

REPORT OF THE TECHNICAL REVIEW TEAM:
EVALUATION OF THE BITTERROOT AND NORTH CASCADES
TO SUSTAIN VIABLE GRIZZLY BEAR POPULATIONS

A Report to the Interagency Grizzly Bear Committee

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BACKGROUND

The Bitterroot and North Cascades areas were specified in the listing notice for the grizzly bear in 1975 as two of the six areas that contained or might contain a grizzly bear population at that time. Both areas were also listed in the 1982 Grizzly Bear Recovery Plan as places where grizzly bears were thought to exist. In 1982, however, limited and questionable information was available on grizzly bear distribution and habitat values for these areas. Because of this lack of information, no recovery area lines were delineated for the Bitterroot or North Cascades in the 1982 Grizzly Bear Recovery Plan.

To evaluate the capability of the habitat in the Bitterroot and North Cascades areas to sustain a viable grizzly bear population, the Northwest Ecosystems Management Subcommittee, with the concurrence of the Interagency Grizzly Bear Committee (IGBC), established a formal evaluation process starting in 1986-87. This evaluation process was scheduled to last five years. Techniques used in the evaluation process included: GIS and satellite mapping of habitat; ground mapping of habitat and checking satellite-based habitat classifications; delineation of the presence, abundance and diversity of grizzly bear foods; delineation of habitats of seasonal importance and their distribution based on the habitat mapping and foods data; evaluation of the extent, quality, and availability of spring ranges in each area; and delineation of human activities such as roads, habitation, timber harvest, and recreation, especially within spring ranges. The evaluation has been carried out by an interagency team for each area. Membership of the team included representatives from the Forest Service, Park Service, Washington Department of Wildlife, the Idaho Fish and Game Department, and private contractors with expertise in mapping and remote sensing. The evaluation process for both the Bitterroot and the North Cascades was completed in 1991.

A Technical Review Team established by the Northwest Ecosystems Management Subcommittee is to review the habitat and bear distribution data gathered during the five-year evaluation process. The Technical Review Team is made up of experienced grizzly bear biologists and habitat specialists with no direct involvement in the evaluation process. The Technical Review Team is specifically charged with evaluating the habitat and space values for each area based upon habitat mapping, bear food diversity and availability, seasonal habitats, and human activities. The Technical Review Team is to make a decision on the capability of the habitat in each area to sustain a viable grizzly bear population based on habitat values and space. The decision of the Technical Review Team was given a preliminary report to the Northwest Ecosystems Management Subcommittee in November 1991 via the management working groups for the

Bitterroot and North Cascades respectively. The Northwest Ecosystems Management Subcommittee will make a recommendation to the IGBC at the December 1991 meeting whether to pursue recovery in these areas based on the Technical Review Team review of the results of the evaluation process.

This report presents the results the Technical Review Team review.

PHYSICAL ATTRIBUTES TO SUPPORT GRIZZLY BEARS

It is the opinion of the Technical Review Team that the North Cascades and Bitterroot areas contain the physical attributes to sustain viable grizzly bear populations. A viable grizzly bear population cannot be exactly specified in numbers, but when we speak of a viable population we presume that this would include 200-400 bears interacting as a single population in each area. A grizzly population of this size would not require demographic manipulation. Such a population, if isolated from other grizzly bear populations for a long period of time, may require placement of a minimum of one bear from another area into the breeding population every 10 years to assure genetic viability.

The data compiled by the evaluation teams as detailed in the accompanying reports show that physical space, vegetative diversity, abundance and diversity of bear foods, seasonal distribution of foods, and seasonal habitat needs are available in sufficient quantity and quality in both areas to sustain 200-400 grizzly bears in each area. Both areas contain significant areas of wildlands with minimal disturbance and manipulation by humans.

The Bitterroot evaluation area is 3,465,956 acres or 5416 square miles. Of the Bitterroot evaluation area, 1,710,677 acres or 2,672 square miles are designated as Wilderness. Private lands make up 2.4 percent of the evaluation area. A significant amount of wilderness lies to the south of the evaluation area as the Frank Church River of No Return Wilderness. No national parks occur within the evaluation area.

The North Cascades evaluation area is 6,473,264 acres or 10,114 square miles. Of the North Cascades evaluation area, 1,887,038 acres or 2,948 square miles are designated as established wilderness. Private lands make up 10 percent of the evaluation area. A significant amount of habitat known to contain grizzly bears occurs in British Columbia adjacent to the evaluation area. North Cascades National Park is within the evaluation area and measures 500,740 acres or 782 square miles.

