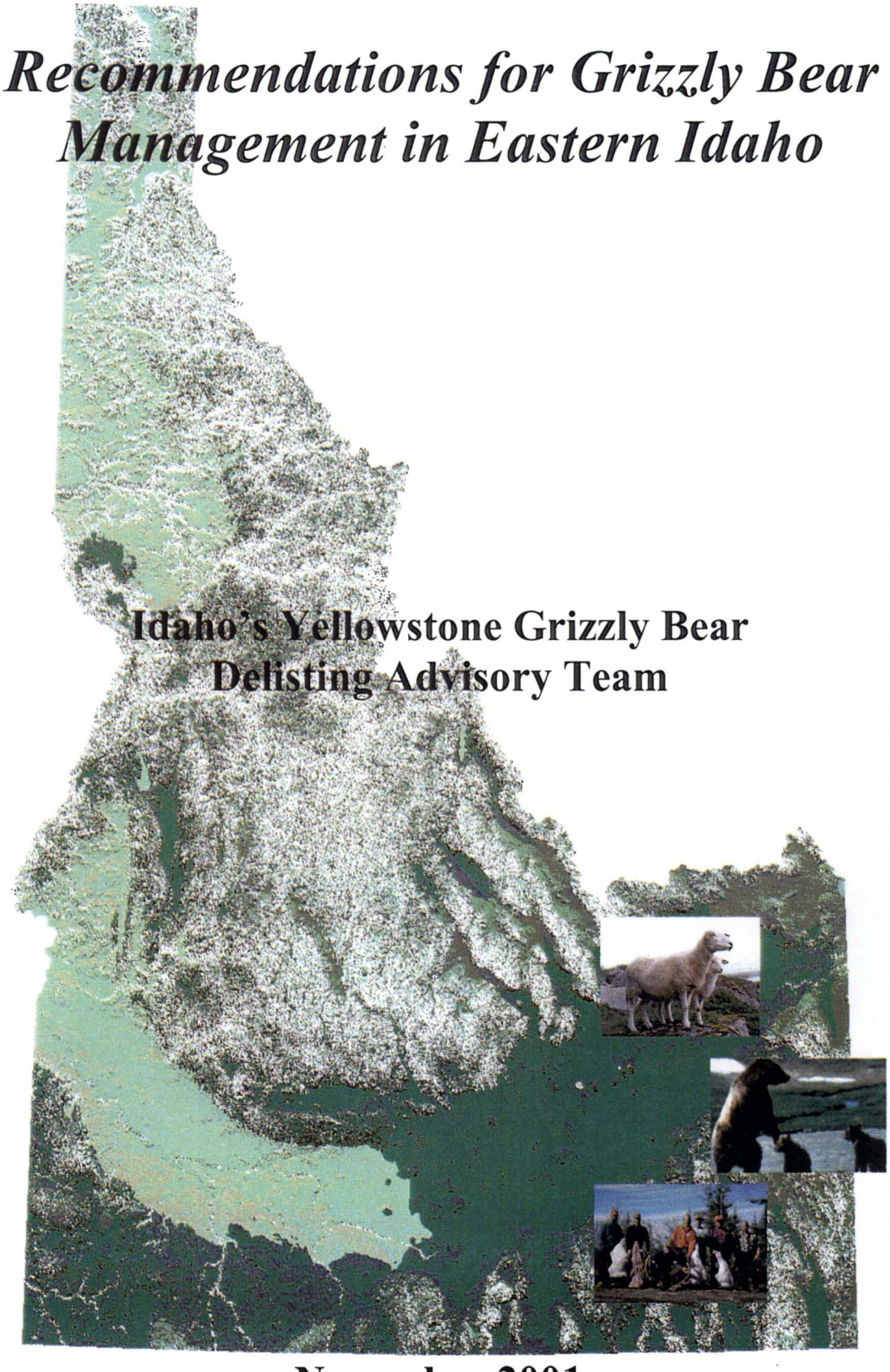
# *Recommendations for Grizzly Bear Management in Eastern Idaho*



**Idaho's Yellowstone Grizzly Bear Delisting Advisory Team**

**November 2001**

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# *ACKNOWLEDGMENTS*

Idaho's Yellowstone Grizzly Bear Delisting Advisory Team is composed of individuals from Idaho, representing a wide variety of interests. Their primary goal was to develop recommendations for management of grizzly bears in Eastern Idaho that consider all the varied landscapes, people, current land uses, culture, grizzly bear ecology, and legal requirements once the population was removed from protection under the Endangered Species Act. Without dedication of the members and willingness to work together, this project would likely not have succeeded. Members of the Delisting Advisory Team include:

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The Delisting Advisory Team was provided logistical and technical support by a number of agency personnel representing the Governor's Office of Species Conservation (OSC), Idaho Dept. of Fish and Game (IDFG), and the U.S. Fish and Wildlife Service (USFWS) including:

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Facilitator Pat Entwistle, Horseshoe Bend, provided the necessary guidance and encouragement for the Delisting Advisory Team to move forward and complete its assignment in a timely fashion.

# *INTRODUCTION*

**Background**

In the lower 48 states, grizzly bears were eliminated from 98% of their historic range during a 100-year period (Mattson et al. 1995). The 1920s and 1930s drove grizzlies to extinction throughout much of their range. Of 37 bear populations present in 1922, 31 were eliminated by 1975 (Servheen 1999). Currently there are five recognized grizzly bear populations in portions of Wyoming, Montana, Idaho, and Washington. Three of these populations contain fewer than 35 individuals. The Yellowstone population, residing in portions of Idaho, Montana, and Wyoming currently contains an estimated 400-600 individuals. The grizzly bear was listed as "Threatened" under the Endangered Species Act in 1975, with primary management under the direction of the US Fish and Wildlife Service (USFWS). After delisting, the states would assume the primary management role.

Currently, Idaho classifies grizzly bears as a Threatened species, making it illegal to take or possess grizzly bears except under certain circumstances, including scientific research, propagation, to stop damage to property and water rights and other specific circumstances outlined in 36-106(e)5 and 36-1107, Idaho Code. (Appendix I). In addition, the following Idaho State Statutes apply to management of all fish and wildlife species, including threatened species:

36-103 (a). Wildlife property of State – Preservation – Wildlife Policy. All wildlife, including all wild animals, wild birds, and fish, within the State of Idaho, is hereby declared to be the property of the State of Idaho. It shall be preserved, protected, perpetuated, and managed. It shall only be captured or taken at such times or places, under such condition, or by such means, or in such manner, as will preserve, protect, and perpetuate such wildlife, and provide for the citizens for the State and, as by law permitted to others, continuous supplies of such wildlife for hunting, fishing and trapping.

(b). Commission to Administer Policy. Authority, power and duty of the fish and game commission to administer and carry out the provisions of the Idaho Fish and Game Code. The commission is not authorized to change the state's wildlife policy but only to administer it.

36-201. Fish and Game Commission authorized to classify wildlife. With the exception of predatory animals, the Idaho Fish and Game Commission is hereby authorized to define by classification or reclassification all wildlife in the State of Idaho. Animals currently classified as 'predatory' include coyote, jackrabbit, skunk, weasel, and starling.

The Grizzly Bear Recovery Plan (USFWS 1993) identifies specific criteria that must be accomplished prior to a change in status for the grizzly bear. Along with specific population criteria that have been met, habitat based recovery criteria would be developed and a Conservation Strategy would be prepared. Amendments to the Recovery Plan and the Draft Conservation Strategy were submitted to the public for review in the spring of 2000. The habitat based recovery criteria will be finalized and appended to the Recovery Plan. The Conservation Strategy will be a cooperative management plan that describes agency interactions, regulatory mechanisms, population management, population monitoring, habitat monitoring, and habitat management that will be in effect after delisting. The Conservation Strategy only applies to the existing Recovery Zone (named the Primary Conservation Area in the Conservation Strategy) and a 10 mile buffer. While the final Conservation Strategy is in effect, there will be goals for population size and habitat status. If these goals are not met, the grizzly bear could be relisted.

The Yellowstone Ecosystem Subcommittee (YES) of the Interagency Grizzly Bear Committee (IGBC) produced the "Draft Conservation Strategy for the Grizzly Bear in the Yellowstone Area." The governors of Idaho, Wyoming, and Montana appointed a 15-member citizen roundtable to review the strategy. This Governors' Roundtable identified and reached consensus on a number of issues and provided a series of recommendations. The Governors ultimately endorsed the following recommendations:

1. A Primary Conservation Area (PCA) should be designated and managed conservatively to protect a core of secure habitat and grizzly bear numbers. They endorsed the current size and management guidelines for the PCA.
2. Agencies should establish a joint agency-citizen education committee to promote better understanding and awareness of grizzly bear conservation needs. Key messages should include realistic information on grizzly bear management, living with grizzly bears, and hunting in grizzly bear country without encountering problems.
3. The Yellowstone Grizzly Management Committee (currently YES) should be expanded to include 3 non-voting members from each state, appointed by the governors, to add citizen perspectives to management.
4. In the short term, states should continue funding essential grizzly bear recovery efforts. In the long term, better funding mechanisms are needed to distribute the cost equitably among interests that support grizzly bear conservation. The governors and congressional delegations from Idaho, Montana, and Wyoming should pursue additional federal funding.
5. State management plans for areas outside the PCA should be developed concurrently with the revision of the Conservation Strategy and should seek to:
    a. Ensure the long-term viability of grizzly bears and preclude relisting.
    b. Support expansion of grizzly bears beyond the PCA, into areas that are biologically suitable and socially acceptable.
    c. Manage grizzly bears as a game animal, including allowing regulated hunting when and where appropriate.

Recommendation #5 initiated the development of a state plan. The section of Idaho Code that created the Office of Species Conservation authorizes a procedure to be followed in development of state management plans for Threatened and Endangered species (Appendix II).

