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THE WILDLIFE SOCIETY

RECEIVED BY U.S. FISH AND WILDLIFE SERVICE GRIZZLY BEAR RECOVERY COORDINATORS OFFICE.

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Idaho and Montana Chapters, The Wildlife Society

November 24, 1997

Dr. Chris Servheen
U.S. Fish and Wildlife Service
University Hall, Room 309
University of Montana
Missoula, MT 59812

Dear Dr. Servheen,

A joint committee of biologists was established by the Idaho and Montana Chapters of The Wildlife Society (TWS) to review the Draft Environmental Impact Statement for Grizzly Bear Recovery in the Bitterroot Ecosystem and to submit comments and suggestions. The committee members have diverse professional backgrounds in wildlife research and management. They focused collectively on the science and biology involved with an attempt to recover grizzly bears in the Bitterroots along with an understanding of the intense and varied public interest in this complex issue.

The Idaho and Montana Chapters of TWS support grizzly bear recovery in the Bitterroots. Should the effort move forward, commitments and funding must be sufficient to conduct the reintroductions and more importantly to carry out the monitoring that will be imperative during this undertaking. In our opinion, the procedures for reintroducing grizzly bears need further refinement. The following review summarizes comments and suggestions of the committee and we hope they will be incorporated into the final actions to restore this missing component to the Bitterroot Ecosystem.

The joint committee review follows.

Review of the Draft Environmental Impact Statement for Grizzly Bear Recovery in the Bitterroot Ecosystem by the Idaho and Montana Chapters of The Wildlife Society, November, 1997.

INTRODUCTION

Grizzly bears (Ursus arctos) once ranged over much of the western United States, including the Selway-Bitterroot area of Idaho and Montana. As in many other areas, grizzly bears were eliminated from the Selway-Bitterroots by humans and now occupy less than 5% of their historic range in the lower 48 states. Currently, less than 1,000 grizzly bears persist in the contiguous 48 states, inhabiting isolated areas in Montana, Idaho, and Wyoming. Attempts to stem the decline of grizzly bears and their reduction in distribution is warranted for many reasons.

The number of grizzly bears and their range will likely increase as a result of reintroductions into the Bitterroot Ecosystem (BE) and thereby increase long-term viability. The concepts of reintroducing grizzly bears to the BE is supported by the Idaho and Montana Chapters of The Wildlife Society (I&M-TWS). Mechanisms to achieve that goal, as outlined in the Draft Environmental Impact Statement (DEIS), are not entirely clear and need further refinement.

1 It seems ironic that with such a complex issue, only 2 alternatives were developed that support the purpose and need for action. The I&M-TWS do not support alternatives 2 or 3. Elements of alternatives 1 and 4 are supportable, but neither alternative adequately outlines what I&M-TWS considers the best biological/administrative alternative. Our review addresses specific issues, largely biological, on which a hybrid course of action might be charted. Summary recommendations are in bold type.

CITIZEN MANAGEMENT COMMITTEE

Sharing implementation of the Endangered Species Act by empowering a local citizens group is a novel approach in endangered species activities and has great potential to move grizzly bear recovery forward. However, the concept of reintroducing grizzly bears in the BE is an exceedingly complex biological endeavor, involving issues that challenge the very best ecologists. It would be difficult for people unaware of the history of population ecology, the right and wrong logic of the past and the counter-intuitive insights that come from modern quantitative ecology to make credible decisions on subtle biological issues with far-reaching implications. Because of this biological complexity, it will be essential for the scientific community to have co-ownership in design, implementation, and evaluation of reintroduction efforts.

2 For example, the DEIS states that the CMC would decide whether or not reintroduction was "successful" after 10 years (p. xvi, p. 2-9). Evaluation of probable viability of a population following a translocation is one of the most challenging, cutting-edge questions in applied ecology, embracing an intensely complicated area of research. The same could be said of the decisions on "changes in land-use standards and guidelines as necessary for grizzly bear management" (p. xv) that would be made by the CMC. These decisions revolve around complex biological issues; informed and credible decisions will depend on the best scientists working with citizens and agency representatives. To deal with that complexity, we suggest that the CMC be recast as a Co-Management Committee that includes not only citizens and agency personnel, but also scientists recommended by the National Academy of Sciences. The mission of the Co-Management Committee would explicitly be that of establishing a viable population of grizzly bears in the BE. This co-management committee would function as outlined in the proposed alternative.

