

Grizzly Bear Management Plan for the Wind River Reservation

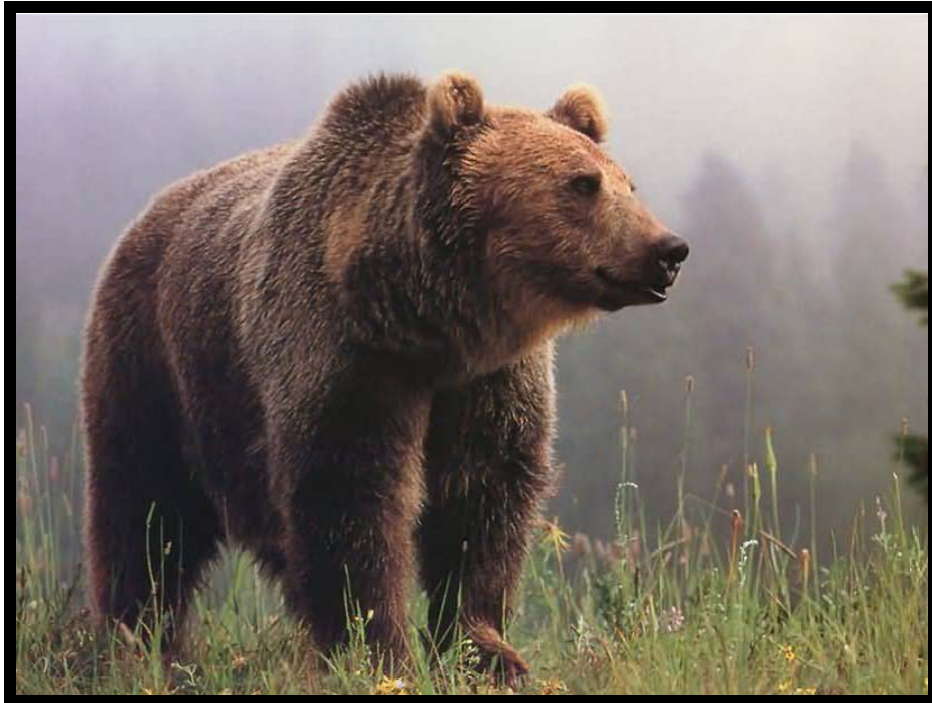


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**Eastern Shoshone and Northern Arapaho Tribes
Ft. Washakie and Ethete, WY
&
Shoshone and Arapaho Tribal Fish
and Game Department
Ethete, WY**

**Assisted by the U.S. Fish and Wildlife Service
Fish and Wildlife Conservation Office
Lander, WY**

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Introduction

The grizzly bear (*Ursus arctos*) conjures images of power, respect, fear, solitude, and wilderness. Traditional tribal views often hold the grizzly bear in esteem while some contemporary views see them as a serious threat to human safety, competitors, livestock killers and in other negative ways. The intent of this plan is to support the co-existence of grizzly bears and people. Management is essential due to tensions that will arise between the needs of grizzly bears and the needs of people. Grizzlies have the potential to affect resources important to Tribal people such as outdoor recreation, big game populations and livestock. People have the potential to affect grizzly bears by changing habitat and food resources through development, climate change and harvesting of big game. This plan will guide the Tribes in conserving and sustainably managing grizzly bears for this and future generations on all lands within the 1868 exterior boundary of Wind River, as modified by the Lander Agreement of 1872 and Thermopolis Agreement of 1896 (the Lander Agreement removed the South Pass portion of Wind River and the Thermopolis Agreement removed the northeast corner of Wind River in the Thermopolis area).

In 1975, the grizzly bear was designated as threatened under the Endangered Species Act in the lower 48 states. Since then, its population grew and expanded throughout the GYA, including Wind River (Schwartz *et al.* 2006). In 2007, the grizzly bear was delisted and primary management was turned over from the federal government to the states and tribes. The Conservation Strategy requires a minimum of 500 grizzly bears be maintained in the GYA. As of 2007, there was an estimated 571 grizzly bears in the GYA (Schwartz *et al.* 2008).

Coordination between parties involved in grizzly bear conservation is important, especially since bears routinely cross jurisdictional boundaries. With coordination, mutual benefits occur between parties that ultimately lead toward better conservation and management of grizzly bears. The Tribes are members of the YGBCC, which is the local sub-committee of the IGBC that is responsible for overseeing conservation of grizzly bears in the GYA. Tribes are also in the process of establishing a cooperative Memorandum of Understanding with the IGBST. The IGBST is an interdisciplinary group of scientists and biologists responsible for long-term monitoring and research efforts on grizzly bears in the GYA, and works closely with the IGBC. The Memorandum of Understanding will allow assistance and data-sharing to occur.