Based on the procedure, Delisting Advisory Team members were selected in July 2001. Six management planning meetings were held throughout the fall and winter of 2001. Meetings were attended by Delisting Advisory Team members, representatives of IDFG, U.S. Fish and Wildlife Service, Office of Species Conservation, regional experts on grizzly bear biology, and members of the public. Public comment was accepted throughout the plan's development. Public opinions and ideas were considered by the team and included in the plan where appropriate.

## Plan Development & Scope

This document provides the recommended components of grizzly bear management in Eastern Idaho, as developed by the Delisting Advisory Team. Upon review by the Director of the Idaho Dept. Fish and Game, Fish and Game Commission, and the Idaho legislature, these recommendations will be approved and adopted as the management plan for grizzly bears in Eastern Idaho. The primary reason for most management efforts is to ensure long-term annual benefits from the wildlife resource to the human population. Such management efforts also benefit wildlife populations. A variety of "products" are provided by healthy wildlife populations, including tangibles such as harvest, watchable wildlife, scientific values, and recreational economic benefits, and intangibles such as social and cultural values. Wildlife is held in public trust for the people of Idaho, who ultimately decide which mix of products is most desirable.

***The recommendations included within this document are only applicable to the grizzly bear population associated with Yellowstone National Park and surrounding areas. No recommendations are presented for the Selkirk, Cabinet-Yaak, or Selway-Bitterroot recovery areas. Furthermore, it is recommended that no grizzly bears from the Yellowstone population be translocated to areas outside their occupied range.***

Throughout this document the team has attempted to consider the interests of all Idahoans, as well as the needs of the grizzly bear, within biological, economic, social, and staffing constraints. If problems exist which are impossible to correct, it is important for the Department, in consultation with affected stakeholders, to re-evaluate and adjust management direction.

Upon review, final approval, and implementation of the recommendations contained within this document, it is recommended that a termination date not be established. Future management must be adaptive and responsive over time. As new data and knowledge of various biological and sociological factors are attained, management programs and frameworks will be adjusted and monitored as to their effect. An integral component to adaptive management is input and involvement by all affected stakeholders. The Department will work diligently toward informing and involving all publics interested in management of the grizzly bear.

Overall, the goal of the recommendations is to allow for the compatible co-existence of grizzly bears and humans in Eastern Idaho. Management programs and frameworks must be adaptive and responsive in order to serve Idaho's citizens as well as grizzly bears.

## Grizzly Bear Ecology

The grizzly bear is an opportunistic omnivore that readily adapts to a wide range of habitats. Historically, suitable bear habitat existed throughout North America, but current distribution is restricted to Alaska, Canada, and 4 western states (Miller and Schoen 1999, McLellan and Banci 1999, Servheen 1999). In Idaho, grizzly bears currently occupy the 'Greater Yellowstone Ecosystem' (GYE, Fig. 1), Selkirk Ecosystem, and Cabinet/Yaak Ecosystem. Grizzly bears historically occupied the Bitterroot Mountains of central Idaho, but no evidence supports current

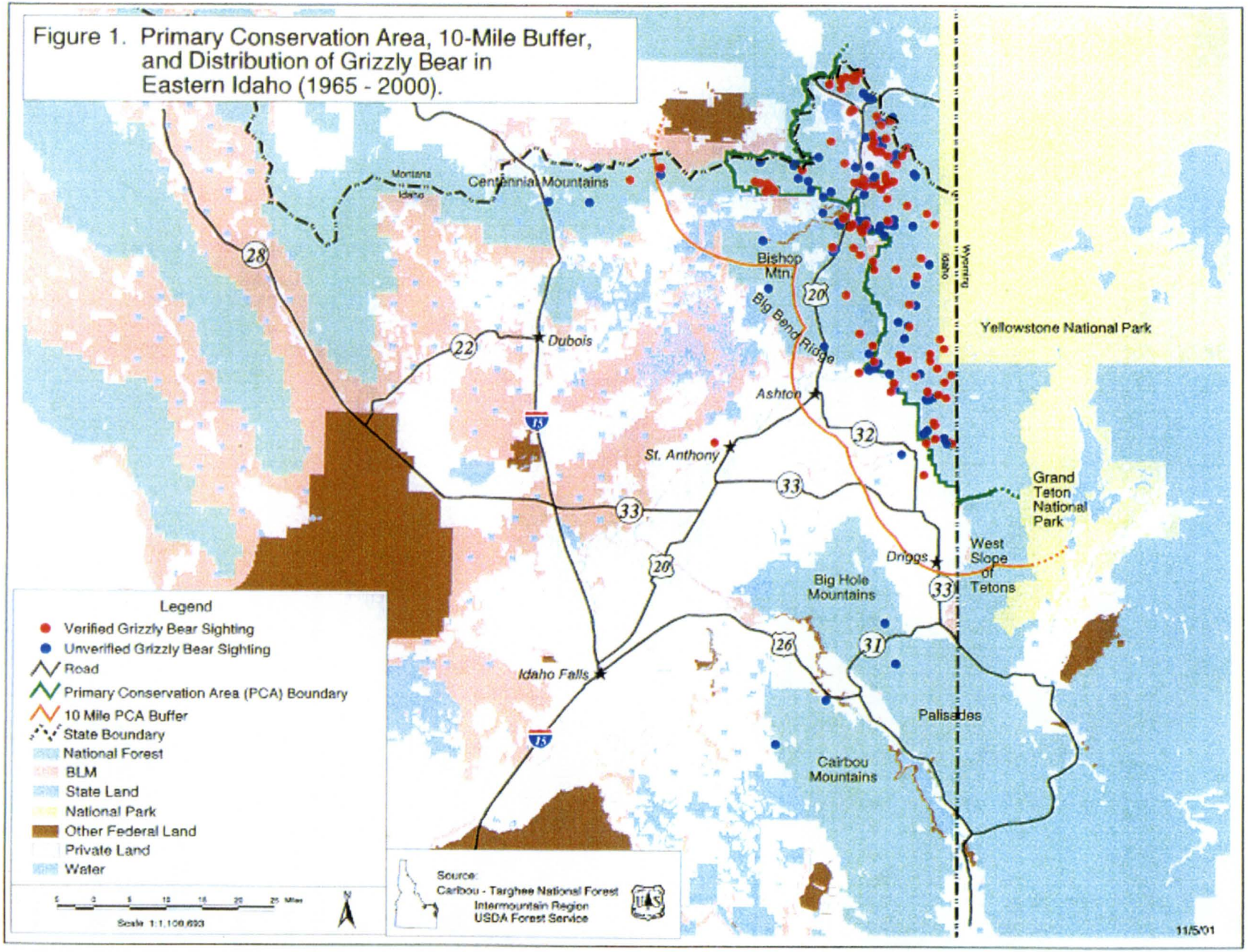
Figure 1. Primary Conservation Area, 10-Mile Buffer, and Distribution of Grizzly Bear in Eastern Idaho (1965 - 2000).
Montana
Idaho
Centennial Mountains
Bishop Mtn.
Big Bend Ridge
Yellowstone National Park
Wyoming
Idaho
Dubois
Ashton
St. Anthony
Grand Teton National Park
West Slope of Tetons
Driggs
Big Hole Mountains
Idaho Falls
Palisades
Caribou Mountains
28
22
20
32
33
26
31
15
Legend
Verified Grizzly Bear Sighting
Unverified Grizzly Bear Sighting
Road
Primary Conservation Area (PCA) Boundary
10 Mile PCA Buffer
State Boundary
National Forest
BLM
State Land
National Park
Other Federal Land
Private Land
Water
Scale 1:1,100,693
N
Source:
Caribou - Targhee National Forest
Intermountain Region
USDA Forest Service
11/5/01

occupation of the area (Melquist 1985, Groves 1987, Servheen et al. 1990, Kunkel et al. 1991). Servheen (1999) completed a review of grizzly bear distribution in the lower 48 states.

Grizzly bear home ranges within the GYE are larger than those reported for other grizzly bear populations. Larger home ranges can indicate low environmental productivity and increased foraging requirements to meet bear nutritional needs. From 1975-1987, the Interagency Grizzly Bear Study Team reported mean home range sizes from 874 $km^2$ for adult males and 281 $km^2$ for adult females in the GYE. Females with new cubs used slightly less area, and those with yearlings used more. Subadult males disperse from their natal ranges to establish new home ranges, and these spatial requirements probably limit ultimate population density.

Within the GYE, a variety of foods are available to the grizzly bear; however, seasonal variation, weather, and human disturbance can influence the bear diet. To a large degree, abundance of high-quality foods dictates body size, reproductive rates, and population density. Animal matter is arguably one of the most valuable bear foods (Welch et al. 1997, Hilderbrand et al. 1999). Bears are most successful feeding on animals that are abundant and vulnerable to their predatory skills. For some interior populations, trout may provide a high-quality seasonal food. In the GYE, it is estimated that 30-50 grizzly bears forage annually on spawning cutthroat trout (*Oncorhynchus clarki*) in tributary streams of Yellowstone Lake (Reinhard and Mattson 1990). During the spring, grizzly bear use of ungulates, both scavenged and as neonate prey, is extensive (Gunther and Renkin 1990, French and French 1990, Green 1994). The annual percentage of energy obtained from ungulate meat is considerably higher in GYE than for other interior populations (Hilderbrand et al. 1999).

Use of ungulates abates during summer as bears use habitats that supply a variety of graminoids, forbs, and root crops (Mattson et al. 1991a). Yellowstone lacks significant berry-producing habitats. Consequently, bears use high-elevation sites to feed on whitebark pine (*Pinus albicaulis*) nuts (Blanchard and Knight 1991, Mattson et al. 1991a). Pine nuts are high in fat and one of the most energy-rich foods consumed by bears. When abundant, bears use pine nuts to the exclusion of most other foods. Throughout much of its range, however, whitebark pine has been severely impacted by an exotic fungus, white pine blister rust (*Cronartium ribicola*). The rust is present and spreading in the Yellowstone area (Smith and Hoffman 1998).