The Technical Review Team considered assignment of habitat coefficients to the habitat values generated by the evaluation

teams. We rejected the habitat coefficient approach, however, because we do not know enough about grizzly bear use of the habitats in these areas. With further work on grizzly bear food habits within these areas, the application of habitat coefficients may be possible.

Our conclusion that these areas do contain sufficient values for space, foods, and seasonal values is based on the detailed information in the attached reports.

PAST BEAR HISTORY AND PRESENT DISTRIBUTION

The Bitterroot area once had an abundant grizzly bear population as evidenced by the fact that the Lewis and Clark expedition killed 6 grizzly bears along the Clearwater River near present-day Kamiah, Idaho. Unfortunately grizzly bears in this area were subject to intensive and unlimited persecution until the last known bear was killed in the Lochsa Valley in 1956. No verified evidence of grizzly bears has surfaced in the Bitterroot evaluation area since 1956, although unconfirmed reports occasionally occur.

The North Cascades have always had resident grizzly bears. Trapper records, explorer journals, and myths of native people all mention the grizzly on both sides of the Cascades Range. Bears have been persecuted in this area to the point that only a few individuals remain. At present, verified records of grizzly bears do exist in this area and a small number of bears still live in the North Cascades.

HUMAN INFLUENCES ON HABITAT

The grizzly bear populations of the Bitterroot and the North Cascades areas were reduced through direct, unlimited killing of bears by humans. These reductions took place over a period of perhaps 100 years from roughly 1840 to 1940. Habitat impacts such as grazing of domestic livestock, mining, timber harvest, and human settlement also affected bears. Significant regions of both areas however received relatively little habitat disturbance because of their remote mountainous nature.

A major impact to the habitat values of both areas was human impact of anadromous fish runs. Hydroelectric and regulatory dams dramatically reduced the spawning fish available to grizzly bears in both areas. Most impacts on the fisheries took place after years of excessive killing of bears for fur, livestock protection, fear of bears, and sport. The reduction of the fisheries were then a final blow to populations already severely damaged by human-induced mortality.

After review of the data on seasonal food abundance collected during the evaluation effort, the Technical Review Team concluded that grizzly bears could survive and recover in both areas given the diversity and amounts of available foods despite the reduction in fisheries. The lack of significant runs of anadromous fish should not adversely affect the recovery potential of either area.

Consideration of the availability and accessibility of spring range was a concern of the evaluation teams and of the Technical Review Team. The evaluation teams were directed to give special attention to mapping potential spring range areas, determining the availability of spring bear foods, and the levels of human activities in spring range. Spring ranges are usually those in lower elevations where snow melt is early and plant phenology is most accelerated. Such areas often have human settlement and/or access which can be sites of bear-human conflicts. The data gathered by the evaluation teams demonstrates that sufficient spring habitat does exist in both evaluation areas to sustain viable grizzly bear populations. However, we recognize that current human occupancy and use patterns in both areas do affect the existing spring range areas and that active management will be necessary to limit bear-human conflicts in these areas. Such management should include public education, sanitation management of potential bear attractants, and seasonal access management (road closures) on public lands. The Technical Review Team foresees a similar level and intensity of seasonal management in the Bitterroot and North Cascades to that which already exists in other ecosystems.

One of the elements of recovery is assuring that grizzly bears have adequate seasonal habitat. The availability of habitat is only part of the habitat equation; adequate distribution of seasonal habitats across ecosystems is essential. Grizzly bears must have available and accessible seasonal habitats within their home range. We recommend that as recovery actions begin, the existing habitat data be analyzed on a grid size of approximately 100 square miles as a step toward delineation of appropriate bear management units (BMU's). This type of analysis will permit better understanding of the distribution of seasonal habitat values across each ecosystem.

The results of the evaluation team efforts have demonstrated that sufficient quality habitat does exist in both areas to maintain and recover grizzly bear populations. The major impact on the grizzly bear populations in both the Bitterroot and the North Cascades has been human-caused mortality. Human-caused mortality, not habitat capability, will be the limiting factor in the success of grizzly bear recovery in these areas. The survival and recovery of grizzly bears in these areas will require management of mortality through law enforcement, public education, sanitation, and road access management. Experience in

other grizzly bear ecosystems has resulted in extensive and detailed mortality management programs. Such mortality management must be applied in the Bitterroot and North Cascades if the grizzly bear is to survive in these areas.