The Lander Fish and Wildlife Conservation Office (LFWCO) of the FWS has had a long and productive relationship assisting the Tribes in managing their fish and wildlife resources on Wind River since 1941. The JBC and TFG were assisted by the LFWCO in developing this plan.

Tribal Elder Views

Interviews of Shoshone and Arapaho Elders were conducted from August 2005 to February 2007. Visits were made to the Ft. Washakie, Ethete and Arapaho senior centers, Rocky Hall, individuals' homes, the Tribal College, and the Shoshone Cultural Center. During these interviews traditional history, stories, meanings, and memories along with current opinions were obtained and collated into the following:

Traditional views recognize grizzly bears as an elder relative, as strong, as great, as master of the forest and as deserving of respect and placed here by the Creator for a purpose. The Shoshone word for grizzly bear, "Bee-yah-ah-gwy" means "big bear." Grizzlies were like a wise uncle that knew best. When appearing in a vision, one was to follow what the grizzly bear showed you. Both Shoshones and Arapahos have a traditional Pow Wow dance honoring the grizzly bear.

Grizzlies were to be left alone and people were supposed to be careful around them. Bears generally wouldn't bother you; however, sometimes people had to kill them. If they were killed, then all parts were to be used. Bear oil was used to treat arthritis, rugs were used to stay warm and of course the meat was eaten. Claws were used in decorative dress and were worn by men because it was impressive and showed high status. A segment of the Arapahos' are members of a bear clan and see the grizzly bear as sacred. Members of the clan are not supposed to harm the bear.

Grizzlies modeled virtuous things to people such as strength, independence and care for family. One traditional story told of a bear family that stayed in a cave, caring for their young. The bear talked to an old man and told him that they were very much alike - that it had a family just like the man and was trying to care for them and to exist just the same. The grizzly bear, along with other animals, used to talk with people through telepathy.

As for current opinions, some Elders said that grizzly bears should be protected. Some said grizzly bears were dangerous and to stay away from them. Another mentioned that as long as grizzly bears stayed away from her house, she was OK with them. One man wanted the Business Councils to talk with the elders directly and ask the elders themselves for their input.

Biology and Current Status

Biology: Grizzly bears are large omnivores averaging 425 pounds for males and 295 pounds for females in northwest Wyoming (Schwartz *et al.* 2006). However, weight varies greatly during the year due to a bulk-up in fall that sustains them during winter hibernation. Females generally have a litter size of 2, breed every 3 years and have their first litter at age 4 to 6. Females peak reproductively at about 9 years and can produce cubs until 25 years of age. Breeding occurs between mid-May and mid-July. Typical annual survival rates are 0.77 for adult males, 0.94 for adult females, 0.80 for subadult females, and 0.84 for cubs. Home range size for females and males in northwest Wyoming averaged 105 mi² and 325 mi², respectively (Schwartz *et al.* 2006).

Feeding Habits: Grizzly bears consume a wide variety of vegetation, insects and mammals (Schwartz *et al.* 2003). Foods of major importance include whitebark pine cones (*Pinus albicaulis*), army-cutworm moths (*Euxoa auxiliaries*), elk calves (*Cervus canadensis*) and ungulate carcasses. Whitebark pine cones are an important high-quality food source for grizzly bears, particularly during the late summer and fall (Mattson and Reinhart 1994). Substantial whitebark pine stands occur in both the Owl Creek and Wind River mountains (Figures 1 & 2). Bear-human conflicts are often reduced during years in which cone production is high because bears remain in high elevation areas where whitebark occurs and are thus distant from human developments (Mattson and Reinhart 1994).

Grizzly bears' reproductive success increases during years of abundant cone production (Mattson and Jonkel 1990). Blister rust and pine beetle infestations throughout the west are causing major declines in whitebark (Keane and Arno 1993). This too is apparent on Wind River as large stands of whitebark are succumbing to pine beetle as evidenced by the red-topped trees in Figure 3. Tree mortality appears to be more prominent in the Owl Creek Mountains; however, stands in the Wind River Mountains are showing effects as well.