Recommendation: Under the special rule, replace the Citizen's Management Committee with a Co-Management Committee consisting of citizens, agency representatives, and scientists.

EXPERIMENTAL, NON-ESSENTIAL POPULATION DESIGNATION

3 The committee supports, but has concerns about, designating this reintroduced population as experimental, non-essential. We understand the management flexibility and increased local acceptance/palatability such designation provides, but are concerned about excessive human-related bear mortalities, especially during initial phases. Minimizing bear mortalities during the first several years will be crucial to the success of this endeavor. We support the role of agency personnel in dealing with bears whose interactions with humans are problematic (e.g. p. 2-17); such actions emphasize bear protection within the experimental, non-essential designation. The proposed alternative provides for replacement bears for those lost as a result of human actions (p. xvi, p. 4-6), but some human-related mortalities may go undetected and sources to obtain replacement bears may not be available (see donor population comments).

Recommendation: Agencies should be allowed to follow current guidelines, as allowed in other ecosystems under fully threatened status, until new guidelines are proposed and accepted by the management committee.

4 The non-essential, experimental designation requires a reintroduced population to be isolated at the time of initial reintroduction. While this requirement is understood for the purposes of this designation, management plans should move aggressively toward linking BE bears with other populations to help insure population persistence in both the BE and other areas. The isolation requirement for experimental, non-essential should not preclude work toward linking various grizzly populations (see next section: "Isolation versus Connectivity").

Recommendation: In concert with the effort to link this and other grizzly populations, we recommend intensified efforts to develop and manage effective linkage zones and recover grizzlies in the other ecosystems.

ISOLATION VERSUS CONNECTIVITY

The DEIS develops a foundation for linkage zones and interchange among grizzly bear sub-populations as essential for long-term persistence (p. 1-5), yet the preferred alternative does not designate linkage zones. Successful re-colonization of the BE by grizzly bears has not occurred during the last 50 years and is very unlikely to occur, confirming the lack of effective linkages. If grizzlies become re-established in the BE, another isolated population may exist with all the inherent problems currently affecting the other island populations of grizzlies in the lower 48 states. Additionally, such isolation for an extremely small, initializing population would have more dramatic effects that would hinder or perhaps preclude population growth and establishment without large inputs of bears. We recognize establishment of linkage zones will be difficult, especially given recent rates of human development that continue to erode these areas.

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An isolated population is generally much more susceptible to extinction than a population that experiences gene flow with other populations, for both demographic and genetic reasons. It is important to stress that the advantages of connectivity magnify when population growth rates are inherently low, as in grizzly bears, because slow-growing populations are less able to escape the small numbers that make them most susceptible to extinction from demographic and genetic problems. Other forms of connectivity, such as helicopter movement among bear populations, are an unpleasant but possibly necessary alternative for successful linkages of bear populations.

Recommendation: Linkages between the reintroduced population and other populations should be pursued aggressively as soon as possible. To the extent that linkages are not developed, the DEIS should make extremely clear that an isolated population is not part of a metapopulation, and does not incur the advantages of a metapopulation described on p. 1-5. Additionally, expanded clarification of ongoing research on linkages such as described on p. 2-24, should be included in the proposed alternative.

DONOR GRIZZLY BEAR POPULATIONS

The committee supports the use of bears from other populations if such loss does not jeopardize recovery thresholds established for the donor ecosystems. To succeed, a thorough evaluation of the population size and dynamics of the donor population will be needed and should go beyond simple assessment of recovery plan mortality thresholds. We further suggest that no one ecosystem, or area within an individual ecosystem, be over-exploited as a source for donors. Genetic diversity will be maximized, and impacts on the local population will be minimized, if a

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concerted effort is made to draw bears from broad areas.

5 **Recommendation: Require the Co-Management Committee to review current information, propose additional analyses, and provide recommendations to minimize potential impacts to donor populations.**

ADEQUACY OF NUMBERS RELEASED AND RELEASE SITES

The DEIS does not convincingly justify that the preferred alternative minimum target of 25 bears over 5 years would have a high probability of success. There are numerous examples of isolated brown bear populations persisting at extremely low numbers and exhibiting no measurable population growth. A target introduction population of 25 bears in the Selway-Bitterroot over 5 years does not insure that the internal dynamics and behavior attributes for population growth will be in place. Although 25 bears is numerically sufficient to establish a nucleus of bears under the best of circumstances, we suggest that a positive and reliable indication of long-term population growth will not be realized for at least 20 years, after which growth rates will likely be less than 4%.