Significant amounts of private lands are within the evaluation area in the North Cascades. This inclusion of private lands was done deliberately to assure that mortality management is addressed on these private lands. It is likely that grizzly bears will utilize public lands close to private lands, especially in the spring. Management of bears cannot be limited to the public lands if the bears are to recover. Education of private landowners as to how they can avoid conflicts with and mortality to grizzly bears will be essential. The Technical Review Team believes that recognition of this fact is advanced by inclusion of such private lands within the areas to be managed. This situation is similar to the inclusion of significant areas of low elevation private lands in the recovery zone of the Northern Continental Divide Ecosystem in Montana.

SUMMARY

The Bitterroot and the North Cascades offer sufficient habitat and space to support viable grizzly bear populations. Both areas contain enough remote and diverse habitat to sustain 200-400 grizzly bears interacting as a single population in each area. Given the amount of habitat available within these evaluation areas the average density of a population of 200 grizzly bears on public lands only would be 26.4 square miles per bear in the Bitterroot area and 45.5 square miles per grizzly bear in the North Cascades. Estimated densities in other recovery areas for comparison are: 8 square miles per grizzly bear in Glacier National Park; 48 square miles per grizzly bear in the Yellowstone Recovery Zone; and a range of 14 to 22 square miles per grizzly bear in the Northern Continental Divide Recovery Zone.

The Bitterroot and North Cascades areas are two of the last remaining large ecosystems capable of supporting grizzly bear populations in the lower 48 United States. Grizzly bears have one of the largest home range sizes of any remaining carnivore in the lower 48 states, and their range encompasses a diversity of plant communities, elevational ranges, and significant amounts of space. The Bitterroot and North Cascades offer two of the remaining opportunities in the conterminous United States to manage large ecosystems. The biodiversity that exists in these areas is of great value and the maintenance of a viable grizzly bear population in these areas will help assure that this diversity is not jeopardized. So few areas remain which can support viable grizzly populations and the associated biodiversity that accrues with management of large ecosystems,

that such opportunities should not be lost.

Management of grizzly bears in these areas includes human activities. Significant experience is now available to allow the management of grizzly bears in balance with human activities. The recovery of grizzly bears in these two areas will require a review of all existing human activities to assure that they are compatible with grizzly bear survival.

The demise of the grizzly bear from 98 percent of its range in the lower 48 United States took less than 100 years. Isolation of small grizzly populations through displacement of bears from habitat and habitat destruction accelerated this decline. The creation of island populations of grizzlies had proceeded to the point that when the grizzly was listed as threatened in 1975, it only existed in 6 separate island populations in less than 2 percent of its former range. Such island populations are vulnerable to genetic and demographic problems. In order to increase the probability of the continued survival of these small populations of bears, consideration should be given to the possibility of not precluding movement between existing populations. Due to its location and size, the Bitterroot area offers the highest potential to provide linkage between the Northern Continental Divide Ecosystem, the Cabinet-Yaak Ecosystem, and possibly the Yellowstone Ecosystem.

The North Cascades area is contiguous with grizzly bear habitat in British Columbia. The grizzly population in the British Columbia portion of the North Cascades is small and isolated from contiguous habitat to the north. Every effort should be made to increase and enhance cooperation between management authorities in the United States and Canada in the management of the North Cascades grizzly population. The North Cascades ecosystem is one area on both sides of the international border and it should be jointly managed as such. Because of the isolation of this area, the Canadian and United States authorities are mutually dependent upon each other to maintain a grizzly population in this area.

In summary, the Bitterroot and North Cascades areas are two of the remaining large ecosystems in the lower 48 United States that can sustain 200-400 grizzly bears. The present low numbers of grizzly bears in the North Cascades and lack of reports since 1956 in the Bitterroots are due to excessive human-caused mortality, not to loss of habitat capability. The Technical Review Team believes that the Bitterroot and North Cascades areas have the capability to support viable grizzly bear populations.