Army-cutworm moths aggregate in large masses under high alpine talus slopes throughout the Absaroka and Wind River Mountains. These moth aggregation sites are an important high-quality food source for grizzly bears (Mattson *et al.* 1991) and can comprise nearly ½ of their annual caloric intake (White 1996). There are 2 known army-cutworm moth sites in the Absaroka Mountains that have been visited by grizzly bears that were radio-collared on Wind River in 2006. Additional moth sites do occur in the Wind River Mountains, but at this time grizzly bears have not been observed using them (Dave Moody, personal communication 2007).

Elk calves, winter-killed ungulate carcasses and gut piles from harvested big game provide a major source of protein-rich food for grizzly bears. In a 3-year study in Yellowstone National Park, black and grizzly bears accounted for 55 to 60% of mortalities of elk calves that were less than 30 days old (Barber *et al.* 2005). Estimates of wintering ungulates on Wind River are: 6500 to 7500 antelope, 3200 to 4800 deer, 7000 to 9000 elk, 100 to 200 moose, and 350 to 450 bighorn sheep. In 2007, approximately 1,130 Tribal hunters harvested 96 pronghorn antelope, 495



Figure 3. Dying and dead whitebark pine due to pine beetle infestation, Trail Ridge, Owl Creek, 2007.

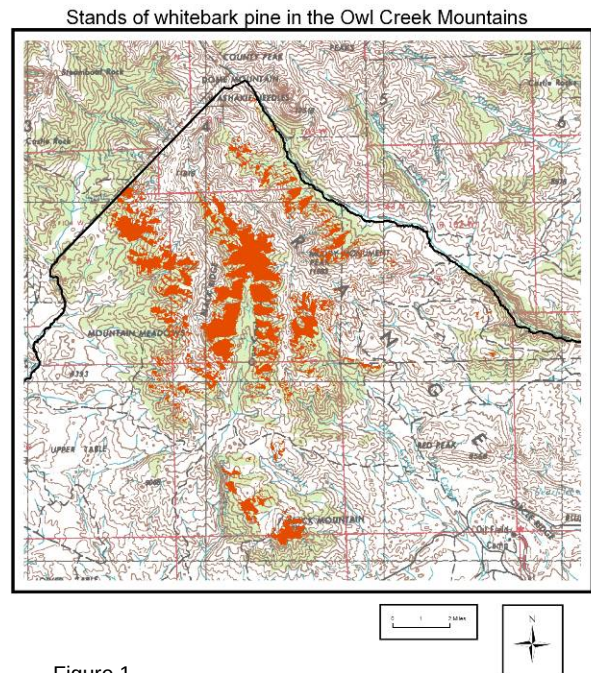


Figure 1.

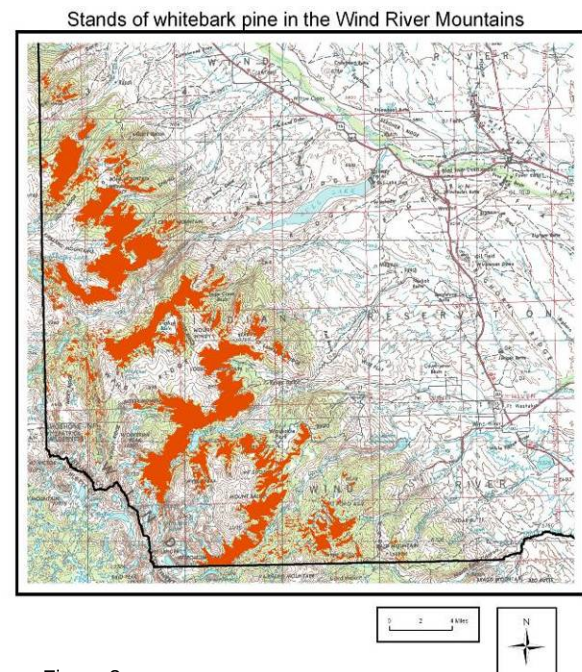


Figure 2.

deer, 527 elk, 3 moose, and 16 bighorn sheep. Gut piles from harvested big game provide an important food source for grizzly bears prior to entering the den (Dave Moody, personal communication 2008).

Available Habitat: The vast majority of Wind River's 2,260,000 acres is remote and sparsely populated. Elevations range from 4,500 to 12,250 feet. Habitat types

include desert, grassland, shrubland, agriculture, montane, and alpine. Specifically, 458,000 acres are forests, 1,290,000 acres are shrubland, and 183,000 acres are grassland and alpine meadow. There are at least 734,000 acres of potential grizzly bear habitat with 161,000 acres and 100,000 acres currently occupied by grizzly bears in the Owl Creek and Wind River mountains, respectively (Figure 4).

