceeding total independent female mortality limits in 2015 and possibly 2016
 - Mortality (see section in Population Parameters)
- Calculating background mortality
- NPS retaining discretionary mortality and buffer zone stuff
- Perpetuity of Conservation Strategy issue

500 = genetic health goal, not population

500 or 48 females with cubs → 48 females with cubs now translates to 600 bears because of a new sex ratio in the population

600 to 747 = 95% confidence interval. 674 = average