Army cutworm moths (*Euxoa auxiliaris*) are also valuable seasonal foods (Klaver et al. 1986, Mattson et al. 1991b, White 1996), as they are high in lipid and calorie content (Kevan and Kendall 1997, White et al. 1999). Studies from Glacier National Park (White et al. 1999) indicate that a foraging bear can consume as many as 40,000 moths/day.

During failure of key natural food items, the search for alternative foods often results in an increase in the number of bear-human conflicts and an increase in human-caused bear mortality (Blanchard 1990, Riley et al. 1994, Blanchard and Knight 1995). Additionally, development (e.g., summer homes, resorts, campgrounds) may result in a loss of habitat, while the attraction to these sites from poor sanitation practices may result in increased human conflict and bear mortality.

Causes of mortality in grizzly bears include natural death, illegal killing, defense of life or property killings, management actions, accidents, and unknown. Human-caused mortality is the primary cause of grizzly bear deaths (Fig. 2, Schwartz et al. in press), with the majority of deaths occurring near human facilities and access routes (Knight et al. 1988). However, no human-caused bear mortalities have been documented in the past 17 years in Idaho. Recreational developments and various other human concentration areas can increase mortality rates of grizzly bears. Additionally, diverse attractants such as apple orchards, outfitter camps, and locations where people have persistently fed individual bears or unlawfully disposed of garbage have enticed bears into conflict situations, especially during periods of natural food shortage. The primary situations that result in human/grizzly conflict are: 1) food related – improper food storage or sanitation in either a backcountry, rural, or urban setting; 2) surprise encounters (e.g., sow defending cubs, bear defending a kill/carcass, bears surprised in close quarters and acting defensively); 3) human encroaching on a bear's space (e.g., photographer or tourist approaching a bear close enough to precipitate a defensive reaction; and 4) bears responding to a noise attractant (e.g., bear attracted to a hunter attempting to bugle or cow-call an elk, bears associating gunshots with a food source [carcass or gut pile]).

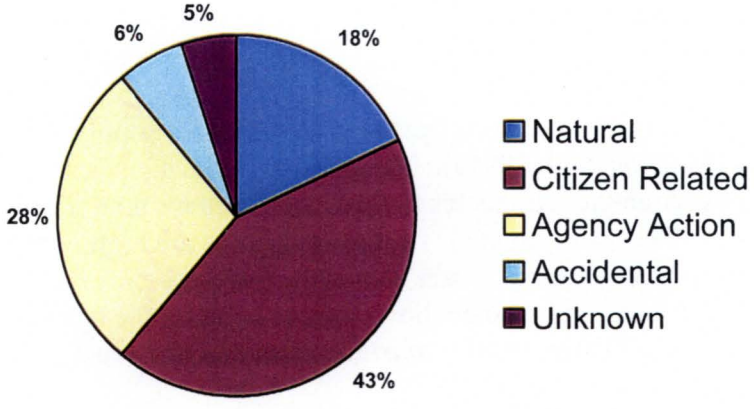


Figure 2. Causes of mortality in grizzly bears from unhunted populations in northwestern Montana and the Greater Yellowstone Ecosystem, 1975 – 1985 (Schwartz et al. in press).

In hunted populations, harvest tends to be greater in areas with access (Miller 1990a). Hunting impacts population composition in different ways, and regulations can impact the composition of harvests (Miller 1990b, Van Daele et al. 1990). Because bears are promiscuous, regulations that direct harvests toward males and away from adult females permit higher hunter quotas (Taylor et al. 1987). Not all bear deaths are detected and recorded. Miller (1990a) indicated that unreported sport or nuisance kills and wounding losses could represent significant sources of mortality that managers should consider.

Sustainable grizzly bear mortality levels are derived from estimates of population size and reproduction data (Miller 1990b). Because grizzly bears can sustain only very low mortality rates (a maximum of 5.7% was estimated by Miller [1990b]), most managers adopt conservative regulations to avoid overharvests.

Grizzly bears have a low reproductive rate relative to other mammals, a trait that critically impacts the species' survival in the presence of humans (Pasitschniak-Arts 1993, Craighead et al. 1995). The age of first litter production is dependent on maturation and body size (Blanchard 1987, Stringham 1990), which is positively related to diet quality (Hilderbrand et al. 1999). Mean age of first litter production from a sample of 15 females observed in Yellowstone National Park was 5.9 years (range = 5 – 9; Craighead et al. 1995). Cub litter size varies among individuals and populations but on average ranges between 1 and 3 young. Mean litter size has been correlated with adult female body mass; intake of dietary meat, primarily salmon and ungulates (Bunnell and Tait 1981, Stringham 1990, McLellan 1994, Hilderbrand et al. 1999); garbage (Stringham 1986); latitude (Bunnell and Tait 1981, Stringham 1984); climate; and a climate-carrion index (Picton 1978, Picton and Knight 1986). Litter size is also related to age with young and old females producing fewer cubs per litter than prime-age adults (Craighead et al. 1974, 1995; Sellers and Aumiller 1994). The proportion of cubs in any population is a reflection of reproductive performance and early mortality and should be higher for more fecund populations. Although sex ratio at birth can favor males (Craighead et al. 1974; Craighead and Mitchell 1982; Knight and Eberhardt 1985, 1987), males generally have a lower rate of survival. The overall sex ratio in bear populations tends to be skewed towards females.

**Agency Responsibilities**

Idaho Dept. of Fish and Game (IDFG), under direction from the Idaho Fish and Game Commission, will be the primary agency responsible for management of Yellowstone grizzly bears in Idaho. The Department will implement approved management actions within the financial, staffing, and legal limits that exist. Given that the grizzly bear population encompasses Idaho, Wyoming, Montana, Yellowstone National Park, and Grand Teton National Park jurisdictions, a highly coordinated and cooperative management effort among the management agencies will be necessary.

After delisting of the Yellowstone grizzly bear, the existing Yellowstone Ecosystem Subcommittee of the Interagency Grizzly Bear Committee will be renamed and operate as the management body responsible for implementation and evaluation of grizzly bear conservation within the Primary Conservation Area as specified in the Conservation Strategy. This group will continue as the 'Yellowstone Grizzly Bear Management Committee' and be responsible for:

1. Implementing the Conservation Strategy.
2. Ensuring that population and habitat data specified in the Conservation Strategy are collected and evaluated annually to monitor the current status of the grizzly bear population.
3. Sharing information and implementing management actions in a coordinated fashion.
4. Proposing management policy changes as necessary.
5. Establishing necessary task forces to implement management reviews and approved actions when necessary.

6. Identifying research needs and financial needs for management.
7. Implementing management and status reviews as necessary to ensure responsiveness of the agencies to changing circumstances of the grizzly or its habitat in Yellowstone.
8. Directing and coordinating information and education efforts.

The Governors of Idaho, Montana, and Wyoming have recommended that the Yellowstone Grizzly Bear Committee be expanded to include nine non-voting, governor-appointed members in order to provide local citizen perspectives to management.

# *DISTRIBUTION AND OCCUPANCY*

Goal: To manage a recovered grizzly bear population in eastern Idaho and to provide for a continuing expansion of that population into areas that are biologically suitable and socially acceptable. Social acceptance of grizzly bears will depend on how management issues are approached and how much faith people have in managers.

The management direction established in the Conservation Strategy will be adhered to within the Primary Conservation Area (PCA) and 10 mile buffer. This management direction is designed to maintain grizzly bear distribution and occupancy within the PCA and to keep mortalities at low levels. Management direction in the PCA has met the goals of the grizzly bear recovery plan. This management direction will allow for the grizzly bear population to grow and expand into areas outside of the PCA.

Outside of the PCA, the objective is to maintain existing resource management and recreational use and to develop a process whereby local publics can respond to demonstrated problems with appropriate management actions. By maintaining existing uses, people will feel less threatened both economically and in their lifestyles, thus building support and increasing tolerance for a greater expansion of the bear population. The key to a greater expansion of the grizzly bear population lies in bears utilizing lands that are not managed solely for them but in which their needs are adequately considered along with other uses.

The majority of the biologically suitable habitat occurs on the Caribou-Targhee National Forest. A lesser amount of biologically suitable habitat occurs on public and state lands adjacent to the National Forest land. It is also anticipated that grizzly bears will occasionally occur on private lands.

***During the next 5-10 years, it is expected that grizzly bears will occur within the primary PCA and will continue to expand outside of the PCA to the following general areas: west through the Centennial Mountains; through the Island Park Caldera and out through the Bishop Mountain area and Big Bend Ridge areas; south along the Westslope of the Tetons and into the Palisades and Big Hole Mountain areas (Fig. 1).***

Grizzly bears will be allowed to expand naturally into biologically suitable and socially acceptable areas. Bears that are trapped and relocated will only be relocated into the PCA or other already occupied areas in eastern Idaho. There will be no relocations into unoccupied areas. In areas with high potential for human/ grizzly bear conflicts, a variety of management options are available including management for lower numbers of bears.

**Motorized Access and Habitat Management**

Inside the PCA, land management agencies will incorporate and maintain the motorized access management direction contained in the Conservation Strategy. Outside of the PCA, IDFG will work with the land management agencies to achieve direction contained in approved land management plans, considering the needs of all wildlife species.

While IDFG recognizes the need to minimize negative impacts, it has no direct jurisdiction over land management activities on a majority of the land adjacent to the PCA. Therefore, IDFG will act in an advisory capacity with regard to impacts on grizzly bear habitat, encouraging land management agencies to consider the grizzly bear in their land management plans. This approach is currently used for other species and has been largely effective.

IDFG will consider the following general management guidelines when evaluating the effects of existing and proposed human activities in identified seasonally important habitats for a variety of wildlife species, including grizzly bears.