Current Population Status: As of September 2008, there were 3 grizzly bears with active radio-collars in the Owl Creek Mountains. These included #531 (a 10 to 12 yr-old female), #532 (a 5 to 6 yr-old male) and #537 (a 5 to 6 yr-old female) (Figure 4). Bear #459 (an 11 yr-old male) recently dropped its collar in May 2008 and likely still occurs on Wind River. All of these bears were captured and radio-collared in the Crow Creek Basin and East Fork areas during a joint trapping effort between the TFG, WGFD and LFWCO lasting 2 ½ weeks in July and August 2006 (Figure 5). Two additional grizzly bears were radio-collared, however one died in August 2006 and the other dropped its GPS collar in May 2007 (Figure 6). The number of bears trapped during this short period greatly exceeded all expectations.

During July and August 2008, a remote camera study was conducted in the Wind River Mountains between Bob Creek and Bull Lake Creek to document presence and distribution of grizzlies (Lockwood *et al.* 2008). During the 49-day study, there were 8 detections of grizzly bears as follows: an adult female with 2 yearling cubs on 6 occasions in the Kirkland Park area, an adult male on 1 occasion in the Bold Mountain area, and three 2-year-olds in the Bob Creek drainage (Figure 4). Based on the aforementioned data, Wind River has a moderate and expanding population of grizzly bears. Supporting evidence for this observation is that the population in the Greater Yellowstone Ecosystem grew at a 4 to 7 % annual rate between 1983 and 2001 (Conservation Strategy 2007) and has continued to grow since.

Potential grizzly bear habitat on Wind River and locations of 3 male and 3 female radio-collared bears in the Owl Creek Mtns, July 2006 to Sept 2008, and 1 male, 3 2-yr-olds, and 1 female with 2 yearlings captured on remote camera in the Wind River Mtns, July 2008.

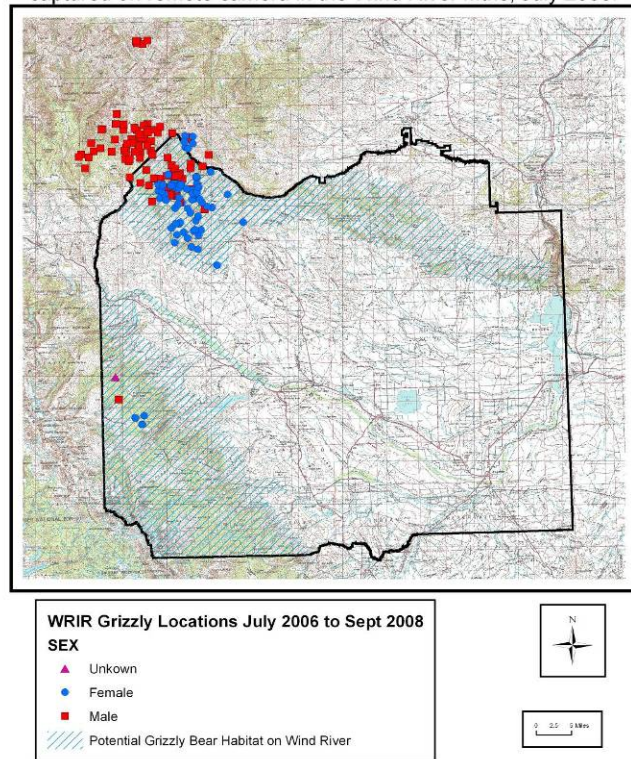


Figure 4.



Figure 5. TFG wardens Western Thayer, Ben Warren and Herman St. Clair with sedated grizzly bear, Crow Creek, 2006.

Livestock: Though generally not a food source, cattle, primarily calves, can be depredated upon by grizzly bears. In 2 cattle allotments near Blackrock just west of Togwotee Pass, Wyoming, grizzly bears were responsible for 78 of 182 calves that were lost (43%) between 1994 and 1996 (Anderson *et al.* 2002). However, this loss represented only 1 to 2% of the 6,000 calves that ranged on the allotments during that time period. Grizzly bear density was high as there were at least 10 bears on the allotments. Three grizzlies were responsible for 90% of the losses and once removed by management action, calf depredations were reduced dramatically. During this time period fewer than 9 adult cows were depredated by grizzly bears. Cattle are the primary livestock utilizing range on Wind River. There are approximately 135 permittees that ran 23,100 cow/calf pairs utilizing 163,400 Animal Unit Months on Tribal lands in 2001 (Bureau of Indian Affairs 2002). Approximately 140 horses also ranged on these lands. There are no free-ranging domestic sheep or other livestock utilizing Wind River.

