# Chapter 9

# Grizzly Bear *(Ursus arctos horribilis)*

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I. INTRODUCTION –

A. Distribution and Status – Historically, grizzly bears (*Ursus arctos horribilis*) occupied most of the western United States and Canada (Rausch 1963). Currently, the species is restricted to small populations in northwest Montana, northern Idaho and Washington, and the Greater Yellowstone Area of Wyoming, Montana, and Idaho. The current range of the grizzly bear in Wyoming is not known precisely, but a general distribution has been constructed from locations of radio-collared bears over the past 25 years (Fig. 1). This distribution includes all of Yellowstone and Grand Teton National Parks, the National Elk Refuge, and portions of adjacent lands administered by the Forest Service south and east of Yellowstone extending to the east border of the Shoshone National Forest, south to the Green River Lakes area in the Wind River mountains, and southwest to the Greys River drainage in the Wyoming Range.

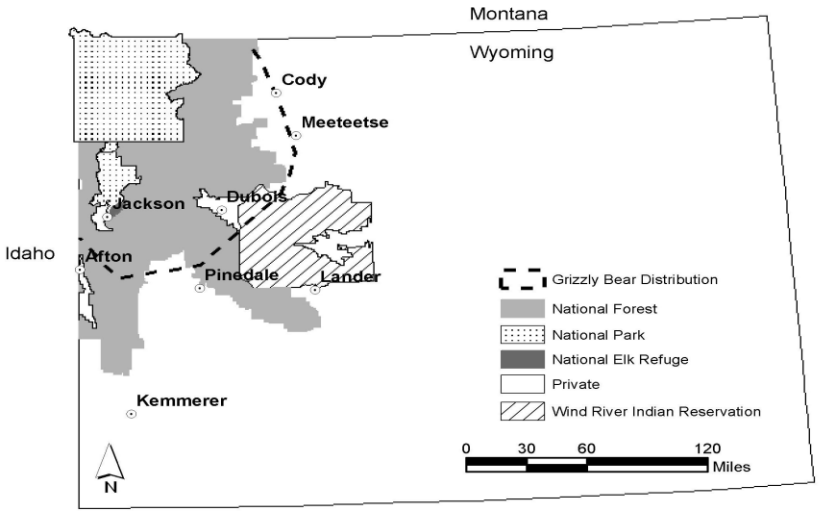


Fig. 1. Present distribution of grizzly bears in Wyoming based on minimum convex polygon analysis of grizzly bear locations since 1975. The Primary Conservation Area (PCA) is also shown.

In 1975, grizzly bears in the lower 48 states were listed as 'Threatened' under the Endangered Species Act (ESA). Prior to that time, grizzly bears in Wyoming were managed under the jurisdiction of the Wyoming Game & Fish Department (Department). Grizzlies were classified as "game animals" on most national forests, meaning they could not be trapped or hunted without approval by the Chief or local game warden. On private lands, grizzlies were considered predators and could be killed at any time and by most methods. Until 1967, no permits were required to take grizzly bears during hunting seasons. In 1968 and 1969, grizzly bear hunting was suspended because of concerns about low bear populations. In 1970, a limited permit system was instated and hunting grizzlies continued until 1975 when the bear was federally listed.

In 2002, a plan was developed to manage grizzly bears after the species is eventually removed from federal protection under the ESA and management authority reverts to the states (Moody et.al. 2002). The plan identifies the areas of the State grizzly bears will occupy, and the types and amounts of monitoring and management to be done by the Department and other agencies.

B. Management –

The United States Fish and Wildlife Service (USFWS) currently has management jurisdiction over grizzly bears in Wyoming. The Department assists with trapping, data collection, and management of nuisance bears as part of the Interagency Grizzly Bear Study Team (IGBST)(Schwartz and Moody 2000). The IGBST monitors grizzly bears within the Primary Conservation Area (PCA) (Fig. 1). The PCA is the core, or recovery area delineated in the Draft Conservation Strategy for the Grizzly Bear in the Yellowstone Area (IGBC 2000).