1. Identify and evaluate for each project proposal the cumulative effects of all activities, including past, current and future projects.
2. Recommend management of human activities or combinations of activities on seasonally important wildlife habitats that minimize adverse impacts on the species or reduce the habitat effectiveness.
3. Continue to provide input into the planning process for all roads and new construction; recommend minimum road and site construction specifications, and construction times, based on the needs of grizzly bears and other wildlife species.
4. Recommend that roads, trails, drill sites, landing zones, etc., be located to avoid habitat components important to grizzly bears, based on site-specific evaluations.
5. Recommend that new roads that are not compatible with area management objectives and are no longer needed for the purpose for which they were built be restricted or decommissioned.
6. Recommend that native plant species be used whenever possible to provide proper watershed protection on disturbed areas. Wildlife forage and/or cover species will be used in rehabilitation projects where deemed appropriate.
7. For roads and/or trails that remain open, recommend seasonal closures and/or vehicle restrictions based on grizzly bear or other resource needs.

**Livestock Conflicts**

Inside the PCA, IDFG will support land management agencies in achieving the livestock management direction established in the Conservation Strategy for the PCA.

On public lands outside of the PCA, while IDFG recognizes the need to coordinate wildlife and livestock management, it has no direct jurisdiction over livestock management activities. Therefore, IDFG will act in an advisory capacity with regard to impacts on grizzly bears and their habitat, encouraging land management agencies to consider the grizzly bear in their livestock management plans.

**Habitat Monitoring**

Inside the PCA, IDFG will adhere to the habitat monitoring requirements established in the Conservation Strategy.

Outside the PCA:

1. IDFG will continue their normal monitoring programs for elk, deer, moose, kokanee, cutthroat trout, and other identified important food sources for grizzly bears.
2. On public lands, IDFG will encourage and work with land management agencies to monitor wetland and riparian habitats, whitebark pine, and important berry-producing plants.
3. On public lands, IDFG will encourage and work with land management agencies to monitor changes in motorized access. Monitoring efforts will focus on those areas that currently provide security for bears (areas that have no motorized access routes or motorized access route densities less than or equal to 1.0 mile per square mile.)
4. In eastern Idaho, private lands are generally at lower elevations than most of the public lands. Undeveloped private lands may provide important spring habitat for some bears because they will provide early green-up. In addition, many of these undeveloped lower elevation lands provide important winter ranges for deer, elk, and moose, and winter-killed animals are an important food source for bears in the spring. On private lands, IDFG will work with citizens, counties, and other agencies to monitor development activities.

**Habitat Restoration**

Inside the PCA, IDFG will adhere to the habitat restoration measures as called for in the Conservation Strategy.

Outside of the PCA, IDFG will encourage the public land management agencies in implementing existing management direction in land use plans. IDFG will identify site-specific changes that may be needed in existing land use plans, and will work with the public agencies through existing procedures and agreements to modify and amend land management plans. Examples of site-specific changes that may be considered include changes in motorized access, changes in livestock allotments, increasing productive whitebark pine stands, control of noxious weeds, and improvements in riparian and wetland habitats. Through this process the public will be able to have full participation in the decisions.

IDFG will assist private land owners who want to improve habitat conditions for wildlife (including the grizzly bear) on their lands. IDFG will provide education materials and technical assistance to

private land owners.

# *POPULATION MONITORING*

Goal: To develop and implement a science-based monitoring program that results in the data and tools necessary for IDFG to successfully manage grizzly bears.

The Conservation Strategy for the Grizzly Bear in the Yellowstone area (USFWS 2000) specifies that known human-caused mortality within the Primary Conservation Area and within 10 miles outside of that boundary should be limited to no more than 4% of the calculated population size. This means that mortalities in the three states and inside Yellowstone National Park must be recorded. State agencies would record all known mortalities and coordinate with the other jurisdictions to help with this assessment. Also, the Interagency Grizzly Bear Study Team will continue to monitor grizzly populations within the PCA and the 10 mile buffer outside of the PCA. IDFG efforts will be coordinated with the efforts of the Interagency Grizzly Bear Study Team to ensure that the entire range of grizzly bears is monitored in Idaho and no unnecessary overlap in efforts occur. Outside the PCA, data analysis units will be established to facilitate monitoring distribution, abundance and mortality. This will be done in coordination with Wyoming and Montana.

Monitoring grizzly bears is complicated by their secretive nature and widely dispersed, low-density distribution. However, a number of techniques are available to assess population status and trend. Techniques that attempt to enumerate individuals can provide the most precise estimates of abundance. Mark-recapture estimates and DNA profiling currently provide quantitative estimates of abundance and require the greatest dedication of resources (personnel and operating dollars). These methodologies would be appropriate when finite estimates of the population are required for intensive management purposes. More qualitative assessments of populations can be accomplished by using techniques currently employed by the Interagency Grizzly Bear Study Team. Observations of females with young are documented, including results from organized aerial surveys. Distribution is further monitored by recording verified sightings of sign and/or bears. Additionally, cause-specific mortality is monitored. Although absolute estimates of abundance generally can't be generated using observational data, relative population status and trend can be ascertained. A monitoring program that primarily uses observational data would require fewer resources to implement than those for generating precise population estimates. Finally, a monitoring program could consist of simply documenting verified sightings to assess distribution, with population trend inferences made from changes in distribution. This framework would cost the least in resources, but the opportunities for intensive management of grizzly bears would be limited due to the lack of quantifiable information.

**Preferred Monitoring Framework**

Monitoring will be directed at estimating females with young, bear distribution, and mortality. Estimation of population size using observations of sows with young is used in the Yellowstone

Ecosystem (Knight et al. 1995) and has been validated (Boyce et al. 2001). Since sows produce approximately 2 cubs once every three years, a minimum estimate of the adult female breeding population can be obtained with these observations (Eberhardt and Knight 1996). The percentage of adult females in the population is 27.4% (Eberhardt and Knight 1996), so the number of unduplicated females with cubs of the year summed over a three-year period can be divided by the percentage of females in the population to obtain a minimum population estimate. This system could be extended to the known range of the population in Idaho, using the same methodologies in order to make the information-gathering process comparable with ongoing assessments.

The preferred monitoring framework is to collect data on females with young; record other bear observations, including sign, to estimate known distribution; and document cause-specific mortality. It is believed that the density of grizzly bears in Idaho during the next few years will be so low that aerial surveys would provide little if any information. Instead, IDFG shall concentrate on soliciting and recording incidental sightings. This framework is generally consistent with what is currently being collected throughout the Yellowstone Ecosystem and therefore allows for uniformity and comparability with other data collection efforts. More intensive monitoring efforts such as capture and collaring and/or DNA profiling could be used to provide more precise information as needed and when adequate funding is available. Monitoring efforts will be coordinated with the Interagency Grizzly Bear Study Team to minimize overlaps.

As with other managed wildlife species, analysis units will be established. Habitat criteria, although monitored within each analysis unit, will not be established strictly for grizzly bears.

**Additional Monitoring Activities**

Additional, more intensive population monitoring will depend upon need and will be coordinated with adjacent states and Yellowstone National Park, through the Interagency Grizzly Bear Study Team, since grizzly bears occupying southeastern Idaho may be expected to travel into other jurisdictions.

Trapping and radio-collaring individual bears could be conducted when needed. Radio-collared individuals allow assessment of population size, home range, habitat use, activity patterns, survival, and productivity, depending upon objectives. Census using marked bears involves extensive field effort over several years. Trapping efforts that include previously marked bears and unmarked bears can be used to estimate population using several mark-recapture procedures (Pollock et al. 1990). A minimum population estimate, plus a sex/age composition of the trapped population, would then be available. This method has been successfully used on both species of bears in Yellowstone National Park (Craighead et al. 1995), southcentral Idaho (Beecham 1983), northwestern Montana (Jonkel 1971), southcentral Alaska (Miller et al. 1997), and many other areas representing a wide variety of habitat conditions and is thus applicable to southeastern Idaho. These efforts will be incorporated into other monitoring efforts on associated species.

A bear census using hair sample collections and DNA analysis to identify individual bears is in the developmental stages (Woods et al. 1999). This technique uses a random sampling procedure stratified according to bear density across the entire occupied bear habitat at intervals throughout the

period when bears are active. Strips of barbed wire to collect hair would be placed in areas frequented by bears. Hair would first be identified by species, and if grizzly hair was collected, then a thorough analysis of the DNA would be made to identify the individual bear. Different laboratories may produce different results, so selection of a reliable analytical laboratory is important.

Bears that are captured during management activities may be sexed, aged, and marked and/or radio-collared. While these individuals will not likely provide population characteristics, changes in composition and bear distribution may imply change in population status and suggest more intensive survey effort is needed.

Hunter harvest will be intensively monitored. When hunting opportunity for grizzly bears is established, a mandatory check shall be implemented for all harvested bears as is done with black bears, mountain lions, bighorn sheep, mountain goat, and moose. Locations of harvested bears may be compared with distributions obtained by other means, and may help guide hunter harvest to more effectively compensate for and reduce management actions. Reproductive tracts from females may also be collected to assess reproductive status.

## *PUBLIC INFORMATION AND EDUCATION*

Goal: To develop, implement and disseminate a coordinated information and education program that is understandable and useful for the people who live, work, and recreate in bear habitat.

Management strategies are unlikely to succeed without useful, state-of-the-art public information and education programs. A partnership information and education approach involving IDFG, as well as other agencies, local communities, and private interests, can result in minimizing human/bear conflicts.

Information on human safety should be included in hunter education classes. Human safety is of utmost concern when hunting in grizzly bear country. Hunters and other visitors in bear country should carry bear-deterrent devices such as pepper spray. Outfitters and guides will be encouraged to provide training and certification in human safety in bear country.