Management

As mentioned previously, this plan attempts to balance the needs of grizzly bears and the needs of people. In order to do this, adequate knowledge of the distribution and population size of grizzlies is essential. With this knowledge, appropriate management decisions can be made that will ensure Wind River's grizzly bear population will be sustained in perpetuity for the benefit of the bear and the benefit of current and future tribal members, while allowing removal of bears as needed for the protection of human safety and personal property.

Population Monitoring: Methods for monitoring include radio-collaring, remote camera surveys, aerial surveys, and public reports. Trapping and radio-collaring efforts will adhere to approved practices so that grizzly bears are handled humanely and efficiently. Currently, the TFG has one bear trap that was constructed by a TFG warden. A second is planned for construction (Figure 7).

As mentioned in the Biology and Current Status section, a cooperative remote camera study was done in the

Areas of use for grizzly bear #538 (5 yr-old male) between Aug 2006 - May 2007. GPS collar was used to collect 1,297 locations. Wind River Reservation, WY.

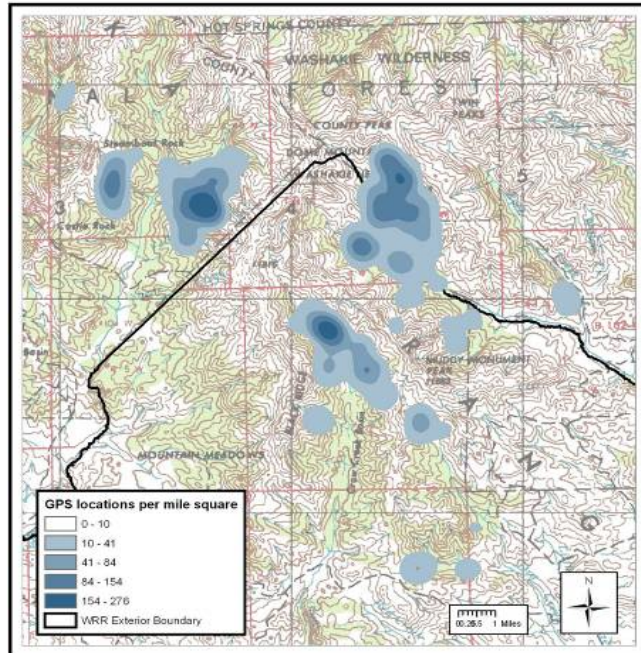


Figure 6.



Figure 7. Western Thayer investigating TFG bear trap in Crow Creek Basin, 2006.

Wind River Mountains in 2008 (Figure 8). Excellent data were obtained on the distribution of grizzly bears in the northern third of the Wind River Mountains, from Bob Creek to Bull Lake Creek. A similar study will be conducted on the southern two-thirds of the Wind River Mountains between Bull Lake Creek and Trout Creek within the next 2 years. This will further our knowledge of distribution throughout the remaining portion of the Wind River Mountains located on Wind River.

Telemetry flights are an important monitoring tool. Flights for the 3 radio-collared grizzly bears in the Owl Creek Mountains will continue to be contracted by the WGFD. Flights typically occur every 10 days beginning in April and continuing until it's documented that a bear has denned, usually in November or December. Monitoring radio-collared bears provides important information related to distribution, seasonal habitat utilization, dates of denning, den site selection, cause of death, and survival rates by age and sex class.

Another important monitoring method are summer observation flights. Members of the IGBST conduct annual survey flights throughout the GYA. In 2007, 74 flights were conducted, each lasting approximately 2.5 hours (IGBST 2007). Aerial monitoring will involve conducting 2 summer surveys of 2 to 2.5 hours in length in each of 3 observation units: West Owl Creek (#46), North Wind River (#48) and South Wind River (#49) (Figure 9). All grizzly bears observed will be plotted with GPS and recorded to age and number in group. Females with cubs-of-the-year (COY) are especially important to document. The number of females with COY are used to estimate population size and the allowable mortality thresholds for the entire ecosystem. Typically, a pilot and one observer conduct the survey. Currently, there is a shortage of flight services that can conduct these surveys. Sky Aviation, the company that performs these flights in this part of Wyoming, may have difficulty conducting additional flights on Wind River due to limited staff and equipment (Dave Stinson, personal communication 2008). Another flight service may be available in 2009. All data from flights will be provided to the WGFD and the IGBST for inclusion in the Yellowstone ecosystem database maintained by the IGBST.