The minimum population of grizzly bears in the Greater Yellowstone Ecosystem is estimated based upon the number of unduplicated females with cubs-of-the-year observed during the non-denning season (June-October). This estimate ranged from 344 to 361 during 1999-2001 (IGBST 2001). The estimate is conservative because not all females with cubs are seen. A current estimate of the grizzly bear population within Wyoming is not available. The trend in unduplicated females with cubs, and thus the population, has increased 3-4% per year since grizzlies were federally listed in 1975 (Haroldson 2000).

C. Key Food Sources –

The IGBST monitors 4 key food sources of grizzly bears within the PCA. These food sources include winterkilled ungulate carcasses, spawning cutthroat trout (*Oncorhynchus clarki*), army cutworm moth (*Euxoa auxiliaris*) aggregation sites, and whitebark pine (*Pinus albicaulus*) production (USFWS 1993). Only moth aggregation sites are currently being monitored outside the PCA in Wyoming. However, whitebark pine production will also be monitored outside the PCA when jurisdiction of the grizzly bear is returned to the states (Moody et.al. 2002).

D. Human/Grizzly Conflicts and Damage –

In Wyoming, the Department handles human/grizzly bear conflicts and livestock depredation incidents inside and outside the PCA. However, final approval of management actions rests with the USFWS. Under the current system, bears receive greater consideration when bear/human conflicts occur within the PCA. Outside the PCA, human uses receive greater consideration (IGBC 2000). Criteria for managing nuisance grizzly bears are outlined in the "Draft Conservation Strategy (IGBC 2000) and the Interagency Grizzly Bear Guidelines. Once the Yellowstone grizzly bear population is removed from federal protection, the Department will manage conflicts based on criteria in the state management plan (Moody et.al. 2002). Currently, the Department reimburses landowners for confirmed livestock losses, and apiary damage caused by grizzly bears. The compensation rate for livestock losses is based on research done by Anderson et.al. (1997). For further information on grizzly bear depredation, refer to the Department's depredation techniques handbook (WGFD 1999).

II. CENSUS –

A. Population Monitoring –

A protocol is not currently in place to monitor the grizzly bear population in Wyoming outside the PCA. However, monitoring provisions of the State management plan will be implemented when the grizzly bear is no longer protected under the ESA. The State plan includes several protocols currently used by the IGBST inside the PCA (USFWS 1993, IGBC 2000). Managers can track population trends and occupancy by consistently monitoring several population parameters such as unduplicated females with cubs, bear distribution, and mortality.

1. Unduplicated sightings of females with cubs –

a. Rationale – An annual estimate of the minimum population size is calculated from observations of unduplicated females with cubs-of-the-year (FWCs). This method also enables managers to assess reproduction and determine whether the population is large enough to sustain the numbers of documented mortalities. When the Wyoming state management plan and the Yellowstone Grizzly Bear Conservation Strategy are implemented, a new methodology will be used to estimate the total population size based on FWCs (Keating et al. 2002).

b. Application – Sightings of FWCs are obtained from several sources including tracking of females with radio-collars, aerial surveys and ground observations, and capture efforts. Record the following information: date, location, number of cubs observed, and detailed physical descriptions including size, pelage color, and distinct markings.

c. Analysis of data – The Trophy Game Section screens reports of FWCs to determine credibility and eliminate duplicate sightings. Duplications are identified based on criteria developed by Knight et al. (1995). A minimum population estimate is calculated based on the principal that the sum of the most current 3 years of unduplicated FWCs represents a proportion of the females in a population (Knight et al. 1988). A 6-year running average of FWCs is also calculated. The 6-year period encompasses 2 breeding cycles, based on an average breeding interval of 3 years.

d. Disposition of data – FWC observations should be forwarded to the Trophy Game (Management) Coordinator. Data will be included in the annual Grizzly Bear Summary prepared by the Trophy Game Section.