Idaho Dept. of Fish and Game:

1. Will create or designate a position responsible for providing educational programs through schools, community presentations, workshops, news releases, magazine articles, videos, and radio and television announcements.
2. Should continue to cooperate with federal resource management agencies in providing safety literature at trailheads and offices in bear country.
3. Should be encouraged to sponsor a program aimed at development of "Bear Smart Communities."
4. Develop a multi-media program based on the "Living in Bear Country" program.

5. Produce and share educational materials and audio/video programs with other bear management agencies and organizations.
6. Will coordinate with other agencies to develop bear education programs for specific user groups such as hunters, anglers, wood cutters, scout groups, communities, 4-H, etc.
7. Will coordinate with other entities involved in the management of Yellowstone grizzly bears to ensure that the development and use of educational materials, signs, brochures, etc., be consistent and similar throughout the tri-state area.

# *CONFLICT MANAGEMENT*

Goal: To minimize the potential for human/grizzly conflicts while maintaining traditional residential, recreational, and commercial uses within Eastern Idaho, and to respond appropriately and efficiently when conflict situations arise. Conflict reporting procedures will be made available to the public through personal contacts and a variety of media channels.

As previously stated in the introduction, the Governors' Roundtable recommended and the Governors endorsed that state management plans be developed for areas outside the PCA. Therefore, Idaho Code, Title 36-2404 (Appendix II) becomes applicable and requires that a state management plan provide for the management and conservation of the species once it is delisted. The plan shall contain sufficient safeguards to protect the health, private property, and economic well-being of the citizens of the State of Idaho.

Potential conflicts emerge when managing the needs of the grizzly bear while protecting human health and safety, minimizing private property damage and livestock depredation, allowing timber harvest and recreational and hunting opportunities, and providing for other wildlife species. A goal of the management plan is to provide a management framework that is quick to respond to conflicts when they arise, while providing for the welfare of the grizzly bear.

Land management agencies and local county governments are encouraged to include the grizzly bear and its interaction with other land uses in their land-use plans. Efforts are encouraged to minimize restrictions on other land uses, while providing for the needs of the grizzly bear. Expanded habitat areas for the grizzly bear are possible when the bears co-exist on land managed for other uses. This also encourages local support for increased habitat and bear populations.

**Human/Grizzly Bear Conflicts**

Human safety is a high priority, and the risk to human safety must be minimized. As bear numbers and distribution increase, the potential for human/grizzly conflicts will also increase. The increase in human/grizzly encounters may jeopardize the safety of humans as well as the safety of the bears. Adequate response to human safety concerns will increase local support for the grizzly bear.

There will be no prosecution of any individual who injures or kills a grizzly bear while acting in self-defense if the bear is molesting, assaulting, killing, or threatening to kill a person.

IDFG shall provide timely information to the public and land management agencies about current bear distribution, including relocations, food conditions, activity, potential and current conflicts, and behaviors. Land management agencies are encouraged to contact their permittees with information that will help them avoid conflicts.

Proper education of those who live, work, and recreate in bear-occupied areas will help to minimize human/bear conflicts. Grizzly bears are highly attracted to potential food sources. Gardens, orchards, garbage, human and pet foods, game carcasses, and septic treatment systems are attractants to bears. IDFG will work with private property owners and others to reduce the source of attractants and provide technical advice for the protection of property and the reduction of human/grizzly conflicts. Preventative measures must be given priority, as they are more effective than simply responding to problems as they occur. IDFG will encourage the development of preventative management tools and techniques as bears expand into available habitat.

Bear-resistant food storage containers, meat poles, and bear-resistant garbage containers should be provided at campsites and other bear areas. Federal and State agencies should assist in securing grant-funding for local governments to develop bear proof garbage containers and bear proof landfills.

The Idaho Fish and Game Commission shall promulgate a regulation which prohibits the baiting of grizzly bears for any purpose, including hunting, photography, viewing, etc.

**Livestock/Grizzly Bear Conflicts**

Livestock operations that maintain large blocks of open rangeland can provide many benefits to the long-term conservation of the grizzly bear through maintenance of open space and habitats that sustain a variety of wildlife species. However, livestock operators can suffer significant losses from bear depredation. IDFG will be the responsible agency dealing with livestock depredation. Efforts will focus on preventative programs aimed at minimizing livestock conflicts. Appropriate operational tools such as guard dogs, electric fencing, and aversive conditioning will be encouraged to reduce conflicts.

Programs will be developed to provide private landowners and livestock operators with incentives or benefits if they implement preventative measures and maintain opportunities for wildlife, including bears. Federal and State agencies should assist in securing funding sources to provide for incentives.

Upon federal delisting, the Idaho Fish and Game Commission will reclassify the grizzly bear as a game animal. The grizzly bear will be included in the big game depredation program, Idaho Code, 36-1109 (Appendix III). Currently this program provides for compensation for depredation of livestock and damage to berries and bees from black bears and mountain lions. The program will be administered by the appropriate IDFG Regional Landowner Sportsman Coordinators and Regional Supervisors.

**Nuisance Grizzly Bear Management**

Successful management of nuisance grizzly bears is paramount to the success of overall grizzly bear conservation. When conflicts occur they must be addressed in a timely, efficient manner. Public acceptance of grizzly bears is dependent on the prevention and alleviation of conflicts with humans, livestock, and private property. The management of nuisance bears must allow flexibility in response to a broad range of conflicts.

Inside the PCA, the nuisance guidelines presented in the Conservation Strategy will be followed (Appendix IV). .

Outside the PCA, significant consideration will be given to humans when grizzly bears and people come into conflict. The focus and intent of nuisance grizzly bear management, damage management, and hunter/grizzly bear conflicts outside the PCA will be predicated on strategies and actions to prevent human/bear conflicts. It is recognized active management aimed at individual nuisance bears will be required as part of the management program. Nuisance grizzly bears will be controlled in a timely and effective manner. Location, cause of incident, severity of incident, history of bear, and health/age/sex of bear will all be considered in any management action.

Grizzly bears occupying areas where the potential for conflicts are high (i.e., subdivisions) will be proactively managed to prevent damage and provide for human safety.

Criteria for Nuisance Grizzly Bear Determination and Control Outside of the PCA (see Appendix V for definitions):

1. IDFG or its authorized representative will investigate reported human/grizzly bear conflicts promptly. IDFG will communicate investigation findings to the affected parties or their representatives promptly.
2. Following the verification of property damage and consultation with the property owner or owner's representative and/or land management agency, IDFG will determine what management action will be initiated.
3. Grizzly bears captured during a management action that have a high probability of being chronic depredators will be removed from the population.
4. When relocation is not possible or practicable, or when it is likely it will not solve the problem, the bear will be removed from the population.
5. Grizzly bears displaying unnatural aggression or considered a continued threat to human safety will be removed from the population.
6. Grizzly bears displaying natural aggression will only be removed from the population when the particular circumstances warrant removal.
7. Grizzly bears displaying food conditioned or habituated behaviors, or damaging property may be relocated, aversively conditioned, or removed based on specific details of the incident. IDFG will inform the affected people and land management agencies of the management decision.
8. Grizzly bears may be preemptively moved when they are in areas where they are likely to come into conflict with humans or their property.

9. Grizzly bears relocated because of nuisance activities will be released in a location where the probability to cause additional conflicts is low.
10. All sub-adult and adult grizzly bears captured in management actions to be relocated/released will be permanently marked and may be radio-collared.

Deviation from these nuisance protocols will be allowed for management flexibility when extraordinary circumstances dictate a need. IDFG will prepare an annual report of these exceptions for the Commission.

**Response Actions :**

1. No Action: IDFG may take no action after the initial investigation if the circumstances of the conflict do not warrant immediate control or if the opportunity for control is low.

2. Averse conditioning and deterrence: IDFG may use various options to prevent grizzly bear depredation. Such options should include but are not limited to bear-proof garbage containers, scare devices, electrical fencing, etc.

3. Capture: when other options are ineffective or when human safety is a concern, IDFG will initiate capture and relocate offending animals. IDFG in consultation with appropriate entities will determine the proper relocation areas (within the PCA or other occupied areas in eastern Idaho) so as to minimize further conflicts.

4. Removal: lethal control of nuisance grizzly bears will be used when other options are not viable and when human safety and protection of personal property warrant such action. Kill permits may be issued under the supervision of IDFG to affected property owners or their agents.

Any bear causing a human fatality will be removed from the population.

All reported grizzly bear conflicts and subsequent IDFG corrective actions must be documented.

# *HARVEST MANAGEMENT*

Goal: To allow for regulated harvest of grizzly bears while maintaining a viable and self-sustaining population.

The success of grizzly bear recovery in the Yellowstone Ecosystem justifies a management paradigm shift from one of preservation to one of conservation. The basis of conservation is sustainable use, which for wildlife resources includes regulated hunting. Recognition of the grizzly bear as a game animal will ensure that the proper resources for population and mortality monitoring will be allocated. This will benefit the long-term viability of the bear, as it has for Idaho's other hunted, large mammal species. Classification of the grizzly bear as a game animal can also be

expected to improve the level of acceptance of the bear by the public living within grizzly bear range and to increase the number of stakeholders favoring grizzly bear conservation. Hunters have been long-term supporters of conservation, and the presence of legal hunters in the field may minimize the poaching of bears by those opposed to their recovery. Additionally, hunting may act as a form of reverse habituation, thus decreasing the likelihood of human/bear conflicts. The removal of individual bears will open up home ranges for subadults, also minimizing conflicts with bears that might otherwise disperse to human-use areas. Thus, hunting tends to reduce the number of management actions needed. Management actions that involve capturing bears are expensive to conduct and, to the extent that hunter harvest can substitute for this, costs will be reduced.

IDFG does not have authority to regulate tribal harvest. The hunting of grizzly bears by members of the Shoshone-Bannock Tribes is a traditional and cultural issue, which will be determined by the Governing Body of the Shoshone-Bannock Tribes after delisting of the grizzly bear is finalized.