Population Management: Tribes have the sole responsibility for managing grizzly bears on Wind River, but will seek assistance from and cooperation with the



Figure 8. Grizzly female with yearling cubs captured by digital image during remote camera survey, 2008.

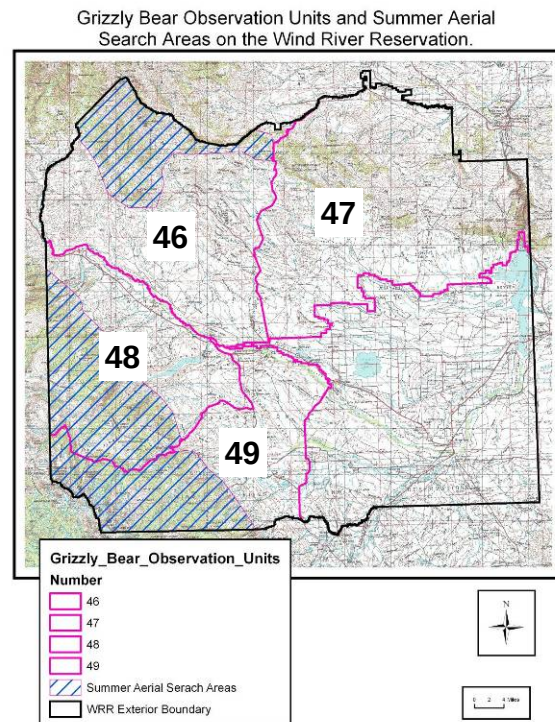


Figure 9.

IGBST and WGFD. At this time, the Tribes do not designate a specific number of grizzly bears for which it will manage, and future strategy will depend on the number of grizzly bears present on Wind River and the direction the Tribes wish to take.

Occasionally, grizzly bears may conflict with people. For example, a hungry bear becomes habituated and spends an inordinate amount of time around human developments, threatening human safety. Or, a grizzly bear becomes a habitual livestock depredator. These are termed "Grizzly Bears of Concern" and will require management action (see Table 1 below for further discussion). Removal of grizzly bears by management action takes precedence over hunter harvest.

Relocating Grizzly Bears of Concern to areas outside Wind River is an option. Prior to relocating, TFG personnel will contact the WGFD to coordinate an appropriate release area and to ensure that bears are radio-collared with the appropriate frequency. Once a grizzly bear is moved off Wind River, it becomes the jurisdiction of the WGFD. Personnel from the Bridger-Teton National Forest (BTNf) and Shoshone National Forest (SNF) indicated that they are willing to accept livestock depredating bears. When relocating is desired, the TFG will contact the North Zone Wildlife Biologist for the BTNf in Jackson or the Wildlife Biologist for the SNF in Cody who will then contact their respective Forest Supervisor for approval. Personnel with Yellowstone National Park stated that it's highly unlikely that they will accept grizzly bears from Wind River since they do not accept bears from anywhere outside the park.

Once the grizzly bear population is of a sustainable size, the Tribes may allow hunter harvest if so desired. Currently, the grizzly bear is designated as a trophy game animal for which the season is closed. Given the limited number of grizzly bears on Wind River and within the GYA, the season may remain closed for a period of time. Because individual grizzly bears each require vast areas of secure habitat and because this habitat is relatively limited on Wind River, the population will remain small. Consequently, when hunter harvest is allowed, take will be very limited to help ensure future sustainability of the population.

Once hunter harvest is allowed, the season timing and length, harvest quota and other specifics will be proposed annually by the TFG and LFWCO for approval by the JBC in accordance with the following requirements:

- The Tribes will attempt to follow mortality limits as laid out in the Conservation Strategy. Mortality from all causes should not exceed 15% for males ≥ 2 yrs-old and 9% for females ≥ 2 yrs-old in order to sustain grizzly populations. Types of mortalities include known natural-caused and all human-caused such as human-related accidents, management action, and hunter harvest.
- Tribal hunters must possess a grizzly bear tag issued by TFG.
- Selection of hunters will be by random drawing.
- Young or females with young may not be harvested.
- Hunters will be required to report harvest to the TFG and the LFWCO within 72 hours. The LFWCO will record all known removal (harvest, management action, illegal, accidents and any other removal) and provide this information to the TFG and IGBST. All mortality information will be provided to the IGBST as soon as possible by phone, preferably within 24 hours of the mortality. This rapid reporting will allow the IGBST to keep track of the annual mortality levels throughout the ecosystem to help assure the mortality limits are not exceeded.