2. Distribution –

a. Rationale – By monitoring locations and movements of grizzly bears, managers can document geographic distribution and occupancy of habitats. Monitoring efforts are focused on females with cubs to assess distribution of the reproductive cohort. Successful reproduction is also used as an indication of suitable habitat conditions. While the focus of monitoring is on the reproductive cohort of females, other bears are monitored as well. A healthy grizzly bear population should be well distributed throughout its occupied range.

b. Application – Distribution is monitored in several ways including radio telemetry, observation flights, capture efforts, and incidental observations. Emphasis is placed on documenting distribution of females with young (cubs-of-the-year, yearlings, or 2-yr olds). Subadult females usually establish home ranges adjacent to their mother's home range. Accordingly, monitoring this cohort may give an indication of future occupancy (Holm 1998). Capture operations are conducted to radio collars on a specific number of females.

c. Analysis of data – The Trophy Game Section will use home range and GIS software to analyze distribution data. The purpose of these analyses is to determine, home range size, core use areas and type of habitats used.

d. Disposition of data – Data collected on grizzly bear distribution should be forwarded to the Trophy Game (Management) Coordinator. Distribution, home range, and habitat use information will be published in the annual Grizzly Bear Summary, and can be requested through the Trophy Game Section.

3. Incidental Observations –

a. Rationale – Grizzly bears are secretive, nocturnal, and inhabit forested habitats, therefore, incidental sightings are rare and thus a poor index of bear abundance. However, observations of bear sign can corroborate presence or absence.

b. Application – Sightings of grizzly bears or grizzly bear sign should be recorded and entered in the Wildlife Observation System (WOS).

c. Analysis of data – Bear observations can provide additional corroboration of population trends, in conjunction with other indicators, but should not be used as a primary measure of abundance. Managers can tally observation records within each BMU and generate graphic displays using GIS software. Records of observations can be useful for reviewing impacts of proposed agency actions, particularly if documentation of bear presence is needed.

d. Disposition of data – Observation records are forwarded monthly for proofing by regional Wildlife Management Coordinators before they are entered in the WOS database. At one time, requests for data queries and downloads were submitted to the Biological Services Section in Cheyenne. However, the system has been reprogrammed enabling remote users to query, sort, and retrieve WOS data from personal computer stations in the field.

4. Mortality Thresholds –

a. Rationale – Harris (1985) suggested a 6 % rate of human-caused mortality is sustainable within grizzly bear populations, provided mortality of females does not exceed 30 % of the 6 %. Managers have established a lower mortality threshold (currently 4%) for the Yellowstone Population to allow population growth, and to compensate for unknown/unreported mortalities (estimated to be 50% of known mortalities). The application of this mortality rate based on a minimum estimate of the population assures additional conservatism. Mortalities of grizzly bears must be monitored closely to assure the total mortality level is within sustainable levels.

b. Application – Department personnel investigate all detected mortalities of grizzly bears. These investigations are done by a Bear Management Officer, Trophy Game Biologist, or regional Game Warden. The cause of death is determined when possible, or otherwise classified as unknown. Sex and age are also determined when possible. Investigators shall record: identity of investigator, date, reporting party, location (UTM), drainage, physical description of the bear, identity of landowner or public land status, and details of the incident.

c. Analysis of data – Mortalities are analyzed and tabulated by the Trophy Game Section, and then compared to allowable mortality levels based on the minimum population estimate. Allowable mortality levels will be based on the total population estimate when the new methodology to estimate total population is in place.

d. Disposition of data – All information from investigations of grizzly bear mortalities is forwarded to the Trophy Game Section (Nuisance) Coordinator. The information is added to a grizzly bear mortality database. Mortality data are

reported in the annual Grizzly Bear Summary. Mortality data can be requested through the Trophy Game Section.