It is unlikely that grizzly bear hunting seasons will be established immediately upon delisting. Establishment of grizzly bear hunting seasons will be conducted using the same process, including public meetings, as for other game species. There are three situations when hunting should be considered as a management tool for grizzly bears:

1. Surplus animals provide opportunity: A well-conserved population is one that produces a huntable surplus. As the bear population expands in accordance with the goals of this plan, surplus animals may be produced. This situation will be identified through the monitoring protocols established elsewhere in this plan, and a hunting quota will be determined by IDFG, based on criteria outlined below.
2. Alleviation of chronic depredation problems: This may indicate a bear population that is socially unacceptable for a given location. Chronic problems involve repetitive events of property damage or frequent repetitive bear use of areas of high human use which might reasonably be expected to lead to conflict. The hunting option would be considered in conjunction with other mechanisms, such as sanitation and public education.
3. Removal of an individual animal: Individual bears may become the objects of a lethal control action per the guidelines set forth elsewhere in this plan. Such an animal, under occasional circumstances, may provide an opportunity for a hunt, at the discretion of the local IDFG office. Factors to consider when choosing to use a private hunter would be the urgency of timely action, safety, high probability of harvesting the appropriate individual, and attention to the principles of fair chase. A list of hunters desiring to participate should be maintained by IDFG, to be contacted as an opportunity occurs. It is expected that this option would be used sparingly.

All animals harvested as described above will count toward total allowable mortality quotas for the population. Harvest management will thus be considered as one component of an integrated management program for grizzly bears. It will be highly regulated, directed at individual bears as needed, and considered in annual mortality targets that will be established by IDFG in conjunction with other states and the Interagency Grizzly Bear Study Team.

Grizzly bears may be hunted in any portion of their distribution within Idaho, on any lands typically open to hunting. However, since portions of Idaho fall within the PCA and 10 mile buffer area, the number of grizzly bears to be removed from that area by hunting must be considered in the total mortality for the entire PCA, in accordance with the Conservation Strategy. That document stipulates that the sum of human-caused mortalities can not exceed 4% of the total estimated minimum population of the PCA, with no more than 30% of that number being female grizzly bears. Thus, hunting mortality within the PCA must be coordinated among IDFG and the other agencies that are signatory to the Conservation Strategy. A mechanism for allocation of bear quotas among the states must be negotiated among wildlife agencies of Idaho, Montana and Wyoming. One such method may allocate tags based on the percentage of the total PCA population estimated to reside within the respective state.

Areas outside the PCA and its 10 mile buffer may be managed less conservatively with regard to grizzly bears, in keeping with their multiple use designations. However, this plan also recognizes that the grizzly bear is a desirable component of Idaho's wildlife heritage. In general, for areas in which it is desirable to have the grizzly bear population remain stable or continue to expand, total human-caused mortality should be maintained at no more than 5.7% of the total estimated minimum population, with only 30% of that number being female. Different total allowable harvest, percentage female mortality, and/or population estimate methodologies may be used in the future as new information and technology become available. A higher percentage of the male or female population may be harvested as desirable for management goals in areas where grizzly bears should be maintained at low population densities. Thus, harvest management is one of the tools used for managing the grizzly bear population.

A spring grizzly bear season is recommended to protect the female cohort. Spring bear seasons typically have a lower percentage of female harvest than do fall seasons. Population data from the previous field season may be used to establish the harvest quota. The quota will be the appropriate percentage of the population as described above, less known mortality from other sources, including accidental, natural, and control actions, as well as treaty hunting mortalities. Therefore, the size of the quota will be limited by the reliability of the population monitoring data. Uncertain data will result in conservative population estimates and harvest quotas smaller than the population might otherwise allow. Since legal harvest is one of the sources of grizzly bear mortality that can readily be managed, this plan recognizes that harvest may be suspended in years of excessive mortality from other sources.

Because grizzly bear populations are very sensitive to the level of female mortality, every effort will be made to focus the harvest on male bears in areas where it is desirable to have a stable or increasing population. Methods to ensure a predominantly male harvest may include:

1. Grizzly bears will be subject to the once-per-lifetime controlled hunt limitation currently applied to mountain goats, bighorn sheep, and moose.
2. There will be a mandatory check requirement similar to that required for mountain lions and black bears.
3. Females with young may not be harvested. Neither may cubs or young accompanying a female be harvested.

4. Early closure of hunting seasons when the allowable female quota has been harvested. The IDFG Director may enforce emergency season closures at his/her discretion.
5. A tag fee structure including a refund for hunters harvesting a male bear.
6. Mandatory training for hunters, outfitters, and guides who hunt grizzly bears. The training will include information on methods to distinguish between a grizzly bear and a black bear, clean camp rules, and safety, including the use of pepper spray.
7. Early timing of the spring hunt. Boars typically emerge from the den earlier than sows and sows with cubs.
8. Promotion of the use of hunting methods intended to allow the hunter a better opportunity to determine sex.

Currently, the use of bait and hounds is not permitted for black bear hunting in Idaho 'Bear Management Units' inside the PCA. To minimize accidental grizzly bear mortality within the PCA, this practice will be continued. There will be no additional restrictions on black bear hunting methods outside of the PCA as a result of grizzly bear distribution and occupancy. It will be illegal for a hunter to take a grizzly bear using bait and/or hounds. Grizzly bear hunters may be guided or unguided.

There will be no additional restrictions on the hunting/trapping of other legally harvested animals inside or outside of the PCA as a result of grizzly bear distribution and occupancy.

Big game, including black bear, hunters desiring to hunt in known grizzly bear range will receive information on methods to distinguish between a grizzly bear and a black bear, clean camp rules, and safety, including the use of pepper spray. Any time the identification of the species of bear is in doubt, the animal should not be harvested. The rate of accidental grizzly bear kills should be monitored and additional training implemented as necessary to keep this rate acceptably low.

This plan does not suppose that grizzly bear hunting license fees will be sufficient to pay for grizzly bear management. However, a fee structure will be enacted that recognizes the unique nature of the grizzly bear hunting opportunity, the desirability of the grizzly bear as a big game species, and the high cost of grizzly bear management. The fee should be high enough that an incentive may be returned to the hunter upon successful harvest of a male bear.

# *PROGRAM COSTS & FUNDING*

Fish and wildlife management costs in Idaho are primarily funded by license and tag fees combined with federal funding derived from the sale of sporting goods (Fig. 3). Additional funding is provided by restricted-use contracts and other sources, of which a small portion is dedicated to nongame management. These nongame funds are directed towards nongame and watchable wildlife programs and activities on species that are not hunted, trapped, or fished. Sales from wildlife license plates (approximately $600,000 annually) and the income tax checkoff (approximately $40,000 annually) provide the majority of state nongame funding, of which $456,000 was expended in FY01 (2000-2001). Wildlife plate and checkoff funds are also expended ($163,000 in FY01) for wildlife

education programs, the MK Nature Center, and to help maintain the rare species database in the Department's Conservation Data Center. The Department receives no state general fund appropriation.

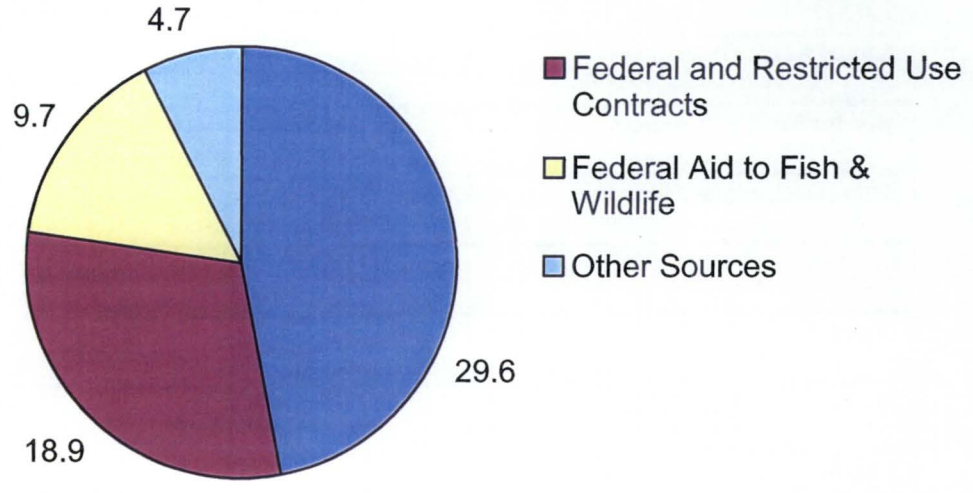


Figure 3. Sources of funding for IDFG during the 2002 fiscal year. Amounts are in millions of dollars. (Source: IDFG Fiscal Year 2002 Stockholders Report)

Grizzly bear management is an Idaho activity that exists because grizzly bear conservation is a national priority. Idaho and a few other western states contain suitable habitat to support grizzly bears. They are managed not just for Idaho citizens, but also for the rest of the nation. It is entirely logical that all those who benefit from the presence of grizzly bears in Idaho should pay for their management. We recommend that the Idaho legislature and Governor encourage the Congressional delegation to seek federal appropriations and funds from national business and conservation groups to fund the majority of grizzly bear management activities in Idaho. A trust or endowment concept has been developed through the Interagency Grizzly Bear Committee. This proposal is a good starting point from which to seek a stable funding mechanism for grizzly bear management.

It is also logical that the legislature appropriate state revenues from general sources to fund some portions of grizzly bear management. It would be preferable to use state funds rather than federal funds to investigate, confirm, and pay depredation losses and damage claims to private property. State funds are not subject to National Environmental Protection Act and other federal oversight requirements. The use of hunting license, federal aid to fish and wildlife, and nongame funds should be continued at historic levels, but additional management obligations created when the bears are returned to state management should be funded with new revenue sources.