Table 1. Summary of take. Take means removal of a grizzly bear by placing in captivity, relocating to another location, or killing and may occur in the following instances:

Provision	Allowance
Take in self defense.	Any person may take a grizzly bear in self defense or the defense of others.
Protection of human life and safety.	The Tribes may promptly remove any grizzly bear determined by the Tribes to be a threat to human life or safety.
Tribal government take of Grizzly Bear of Concern.	"Grizzly Bear of Concern" is defined as a grizzly bear that attacks humans or any domestic animal including livestock, dogs (excludes hounds that are in pursuit of a bear), and livestock herding and guarding animals, damages personal property, or becomes habituated to human food and/or people and spends an inordinate amount of time around human developments, threatening human safety. Management removal by TFG or other authorized personnel will occur on a case-by-case basis and will consider history of offending bear's behavior, threat to human safety, evidence of the attack, potential for future conflicts, degree of damage, presence of unusual grizzly bear attractants, any previously specified animal husbandry practices that have been implemented, effectiveness of other methods, etc. Non-lethal methods (relocating, hazing, rubber bullets, electric fencing, etc.) will be considered on a case-by-case basis when depredation has occurred. Lethal removal will be used if non-lethal methods are impractical and ineffective.
Additional take provisions for Tribal government employees.	Authorized tribal agents (i.e., employees of the TFG authorized by the JBC to manage grizzly bears), acting in the course of official duties, may take a grizzly bear from the wild, if such action is for: (1) scientific purposes; (2) to avoid conflict with human activities; (3) to relocate a grizzly bear to improve its survival and recovery prospects; (4) to aid or euthanize sick, injured, or orphaned grizzly bears; (5) to salvage a dead specimen which may be used for scientific study; and (6) to aid in law enforcement investigations involving grizzly bears.
Hunter Harvest by enrolled member.	Under authorization of the JBC, the TFG may issue tag(s) that allow for the harvest of grizzly bear(s) by licensed hunters during approved seasons. Hunters must apply for a tag and be entered into a random drawing. At the writing of this plan, the grizzly bear season is closed.

Bear Depredations: Grizzly bears will likely spend the bulk of time in remote areas of the Owl Creeks and Wind River mountains where the majority of suitable habitat resides. Cattle are also present in these areas during the late spring, summer and fall and may be subject to grizzly bear depredation. Grizzly bears may also occasionally occur in lower elevation sagebrush uplands and near agricultural lands. Cattle are present in these areas during winter months and calving season. Consequently, grizzly bears may kill livestock and may need to be relocated or lethally removed. This will be assessed on a case-by-case basis as mentioned above. Compensation for livestock losses will not be provided by the Tribes. The Tribes will cooperate with and utilize assistance offered by the LFWCO, Animal and Plant Health Inspection Service (APHIS) - Wildlife Services and WGFD when capturing or lethally removing grizzly bears. All mortality due to removal of depredating bears will be provided to the IGBST as soon as possible by phone, preferably within 24 hours of the mortality. TFG personnel have received and will continue to receive training in determining grizzly bear kills of livestock, capturing techniques, and appropriate care and handling. Any illegal take will be investigated by the TFG in cooperation with the local Special Agent of the FWS if desired.

A typical depredation scenario is as follows:

- A livestock owner finds a dead calf in his pasture. He covers the carcass with a tarp to protect the scene. He notifies the TFG.
- TFG contacts the local APHIS Wildlife Services personnel and/or the LFWCO for assistance if needed. TFG visits scene and determines whether calf was killed by a grizzly bear.
- TFG will discuss options with owner to determine course of action. Actions could include: no action to see if depredation continues; attempt to trap and radio-collar grizzly bear to assess presence near livestock and identification of grizzly bear if depredation

continues; relocate grizzly bear; remove livestock carcasses or other items that may be acting as an attractant; suggest confining or moving livestock if feasible to deter future depredation; consider using non-lethal methods such as rubber bullets and the like; or lethally remove grizzly bear by shooting or trapping and euthanizing humanely.