5. Mark-Recapture –

   a. Rationale – Mark-recapture studies are done to estimate the actual population of bears. Procedures involve marking a random sample of animals and resampling to estimate the proportion of marked animals in the population. The total number of animals originally marked is extrapolated based on the proportion of marked animals in the population to estimate the total population size. Although mark-recapture procedures are widely used and generally considered the most accurate method to estimate bear populations, some problems can be encountered. Two key assumptions are difficult to rigidly meet. These include, even probability of capture, and no ingress or egress of animals in the study area (geographic closure). In addition, mark-recapture studies tend to be costly and labor intensive, which limits their practicality to small geographic areas. Total population estimates are geographically extrapolated from representative areas.

   b. Application – A valid sampling design is critical to successfully conduct a mark-recapture study. The potential for unequal catch rates is lessened through trap spacing (to ensure all animals have access to traps), timing and duration of trapping (to account for seasonal movements), and trap types, sets and baits (to enhance capture of trap-wise animals). Investigators should also consider marking animals with radio-transmitters to assess movements across study area boundaries. Study areas should be large enough to encompass a population and should be representative of other areas to which the estimate may be applied.

      Several mark-recapture or resight methods are used to estimate bear abundance and density. Most commonly, bears are captured, marked, released, and then recaptured or resighted. Trapping and handling techniques are described by Erickson (1957), Johnson and Pelton (1980), and Jonkel (1993). Ear-tags, radio-collars, or both can serve as marking devices. Recapture or resighting can be done through trapping (Martinka 1974, Craighead 1976), aerial observations (Miller et.al. 1997), or photographs (Mace et al. 1994). Other mark-recapture techniques do not require bears to be handled. They include distributing baits laced with chemical markers that are detectable in scats (radio-isotopes; Eager 1977, Pelton and Marcum 1977) or bones/teeth of harvested bears (tetracycline; Garshelis 1990). Individual bears can also be identified through genetic fingerprinting from hair collected at bait sites (Paetkau and Strobeck 1994, Woods et al. 1996, 1999, Grogan and Lindzey 1999, Mowat and Strobeck 2000).

      In 1998, the IGBST began a 3-year mark-resight study to estimate the bear population throughout the PCA, and to determine the precision of that estimate. The design was based upon the capture-mark-resight technique described by Miller et al. (1997). Radio-collared bears constituted the marked segment. A pilot and an observer searched each BMU from a fixed-wing aircraft. Each bear

sighted was identified as marked or unmarked. Each area was flown twice during the non-denning season (June-August) to estimate the proportions of marked and unmarked individuals. Results of this technique in the Yellowstone area were inconclusive due to the low number of grizzly bears seen during the study.

c. Analysis of data – Methods for analyzing mark-recapture data are described in numerous population ecology textbooks (i.e., Begon 1979, Krebs 1989). Other references address unique issues, such as unequal catch rates or lack of demographic closure (see Otis et al. 1978, Pollock 1982, White et al. 1982, White 1996). When telemetry data are available, estimates can be improved by calculating the number of marked animals present during recapture efforts (Miller et al. 1987, Miller et al. 1997) or by weighting the marked:unmarked ratio based on how much time each animal spends in the trapping area (Garshelis 1992). Abundance estimates derived from mark-recapture studies tend to be inflated unless the assumptions of equal catchability and geographic closure are met or taken into account by the analysis.

d. Disposition of data – A final report summarizing the results of any mark-recapture or resight studies, including population estimates, should be prepared and distributed to the Trophy Game Section and applicable Regional Wildlife Coordinators.

III. TRAPPING AND MARKING –

A. Capture and Handling –

1. Rationale – Grizzly bears are captured and marked for many reasons, including to determine the sex and age structure of a population, to estimate population density or size, and to document home ranges and habitat use patterns (Craighead 1976, Knight and Eberhardt 1985, Miller et al. 1997). Trapping is also done to manage nuisance bears (U.S. Fish and Wildlife Service 1993). Personnel must possess a thorough knowledge of capture and handling techniques to assure the operation is conducted safely and to properly care for the bear.