Current annual expenditures for Yellowstone grizzly bear management activities in Idaho amount to approximately $21,000. Recommended management actions outlined in this document are expected to increase those costs to approximately $145,000 per year (Table 1).

Table 1. Current IDFG estimated costs for management of grizzly bears in eastern Idaho and future estimates for implementation of recommendations presented within this document.

| TASK | | Personnel Costs* | Operating Costs | Capital Outlay Costs | Total Costs |
|---|---|---|---|---|---|
| Annual Aerial Observation Flights | Current Costs | 1,000 | 3,000 | 0 | 4,000 |
| | Future Costs | 1,000 | 3,000 | 0 | 4,000 |
| Monitor Key Food Sources | Current Costs | 0 | 0 | 0 | 0 |
| | Future Costs | 1,000 | 250 | 0 | 1,250 |
| Radio Telemetry & Monitoring | Current Costs | 0 | 0 | 0 | 0 |
| | Future Costs | 500 | 3,500 | 1,500 | 5,500 |
| Hair Snaring & DNA Sampling | Current Costs | 0 | 0 | 0 | 0 |
| | Future Costs | 15,000 | 10,000 | 0 | 25,000 |
| Document Distribution | Current Costs | 1,000 | 100 | 0 | 1,100 |
| | Future Costs | 4,000 | 1,000 | 0 | 5,000 |
| Monitor Mortalities | Current Costs | 250 | 100 | 0 | 350 |
| | Future Costs | 500 | 200 | 0 | 700 |
| Respond to Human/Grizzly Bear Conflicts | Current Costs | 1,500 | 500 | 0 | 2,000 |
| | Future Costs | 3,000 | 1,000 | 0 | 4,000 |
| Respond to Livestock Depredations | Current Costs | 250 | 100 | 0 | 350 |
| | Future Costs | 500 | 200 | 0 | 700 |
| Livestock Depredation Payments | Current Costs | 0 | 0 | 0 | 0 |
| | Future Costs | 1,000 | 5,000 | 0 | 6,000 |
| Trapping & Relocation | Current Costs | 1,500 | 250 | 0 | 1,750 |
| | Future Costs | 2,500 | 500 | 1,000 | 4,000 |
| Provide Materials and/or Technical Advice for Preventative Actions | Current Costs | 500 | 0 | 500 | 1,000 |
| | Future Costs | 8,000 | 2,500 | 25,000+** | 35,500+ |
| Seek/Solicit Grants and Other External Funding Sources | Current Costs | 0 | 0 | 0 | 0 |
| | Future Costs | 8,000 | 1,000 | 0 | 9,000 |
| Provide Education Materials | Current Costs | 1,000 | 250 | 0 | 1,250 |
| | Future Costs | 9,000 | 2,500 | 5,000 | 16,500 |
| Develop and Present Education Materials | Current Costs | 1,000 | 250 | 0 | 1,250 |
| | Future Costs | 9,000 | 2,500 | 5,000 | 16,500 |
| Monitor Habitat Conditions | Current Costs | 500 | 0 | 0 | 500 |
| | Future Costs | 500 | 0 | 0 | 500 |
| Provide Technical Assistance for Habitat Restoration on Private Land | Current Costs | 0 | 0 | 0 | 0 |
| | Future Costs | 500 | 100 | 0 | 600 |
| Interagency Coordination | Current Costs | 6,000 | 1,000 | 0 | 7,000 |
| | Future Costs | 8,000 | 1,500 | 0 | 9,500 |
| **TOTAL** | Current Costs | 14,500 | 5,550 | 500 | 20,550 |
| | Future Costs | 72,000 | 34,750 | 37,500+ | 144,250+ |

* Personnel costs based on $25.00/hour including benefits.

** Private, public, and/or corporate funding to be solicited based on future identified needs.

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# *APPENDICES*

## APPENDIX I - Idaho Code

36-106(e)5. Director of Idaho Dept. of Fish and Game

A. The director, or any person appointed by him in writing to do so, may take wildlife of any kind, dead or alive, or import the same, subject to such conditions, restrictions and regulations as he may provide for the purpose of inspection, cultivation, propagation, distribution, scientific or other purposes deemed by him to be of interest to the fish and game resource of the state.

B. The director shall have supervision overall of the matters pertaining to the inspection, cultivation, propagation and distribution of the wildlife propagated under the provision of title 36, Idaho Code. He shall have the power and authority to obtain, by purchase or otherwise, wildlife of any kind or variety which he may deem most suitable for distribution in the state and may have the same properly cared for and distributed throughout the state of Idaho as he may deem necessary.

The director is hereby authorized to issue a license/tag/permit to a nonresident landowner who resides in a contiguous state for the purpose of taking one (1) animal during an emergency depredation hunt which includes the landowner's Idaho property subject to such conditions, restrictions or regulations as the director may provide. The fee for this license/tag/permit shall be equal to the costs of a resident hunting license, a resident tag fee and a resident depredation permit.

36-1107. Wild animals and birds damaging property.

Other provisions of this title notwithstanding, any person may control, trap, and/or remove any wild animals or birds or may destroy the houses, dams, or other structures of furbearing animals for the purpose of protecting property from the depredations thereof as hereinafter provided.

The director may delegate any of the authority conferred by this section to any other employee of the Department.

(a) Director to Authorize Removal of Wildlife Causing Damage. Except for antelope, elk, deer or moose when any other wildlife, protected by this title , is doing damage to or is destroying any property or is likely to do so, the owner or lessee thereof may make complaint and report the facts to the director or his designee who shall investigate the conditions complained of. If it appears that the complaint is well-founded and the property of such complainant is being or is likely to be damaged or destroyed by any such wildlife protected under this title, the director may:

1. Send a representative onto the premises to control, trap, and/or remove such protected wildlife as will stop the damage to said property. Any animals or

birds so taken shall remain the property of the state and shall be turned over to the director.

2. Grant properly safeguarded permission to the complainant to control, trap and/or remove such protected wildlife or to destroy any houses, dams, or other structures erected by said animals or birds. Any protected wildlife so taken shall remain the property of the state and shall be turned over to the director.
3. Whenever deemed to be in the public interest, authorize or cause the removal or destruction of any dam, house, structure or obstruction erected by any forbearing animals, provided that no liability whatever shall accrue to the Department or the director by reason of any direct or indirect damage arising from such destruction or removal.
4. Issue a permit to any bona fide owner or lessee of property which is being actually and materially damaged by furbearing animals, to trap or kill or to have trapped or killed such animals on his own or leased premises. Such permit may be issued without cost to a landholder applicant and shall designate therein the number of furbearing animals that may be trapped or killed, the name of the person who the landowner has designated to take such furbearers and the valid trapping license number of the taker. Furbearers so taken shall be the property of the taker. Beaver so taken shall be handled in the manner provided in section 36-1104, Idaho Code. The term "premises" shall be construed to include any irrigation ditch or right-of-way appurtenant to the land for which said permit is issued.

(b) Control of Depredation of Black Bear, Mountain Lion, and Predators. Black bear, mountain lion, and predators may be disposed of by livestock owners or their employees when same are molesting livestock and it shall not be necessary to obtain any permit from the Department. Mountain lion so taken shall be reported to the director. Livestock owners may take steps they deem necessary to protect their livestock.

(c) Taking of Muskrats in Irrigation Systems Authorized. Muskrats may be taken at any time in or along the banks of irrigation ditches, canals, reservoirs or dams, by the owners, their employees, or those in charge of said irrigation ditches or canals.

**APPENDIX II - Idaho Code**

36-2402. Delisting Advisory Team – Duties - Membership

(1) Director of the Idaho Dept. of Fish and Game…in cooperation and consultation with the Governor's Office of Species Conservation, may establish a Delisting Advisory Team (DAT) of no more than nine members for a threatened species or endangered species, to recommend an appropriate state species management plan for a listed species in response to a notification from the Secretary of the Interior…of intent to delist the species or sooner if deemed appropriate.

(2) The delisting advisory team members shall be broadly representative of the constituencies with an interest in the species and its management and conservation and in the economic or social impacts of management or conservation including, where appropriate, depending on the specific species, representatives of tribal governments, local government, academic institutions, private individuals and organizations and commercial enterprises. The delisting advisory team members shall be selected based upon:

a. Their knowledge of the species;
b. Their knowledge and expertise in the potential conflicts between species' habitat requirements or management and human activities;
c. Their knowledge and expertise in the interests that may be affected by species management or conservation; or
d. Other factors that may provide knowledge, information, or data that will further the intent of this act.

36-2404. State Delisting Management Plan Requirements

(2) The delisting advisory team shall develop a state management plan for a species in response to all notification of intent to delist the species by the Secretary of the Interior or sooner if deemed appropriate. The state management plan shall provide for the management and conservation of the species once it is delisted, and contain sufficient safeguards to protect the health and safety, private property, and economic well-being of the citizens of the state of Idaho.

(3) The Department…shall provide the delisting advisory teams, the informational, technical or other needs and requirements of those teams in the performance of their duties.

(4) In developing a state delisting management plan, the delisting advisory team shall consult with the appropriate state agencies, commissions and boards.

36-2405. Recommendation of Management Plans

(1) The delisting advisory team shall submit the management plan to the director of the Department…for review and recommendation.

(2) The director shall review the management plan and make a recommendation to the fish and game commission…The director may recommend either approval of the management plan, or recommend to return the management plan to the delisting advisory team for further study or review.

(3) If the Fish and Game Commission…finds that the management plan provides for the management and conservation of the species when it is delisted…and that reasonable safeguards are included in the management plan to protect the health, safety, private property, and economic well-being of the citizens of the state of Idaho, the Fish and Game Commission…shall approve the management plan.
(4) If the Fish and Game Commission…makes the finding required in subsection (3) of this section, the Fish and Game Commission shall forward the state management plan to the governor's Office of Species Conservation and the legislature. The management plan is subject to legislative approval.
(5) The governor's Office of Species Conservation may petition the responsible public agencies to initiate rule making to facilitate the implementation of the approved management plan.
(6) Each management plan developed pursuant to this chapter shall include a public education component that shall be developed and implemented in cooperation with other appropriate bureaus of the Department of Fish and Game…
(7) Nothing in this act shall be interpreted as granting the Department of Fish and Game…with new or additional authority.