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STATEMENT OF THE IGBC
ON THE NORTH CASCADES AND BITTERROOT

The Interagency Grizzly Bear Committee (IGBC) member agencies have agreed on the pursuit of recovery for grizzly bears in the North Cascades and Bitterroot Ecosystems. In order to begin this recovery process, the IGBC will appoint working groups chaired by the States and composed of U.S. Forest Service, National Park Service, and U.S. Fish and Wildlife Service representatives. The IGBC recognizes that representatives from British Columbia will participate on the North Cascades working group. These working groups will develop a plan to address recovery for each area and develop a public involvement process. The IGBC believes that it is important that the public be informed about what recovery means and the member agencies have agreed that these working groups address this as their first priority. The IGBC directs that these working groups report on their progress at the July and December 1992 IGBC meetings.

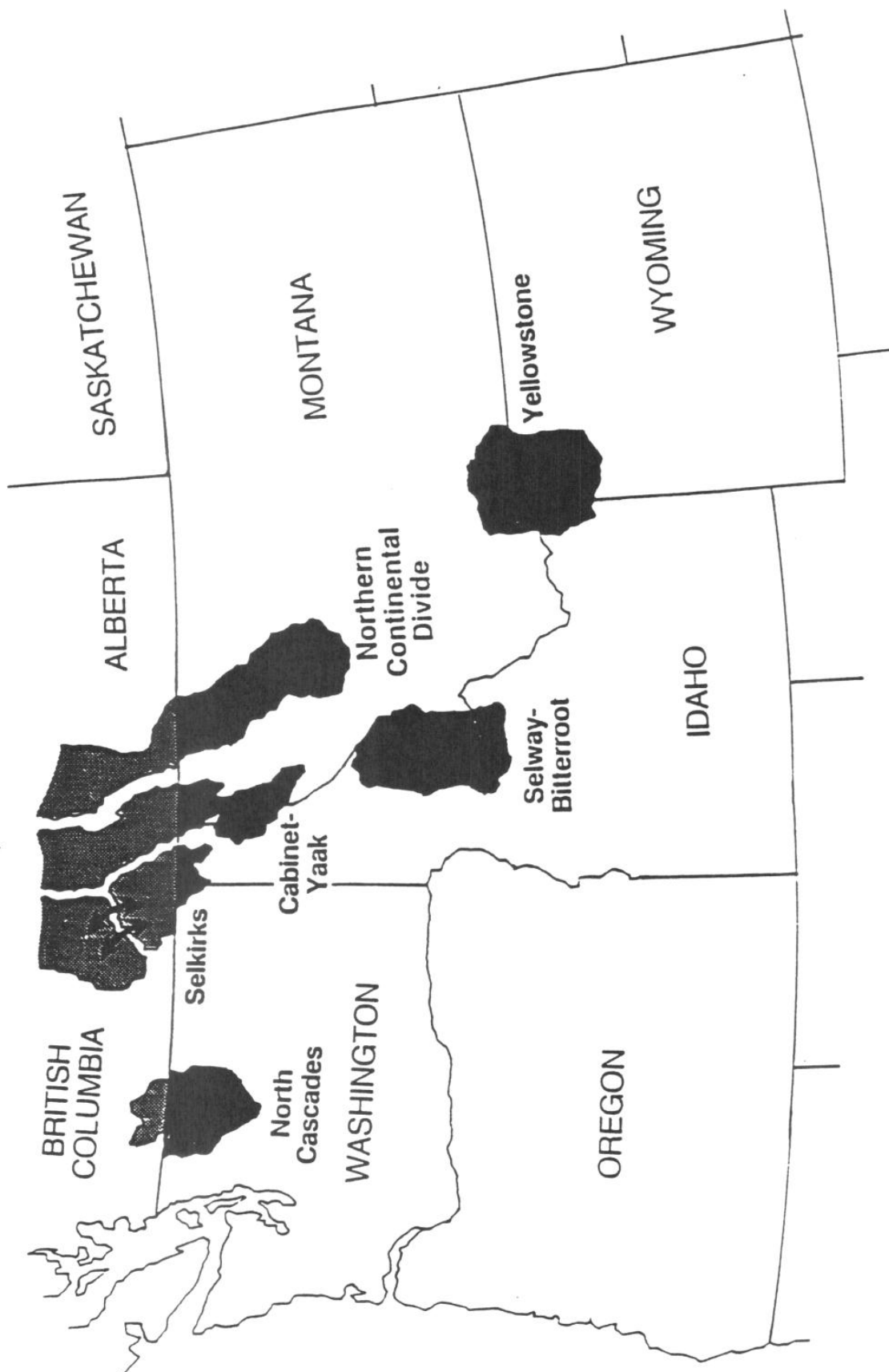


Fig. 1.