2. Application – Several effective techniques are available to trap bears, however the Department generally uses trailer-mounted culvert traps or foot snares, depending on access to the site and public safety concerns. Culvert traps are employed in areas of concentrated human activity, such as housing developments or campgrounds. Foot snares are used when many traps are needed, such as during research efforts or when access by motorized vehicle is limited. Trapping techniques are discussed by Jonkel (1993). Bait such as commercial scent lures, animal parts or other food items are generally used to attract bears into traps.

Captured grizzly bears are immobilized with a combination of tiletimine hydrochloride (HCL) and zolazepam HCL (Telazol), administered at a dose of 8 mg/kg (Kreeger 1996). Telazol acts rapidly, but allows a gradual recovery in bears

(Gibeau and Paquet 1991). Telazol is generally delivered by a $CO_2$-powered pistol, dart rifle, or jab stick. When a bear is anesthetized, its vital signs including pulse, heart rate and temperature should be monitored and recorded every 15-20 minutes. Most captured bears > 1 year of age are fitted with a radio-transmitter collar. Cotton spacers are used to increase the probability the collar will be shed after 2-3 years (Jonkel 1993).

Each bear captured is fitted with an ear-tag and marked with an identification tattoo when possible. Ear tags are round with a unique number on one side and the letters WGFD on the other. These are attached to each ear. Tattoos are placed on the inside of an upper lip using tattoo pliers. The tattooed number generally corresponds with the ear tag number. A "W" preceding the tattoo number signifies the bear was captured in Wyoming.

Biological samples such as hair, tooth and blood are collected from each captured bear. Samples are labeled with the following information: type of sample, bear ID number, sex, estimated age, date, location, investigators' names, and the Department region. Several morphometric measurements are recorded including weight, total length, contour length, girth, height, neck circumference, head length and width, and pad length and width (front and rear). Reproductive status of females is assessed from mammary nipple length, width and pigmentation, as well as vulva condition (Jonkel and Cowen 1971, LeCount 1986, Beck 1991). Depending on the reason for trapping, bears are either released at the site of capture, or relocated.

3. Analysis of data – The Trophy Game section maintains a statewide database of information from captured bears, which is available upon request.

4. Disposition of data – Whenever a bear is anesthetized, a Trophy Game Capture Form is completed. When bears are not anesthetized (only trapped and moved), the following sections of the capture form should be completed: date and location of capture, date and location of release, and physical description of the bear. Capture forms are sent to the applicable Regional Wildlife Coordinators, and then forwarded to the Trophy Game Section. The Trophy Game Section enters information from the forms into a statewide capture database for grizzly bears.

## IV. SEX / AGE DETERMINATION –

### A. Field Techniques –

1. Rationale – Many states, including Wyoming, base management recommendations on criteria relating to the sex and age composition of harvested bears (Garshelis 1990). Grizzly bears cannot be harvested legally due to their current "Threatened" status under the ESA. Therefore, sex and age data must be collected from grizzly bears captured for research or management purposes, from dead bears that are discovered, and when possible, by observing free ranging bears in the field.

2. Application – A bear's sex can easily be identified by examining the external genitalia when the bear is handled (Jonkel 1987). Determining the sex of free ranging bears is more difficult and subjective. Optical equipment can sometimes be used to distinguish characteristics such as male genital hair (Jonkel 1982). Grizzly bears exhibit sexual dimorphism – adult males can grow to twice the size of adult females (Pearson 1975). However, the size of males of one age class can considerably overlap the size of females in an older age class (Pearson 1975, Craighead and Mitchell 1982). Therefore, identifying sex based on body size can be impercise. Lastly, sex may be apparent when bears are observed in groups (i.e., females with offspring or adult bears during courtship).

