CRITICAL HABITAT AND OTHER RESOURCE PROGRAMS IN RELATION TO GRIZZLY BEAR MANAGEMENT

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Abstract: The Endangered Species Act (1973) and the classification of the grizzly bear (*Ursus arctos*) as "Threatened" (1 September 1975) directed the Forest Service to delineate critical habitat of the grizzly bear. Critical habitat is any area necessary for the maintenance and survival of a species during any part of its life cycle. Evaluation of resource programs in terms of their actual and potential impacts on the grizzly within its critical habitat boundaries is required, based on a good understanding of grizzly habitat components. Coordination among biologists, sociologists, and economists is a prerequisite to comprehensive grizzly management. The Forest Service believes that integration of grizzly habitat needs and resource programs is possible but that the final decision on a goal statement is societal.

The Endangered Species Act of 1973 directs all federal departments and agencies to develop and maintain conservation programs for endangered and threatened species and to insure that other resource activities do not jeopardize the continued existence of such species or adversely modify or destroy critical habitat.

The Secretary of the Interior officially classified the grizzly bear as a threatened species on 1 September 1975. The Forest Service recognizes and endorses the need to identify and manage critical habitats for the grizzly bear. The determination of critical habitat must be based upon the best available biological information obtained through a deliberate and objective identification process. Since the production of various goods and services frequently entails competition among them, this nation cannot ignore the total productive potential of any of its lands. The people associated with the Critical Habitat and Land Management programs of the Forest Service must use their best professional judgement in deciding what and how much will be produced as well as where and when.

THE ESTABLISHMENT OF CRITICAL HABITAT FOR GRIZZLIES

General Definition

Critical habitat can be defined as that portion of a habitat essential to the maintenance and survival of a species during any part of its life cycle. The establishment of critical habitat is not the same as the creation of an inviolate sanctuary, wilderness area, or refuge by prohibiting any particular kind of land use or activity. Rather, within the critical habitat boundaries, federal agencies must evaluate their activities and programs in terms of the effect on the grizzly. Activities and programs having a negative effect on the grizzly's habitat are to be modified so as to have a neutral or a positive effect, or else be abandoned.

The Forest Service recognizes that some observers feel that no developmental activities can be tolerated by the grizzly. However, Geist (1971) contends that grizzly bears can coexist with man. However, he expresses concern over man's potential disturbance of habitat and the degree that man can remain a harmless part of the grizzly environment. An evaluation system must be developed that provides a fair picture of the environment and the effect that man's actions will have upon it.

An Evaluation System

Any good evaluation system must be based on research. A properly planned system should provide direction for habitat improvement. The wide variation over grizzly range makes it necessary to review each planned activity on each site. Components to be considered are:

1. Acreage affected
2. Duration of planned activity
3. Time of year
4. Grizzly seasonal habitat affected (early spring, summer, late fall, winter)
5. Expected recovery time of vegetation
6. Cumulative effects of many activities
7. Vegetative habitat types and elevations
8. Possible coordination prescription

The impact of other resource management programs and activities on grizzly bear habitat can range from negative to favorable, depending on their elements. The actual and potential impacts of all resource programs must be measured, evaluated, and documented with a good understanding of the components of grizzly bear habitat. In many cases an on-site evaluation will

aid in adjusting and modifying programs to remove adverse elements. Some flexibility will exist in most situations; however, the first priority is the welfare of the grizzly.

Coordination Techniques

Wildlife biologists in the Yellowstone area are developing a wide range of coordination techniques. Some examples are:

1. Road and trail locations and closures
2. Logging treatments — clearcuts, overstory removal, thinning, postlogging treatments
3. Fire management — prescribed burns, wildfires, slash disposal
4. Livestock grazing — class of stock, season of use
5. Protection of nonforested areas — avalanche chutes, stream bottoms, burns, meadows, sidehill parks, subalpine ridgetops

Precisely what constitutes destruction or adverse modification of grizzly bear habitat is largely unknown. Restrictive interpretations could result in significant curtailment of many uses of national forest lands, ranging from timber management and domestic livestock grazing to energy development and recreational activities. Sociologists and economists must identify and quantify the socioeconomic impacts of proposed critical habitat designations.

Determination of population goals and acceptable population densities is a prerequisite to the allocation of land for critical grizzly habitat. There are land areas where grizzly bear recovery could be realized in harmony with established or proposed land uses, but there are some areas where other uses could not be permitted.

CONCLUSIONS

Since 1959, research has contributed to the basic knowledge about the grizzly bear. Craighead and Craighead (1972) conducted grizzly research from 1959 to 1970 in the Yellowstone National Park ecosystem. In 1974, the Yellowstone Interagency Grizzly Bear Project was initiated.

Research is now under way to learn more about the biology and ecology of grizzly populations and to determine what impact man may have on their habitat. Past research on the grizzly shows that it is possible to delineate critical habitat without including all the area the bear occupies. Research results do not support the assumption that all occupied habitat is *critical* to the welfare of the bear. Inclusion of all occupied habitat, as determined by sightings since 1930, is not a sound biological basis on which to build such an assumption. The fact is that grizzly populations are not presently uniform throughout their range.

The grizzly bear possesses the ability to adapt to new habitats that have undergone some modification. Food habits studies indicate that grizzlies are omnivorous, with a high dependence on forbs, grasses, and mesophytic shrubs, and that specific sites supply important grizzly foods necessary to the welfare of the species.

With its present data base, in addition to ongoing research, the Forest Service believes that habitat requirements of grizzly bears can be integrated with other resource programs without adversely modifying the bears' habitat. Habitat protection and maintenance cannot be achieved accidentally. Through creative, skillful planning it may be possible to improve grizzly habitat through other resource programs. The final decision on a management goal will be societal. It is the responsibility of man to predict and make explicit the spectrum of combinations, alternatives, and consequences inherent in such a decision.

SUMMARY

The public is expressing concern about the welfare of the grizzly bear. Scientific and lay communities are questioning management programs. This concern was stimulated by the bear's classification as "Threatened."

The critical habitat issue is now at center stage. Previous research has provided some basic information for identification of the elements of critical habitat. Current research and studies will refine these basic data. The agencies and the scientific community working with the grizzly bear and its habitat must cooperate in developing a positive management plan for this species.

The need for well-defined goals and objectives in grizzly bear management is evident. The public has every right to be involved in designing and developing these goals and is entitled to the Forest Service's best professional guidance in planning grizzly management for the future.

LITERATURE CITED

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