## APPENDIX III - Idaho Code

36-1109. Control of Damage by Black Bears or Mountain Lions – Compensation for Damage.

(a) Prevention of depredation shall be a priority management objective of the Department, and it is the obligation of landowners to take all reasonable steps to prevent property loss from black bears or mountain lions or to mitigate damage by such. The director, or his representative, will consult with appropriate land management agencies and land users before transplanting or relocating any black bear or mountain lion.

(b) When any black bear or mountain lion has done damage to or is destroying livestock on public, state, or private land, whether owned or leased, or when any black bear has done damage to or is destroying berries or honey on private land, the owner or his representative of such livestock shall, for the purposes of filing a claim, report such loss to a representative of the U.S. Department of Agriculture animal plant and health inspection services/animal damage control (APHIS/ADC) who shall, within seventy-two (72) hours, investigate the conditions complained of. For purposes of this section, livestock shall be defined as domestic cattle and sheep. If it appears that the complaint is well founded and livestock, berries or honey of the complainant has been damaged or destroyed by such black bear or mountain lion, APHIS/ADC shall so inform the director or the Department's regional office of the extent of physical damage or destruction in question. The physical damages, without establishing a monetary value thereon, as determined by the APHIS/ADC representative shall be final, and shall be binding upon the owner or his representative and on the Department.

(c) Any claim for damages must be in written form, shall be in the form of a claim for damages substantially the same as required in section 6-907, Idaho Code, shall be attested to by the claimant under oath, and the claim shall be for an amount of at least one thousand dollars ($1,000) in damages per occurrence. The Department shall prepare and make available suitable forms for claims for damages. Claims may be submitted only for the fiscal year (July 1 through June 30) in which they occurred. Any person submitting a fraudulent claim shall be prosecuted for a felony as provided in section 18-2706, Idaho Code.

1. Upon receipt by the Department, the Department shall review the claim, and if approved, pay it as provided in section 36-115, Idaho Code. Failure on the part of the owner or representative to allow on-site access shall negate the claim for damages.
2. If the Department accepts the claim for damages as submitted by the owner or his representative, the Department may approve the claim for payment, or may make a counter offer. If the owner or his representative rejects the Department's counter offer, this rejection or refusal must be in writing and submitted within five (5) working days. The value of the damage or destruction will then be determined by arbitration as set forth in section 36-1108, Idaho Code. Any claim received by the Department under the provisions of this section must be finally decided within sixty (60) calendar

days of receipt by the Department. If the claim is approved for payment, the claim must be immediately forwarded to the Department of administration for payment.

**APPENDIX IV – Nuisance Bear Guidelines from the Draft Conservation Strategy for the Grizzly Bear in the PCA (see Appendix V for definitions)**

The focus and intent of nuisance grizzly bear management inside and outside the PCA will be predicated on strategies and actions to prevent human/bear conflicts. It is recognized that active management aimed at individual nuisance bears will occasionally be required in both areas. Management actions outside the PCA will be implemented according to State management plans. These actions will be compatible with grizzly bear population management objectives for each State for the areas outside the PCA.

Within the PCA, management of nuisance bears will be addressed according to the following criteria.

**Criteria for Nuisance Grizzly Bear Determination and Control Inside the PCA**

Bears displaying unnatural aggression will be removed from the population.

Bears displaying natural aggression are not to be removed, even if the aggression results in human injury or death, unless it is the judgment of management authorities that the particular circumstances warrant removal.

Bears displaying food conditioning and or habituation may be either relocated or removed based on specific details of the incident. This judgment will be made by management authorities after considering the cause, location and severity of the incident or incidents.

Bears may be preemptively moved when they are in areas where they are likely to come into conflicts with site-specific human activities, but only as a last resort. Such preemptive moves will not count against the bear as nuisance moves.

Bears may be relocated as many times as judged prudent by management authorities. No bear may be removed for any offense, other than unnatural aggression, without at least one relocation unless the reason is documented in writing by representatives of affected agencies.

Bears preying on lawfully present livestock (cows, domestic sheep, horses, goats, llamas, etc.) on public lands will be managed according the following criteria:

1. No male grizzly bear involved in livestock depredations inside the PCA shall be removed unless it has been relocated at least one time and has been found to return and continue livestock depredations.
2. No females involved in livestock depredations inside the PCA shall be removed, even after relocation and subsequent continued depredation on livestock. The only exception to this could be in the case of animals considered dangerous to human safety through their behavior and use of livestock grazing areas where humans are present.

Management of all nuisance bear situations will emphasize removal of the human cause of the conflict, when possible, or management and education actions to limit such conflicts. Relocation and removal of grizzly bears may occur if the above actions are not successful.

Prior to any removal, except in cases of human safety, involved management authorities will consult by phone or in person to judge the adequacy of the reason for removal and the current level of human-caused mortality to avoid exceeding mortality limits through such removals.

The basis for decisions on relocation and removal inside the PCA will be criteria for management of nuisance bears in the Conservation Strategy and best biological judgment of authorities.

Authorized State authorities outside of YNP and GTNP will do removals inside the PCA. Authorized National Park Service authorities will do removals within YNP and GTNP.

Authorities will cooperate to provide adequate and available sites for relocations.

General criteria: Location, cause of incident, severity of incident, history of bear, health/age/sex of bear, and demographic characteristics of animals involved will all be considered in any relocation or removal. Removal of nuisance bears will be conservative and consistent with mortality limits outlined for the population in the PCA in the Conservation Strategy.

Recognizing that conservation of female bears is essential to maintenance of a grizzly population, removal of nuisance females will be minimized. Management actions inside the PCA will be carried out only with conservation of the grizzly bear population in mind, and consistent with State regulations, policy, and State and Federal laws.

Specific criteria for removals: Captured grizzly bears identified for removal may be given to public research institutions or public zoological parks for appropriate non-release educational or scientific purposes as per regulations of States and National Parks. Grizzly bears not suitable for release, research, or educational purposes will be removed as described in appropriate State management plans or in compliance with National Park rules and regulations.

Individual nuisance bears deemed appropriate for removal may be taken by a sport hunter outside of National Parks in compliance with rules and regulations promulgated by the appropriate State wildlife agency commission, as long as such taking is in compliance with existing State and Federal laws, and as long as mortality limits specified for the PCA and within 10 miles outside the PCA boundary as described in this Conservation Strategy are not exceeded.

All grizzly bear relocations and removals will be documented and reported annually in the IGBST annual report. Such actions may be subject to the Management Review process if requested by a member of the Yellowstone Grizzly Management Committee.

Management of nuisance bears outside the PCA will be the sole responsibility of appropriate State wildlife management agencies and is not regulated by the Conservation Strategy.

**APPENDIX V – Definitions used for Nuisance Bear Guidelines.**

Aversive conditioning: the application of techniques that are intended to change a bear's behavior.

Capture: any action to catch a bear for management purposes.

Depredation: damage to any property including agricultural products.

Deterrence: the application of techniques that are designed to discourage a bear from causing further damage or inhabiting undesirable areas.

Food conditioned bear: a bear that has received a significant food reward of non-natural foods such as garbage, camp food, pet food, or processed livestock food and persistently seeks these foods.

Habituated bear: a bear that does not display avoidance behavior around humans or in human use areas such as camps or town sites or within 100 meters of open roads.

Management authorities: are the designated representatives of the agencies in the PCA including Yellowstone National Park (YNP), Grand Teton National Park (GTNP), Wyoming Game and Fish Department, Montana Fish Wildlife and Parks, IDFG, Interagency Grizzly Bear Study Team, each of the National Forests – Gallatin, Custer, Shoshone, Bridger-Teton, Targhee, and Beaverhead, and the U.S. Fish and Wildlife Service Grizzly Bear Recover Coordinator, as requested. These authorities will make the decision to classify a bear as "nuisance" inside the PCA in compliance with the nuisance bear criteria. Outside YNP and GTNP within the PCA, subsequent management actions will be coordinated and completed by State wildlife agencies, after discussing with the appropriate management authorities. When nuisance bears are in YNP or GTNP, decisions will be made by park representatives, and coordinated with State and Forest Service representatives when necessary (e.g. for bear relocations).

Natural aggression: grizzly bear behavior resulting from defense of young, food, during a surprise encounter, or self-defense.

Non-natural foods: includes, but is not limited to human, pet and livestock foods, garbage, gardens, livestock carrion, and game meat in possession of man.

Nuisance grizzly bear: a grizzly bear that depredates livestock, causes property damage, or uses unnatural food that has been reasonably secured from the grizzly bear; or, a grizzly bear that displays unnatural aggression toward humans that constitutes a demonstrable immediate or potential threat to human safety and/or a human injury.

Property damage: damage to any property including agricultural products.

Protection: the application of any device or techniques to protect humans and property from bear damage.

Relocation: the capture and movement of a grizzly bear involved in a conflict with humans or their property by management authorities to a remote area away from the conflict site.

Removal: is the capture and placement of a bear in an authorized public zoological or research facility or destruction of that bear. Removal can also involve killing the bear through active measures in the wild when it is not otherwise possible to capture the bear.

Repeat offense: is the involvement of a bear that has been previously relocated in a nuisance situation or, if not relocated, continues to repeat a behavior that constitutes a human/bear conflict.

Unnatural aggression: grizzly bear behavior that includes active predation on humans, approaching humans or human use areas, such as camps, in an aggressive way, or aggressive behavior when the bear is unprovoked by self-defense, defense of cubs, defense of foods, or in a surprise encounter.