   Determining age is also best accomplished by handling the bear. Patterns of tooth eruption and wear can be used to distinguish age classes and occasionally, specific age groups (Lecount 1986). Jonkel (1987) indicated permanent dentition is acquired during a bear's second year. The presence of milk teeth or newly erupted, permanent teeth indicates the bear is a juvenile. In addition, body size can help distinguish juveniles from older, larger bears. Bears older than two years can be grouped into age classes based on dental wear patterns. Jonkel (1993) has provided descriptions and diagrams of tooth replacement and dental wear patterns for grizzly bears. However, factors such as genetics, diet, and tooth damage can also influence dental wear patterns (Jonkel 1993).

   Additional characteristics useful for estimating age can include: testicular descension, vulva enlargement, and condition of mammary nipples. These gender-specific, physical characteristics should be inspected whenever a bear is handled. Males with testes that have not descended testes are most likely juveniles or subadults. Vulva enlargement in females may indicate preparation for breeding and therefore adulthood. The vulva can enlarge to twice its normal size during the breeding season (Craighead and Mitchell 1982). To determine if lactation has occurred, first attempt to hand express milk from the nipple. If no milk is expressed, examine nipple color. Nipples of bears that have never lactated are small and pinkish without dark pigmentation. If the bear is lactating or has previously lactated, the nipples will be larger and brown or gray (Jonkel 1993).

3. Analysis of data – The use of field criteria to estimate ages of bears is very subjective, and not suitable for obtaining age-specific data. Bears handled in the field are simply assigned to age classes (i.e., cub-of-the-year, juvenile, subadult, young adult, old adult). Specific ages are determined based on laboratory analysis of tooth cross-sections (refer to Laboratory Analysis of Cementum Annuli).

4. Disposition of data – Record the sex and estimate of age on a standard bear capture form. Forward all capture forms to the Trophy Game Section. Data are entered into the grizzly bear capture/mortality database.

B. Laboratory Analysis of Cementum Annuli –

1. Rationale – The most accurate means of aging bears is based on laboratory analysis of cementum annular layers from tooth cross-sections (Marks and Erickson 1966, Stoneberg and Jonkel 1966, Willey 1974, Kolenosky and Strathearn 1987, Harshyne et al. 1998). Cementum is deposited annually in layers around the dental roots of mammals. These layers, when counted, indicate age in years (Dimmick and Pelton 1994). Refer to Appendix III (Aging Techniques), Section III (Laboratory Techniques Based on Cementum Annuli) for a detailed discussion of this technique. In addition, patterns of cementum layers can indicate the reproductive histories of female black bears (Coy and Garshelis 1992). This technique, however, has not yet been perfected for female grizzly bears.

   In some cases, age determination is complicated by false or double annuli (Morris et al. 1978), or by close spacing of annuli in older bears (Willey 1974). Regardless, when teeth are handled properly, the cementum annuli technique is sufficiently accurate for management purposes (Harshyne et al. 1998).

2. Application – Both field and laboratory procedures are required to collect teeth and prepare them for aging. One of the premolars is collected from all bears of unknown age. Normally, the first upper premolar (upm1) is extracted. This vestigial premolar is directly behind the canine tooth and can be removed from live bears without causing them harm (Kolenosky and Strathearn 1987).

   A variety of dental elevators or tooth extraction devices are suitable for removing teeth from their sockets. These devices are available through most veterinary supply companies. Waddell (1975) describes the tools and techniques used to remove black bear teeth. Personnel should exercise care to avoid breaking the tooth. In most cases, the root must remain intact (Dimmick and Pelton 1994).

   After teeth are removed, they should be kept clean and placed in a paper sample envelope labeled with the following information: date, bear or tag number, species, sex, estimated age, identity of collector, and geographic location. The effect long-term storage has on teeth is unknown (Dimmick and Pelton 1994). Therefore, teeth and accompanying data forms should be forwarded to the Trophy Game Section as soon as possible. The Trophy Game Section will catalog tooth samples, and then send them to the laboratory for further processing.

3. Analysis of data – The Wyoming Game and Fish Department does not currently analyze age data obtained from grizzly bears. Due to the bear's "threatened" status under the ESA, analysis of age data is done by the IGBST.