Validation of population growth rates must continue until the recovery goal is achieved. Growth rates may be lower than outlined in the DEIS and monitoring will likely be required for a longer time than anticipated. This monitoring will require long-term measurements of survival and reproductive rates based on data collected from marked bears.

6 **Recommendation: Analyses of population growth models, and scientific review of these outcomes, should be clearly explained as part of the EIS. The Co-Management Committee should monitor success and have the flexibility to modify the number of bears reintroduced, if necessary.**

Before any releases occur, the spatial organization of release locations should be assessed with rationales for site selection, site retention of bears, stocking density, time of year for release, sex and ages of released bears, juxtaposition, etc. We suggest releasing bears in the most productive habitats first and matching as much as possible the habitats from which the donor bears originate. Female bears nearing reproductive age released in the spring with males may help retain bears in
7 an area and begin establishing traditional use areas that should foster population establishment. Analysis of reproductive value may give demographic insights into the relative impact of using certain age classes in the reintroduced population (as well as the effect of removing those age classes from the donor populations).

Recommendation: Biological consideration for translocation sites should be clearly evaluated in a biological management plan prior to release of bears.

RECOVERY GOAL

The recovery population goal should be refined and solidified from the current statement that establishes "a tentative recovery goal of approximately 280 grizzly bears . . ." (p. xv, p. 2-9). While we understand this effort is an "experiment", there is no basis to believe that an isolated population of 280 is a legitimate size to be considered "recovered". Similarly, the section addressing "What is a Viable Grizzly Bear Population?" (p. 1-16) gives the estimated density of bears expected based on summing guesses across predicted densities at varied habitat quality levels across the BE. From a biological perspective focused on the expected dynamics of a reintroduced population, achieving an "average" density in an area is not the same as a viable population. A viable population is one that has a reasonably high probability of persistence for some specified time in the future. Population **density** is one component, but expected vital rates and population **numbers** are equally essential. A single-population census size of 280, the "recovery" size under the preferred alternative, is perhaps 2 to 20 times smaller than viable population sizes found in analyses of other isolated vertebrate populations.

More analysis is needed to demonstrate where, how and why the recovery goal target will result in a self-sustaining population. Milestones should be developed to assess progress on population establishment, provide feedback for development of adaptive management strategies, and to provide a basis for decisions about continuing the effort.

8 **Recommendation: The DEIS should clearly state in several locations that the population goal of 280 should not be confused with either a viable population, or an actual recovery goal. A range of recovery goals for analysis may be more appropriate until more information becomes available following bear use of the area and potential viability modeling using parameters developed through actual BE data.**

HABITAT

Habitats at translocation sites in the BE should be reasonably similar to habitats at donor bear origins.

The recovery area boundaries were apparently established on socioeconomic grounds as much as on their suitability for bears. Boundaries were adjusted from what was originally proposed for a variety of reasons, resulting in uneven habitat information throughout the recovery area. This limits the ability to predict bear population potentials and has a substantial influence on the
9 ability of the whole recovery area to support 280 bears. The final EIS should include all evaluations of grizzly bear habitat in central Idaho.

9 **Recommendation: Habitat quality should be more closely analyzed for the BE, including all areas evaluated for grizzlies in central Idaho, to assure adequate habitat exists to achieve recovery goals.**

IMPLEMENTATION AND MONITORING

10 Special rule development should be further refined to assure the primary goal is to recover grizzly bears in the BE. The co-management committee should determine minimum definitions of success based on biology and time frames for evaluation. Short-term mortality rates will have a great influence on the ultimate ability to re-establish bears. The combined committee must develop measurable milestones for population growth and relationships to habitat and apply adaptive management principles to promote population establishment.

Recommendation: The Co-Management Committee should define milestones for evaluation and monitoring, and the special rules should outline those criteria and mission statement that bear recovery is their primary objective.

This review of the DEIS was approved by the Boards of the Idaho and Montana Chapters of TWS. Thank you for the opportunity to comment.

Sincerely,

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