4. Disposition of data – The Wyoming Game and Fish Laboratory processes tooth samples to determine the age of bears, and then returns the results the Trophy Game Section. Age data are entered into a database and forward to the IGBST.

C. Evaluation of Body Condition –

1. Rationale – The overall health and fitness of a bear, and the quality of its habitat, are generally reflected in the bear's body condition (Bailey 1984, Smith 1990). The Deptartment does not quantitatively measure body condition, however a qualitative assessment is recorded at the time each grizzly bear is captured or inspected during mortality investigations.

2. Application – The qualitative assessment is based on presence of fat. A score of 1-5 is recorded on each capture or mortality form, 1 being poor condition and 5 being excellent.

3. Analysis of data – Qualitative data characterizing body condition are not formally analyzed. However, biologists may use this data to monitor the general condition of bears captured in specific areas, or during specific years.

4. Disposition of data – Body condition scores are recorded on Grizzly Bear Mortality or Capture forms. These forms are sent to the applicable Regional Wildlife Coordinator. The Coordinator then forwards the mortality/capture forms to the Trophy Game Section, and the information is entered into the statewide grizzly bear database.

C. Translocation

1. Rationale – In Wyoming, the decision to relocate bears is made on a case-by-case basis by the Trophy Game (Nuisance) Section and the USFWS, in cooperation with land management agencies. Bears are usually moved in an attempt to prevent or abate conflicts such as foraging in garbage, depredating livestock, or damaging property. Relocation away from the original conflict affords bears an opportunity to avoid further human conflict.

2. Application – The safest way to transport bears is in a trailer-mounted, culvert-type trap. When bears are transported they should be fully conscious. If the bear has been anesthetized, it should be allowed to recover before it is transported. Never park the trap in direct sunlight. If the bear is to be moved a long distance, keep the animal hydrated by running water from a common garden hose into the trap. Bears will drink a lot when ambient temperatures are high. Although relocating a younger bear will often keep it out of trouble, older bears frequently return to the conflict site, especially if a food reward was obtained. Generally, a nuisance bear is moved at least once to avoid further conflicts before lethal alternatives are considered.

3. Analysis of data – Managers may evaluate relocation data to determine the success of translocating specific cohorts of bears for example, based on age and distance moved. All relocation data are available from the statewide database maintained by the Trophy Game Section.

4. Disposition of data – If the bear is anesthetized, a Large Predator Capture Form must be completed. When bears are not anesthetized, the sections of the capture form pertaining to date and location of capture, date and location of release, and a physical description of the bear must be completed. Capture forms are sent to Regional Wildlife Coordinators. After proofing the forms, Coordinators forward them to the Trophy Game Section, and the information is entered in a statewide database for grizzly bears.

V. SEASON SETTING –

A. Procedures –

1. Rationale – Wyoming has no established hunting seasons for grizzly bears because, as of this writing, they remain classified as "Threatened" under ESA. When the grizzly bear is delisted, the procedure for setting seasons will be similar to that used for mountain lions and black bears, except mortality thresholds will be closely monitored to assure population criteria established by the Conservation Strategy and State management plan are met. Specific protocols for hunting seasons have not been finalized at this point.

VI. ANNUAL REPORTS –

A. Completion Reports – The Department traditionally prepares annual completion reports to summarize population status and harvest results for big and trophy game, however a completion report is not done for grizzly bears. Currently the IGBST is responsible for producing an annual report that summarizes all data for the Yellowstone population. The Department collects population and mortality data within its jurisdictional boundaries and analyzes specific indices for the report. The grizzly bear annual report can be viewed at http://nrmsc.usgs.gov/research/igbst-home.htm.

B. Annual Status Reports – The USFWS also requires that Wyoming prepare annual status reports as specified under section 6 of the ESA. These reports summarize data collected in Wyoming and their primary purpose is to assure that Wyoming does not exceed the limitations set forth in USFWS permits. The reports are also used to justify financial requests from the Department to the Service.

VII. LITERATURE CITED

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