Habitat Management: New human developments (wind turbines, oil and gas wells, homesites, and the like) should be avoided or minimized within occupied grizzly habitat. The density of roads, the vehicular use of those roads, and human developments have a major impact on how suitable an area is for grizzly bears (Conservation Strategy 2007). The BIA's Wind River Reservation Forest Management Plan (2004) recognizes the importance of grizzly bears and their habitat by the following guidelines. The plan has a no net increase in roads in the Wind River Roadless Area and in the Monument Peak area of the Owl Creek Mountains. In addition, throughout the remaining portion of grizzly habitat a road density of 1 mile of open road per mile² or less will be maintained in order to sustain the integrity and security of grizzly bear habitat.

In order to assess the level of cone production for whitebark pine, transects will be established and surveys conducted each year. A transect was established on Bold Mountain in August 2008. Additional sites will likely be established in Washakie Park and on Trail Ridge. On each transect, 10 trees are marked permanently and all cones attached to the tree from that year are counted. These are recorded and sent to the IGBST annually.

Food Storage: Minimizing contact of bears with non-natural foods is an effective method of reducing bear habituation to people. Habituation can result in a bear becoming a threat to human safety and personal property (IGBST 2008). The TFG has erected food poles at campsites in Crow Creek Basin and will be installing metal storage containers as well. Efforts will be expanded to include the Wind River Mountains. In bear habitat, homeowners will be encouraged to store garbage, grain, etc. in bear-proof buildings or containers. For those with beehives, use of electric fencing will be encouraged. To further minimize human/bear conflicts, the prohibition of baiting bears will continue.

Public Outreach: The TFG and LFWCO will be jointly responsible for the creation and distribution of outreach materials. Pamphlets will be developed for handout to tribal hunters and other interested individuals and will provide information on grizzly bears biology, tribal management, depredation protocols, etc. This will also be incorporated into existing outreach programs (for example, hunter safety). Signage will be installed and maintained in bear habitat and backcountry users will be encouraged to carry pepper spray. Sample signs that encourage good food storage in bear habitat and that help differentiate black bears from grizzly bears are attached in Appendix A.

Disposition of Grizzly Bear Parts: Grizzly bear parts resulting from confiscation of illegal harvest or from management removal will be housed by TFG and disseminated at the discretion of the JBC for religious, cultural, traditional and/or educational purposes. Sale of parts disseminated by the JBC is not permitted. To obtain a grizzly bear part, a tribal member must submit a letter of request to the TFG stating the intended use and purpose. Once received, a minimal delay may occur in order to confirm the legitimacy of the request with the JBC. Surplus parts may be donated for educational purposes to schools on Wind River.

Definitions

APHIS: Animal and Plant Health Inspection Service.

BTNF: Bridger-Teton National Forest.

COY: cubs-of-the-year. These are cubs that are < 1 year old.

Depredation: a grizzly bear attack that resulted in the immediate or recent (< 1 week) death of a domestic animal.

Domestic animal: animals that have been selectively bred over many generations to enhance specific traits for their use by humans, including use as pets. This includes livestock and dogs (excludes hounds that are in pursuit of a bear).

Enrolled Member: a person officially recognized by the Eastern Shoshone or Northern Arapaho as a member of their tribe.

FWS: US Fish and Wildlife Service.

GYA: Great Yellowstone Area – portions of Wyoming, Montana, and Idaho near Yellowstone National Park, including Wind River.

Grizzly Bear of Concern: a grizzly bear that attacks humans or any domestic animal including livestock, dogs (excludes hounds that are in pursuit of a bear), and livestock herding and guarding animals, damages personal property, or becomes habituated to human food and/or people and spends an inordinate amount of time around human developments, threatening human safety.

IGBC: Interagency Grizzly Bear Committee – a multi-agency group created in 1983 to lead the effort to recover the grizzly bear in the lower 48 states.

IGBST: Interagency Grizzly Bear Study Team - an interdisciplinary group of scientists and biologists responsible for long-term monitoring and research efforts on grizzly bears in the Greater Yellowstone Area. Representatives are from the U.S. Geological Survey, National Park Service, U.S. Fish and Wildlife Service, U.S. Forest Service, Montana State University, and the states of Idaho, Montana, and Wyoming. The Tribes are currently working on a cooperative MOU with the IGBST.

JBC: Joint Business Council of the Eastern Shoshone and Northern Arapaho Tribes.

Livestock: cattle, sheep, horses, mules, domestic bison, and herding and guarding animals (llamas, donkeys, and certain breeds of dogs commonly used for herding and guarding livestock).

LFWCO: FWS Lander Fish and Wildlife Conservation Office.

Private land: all land that is not under Federal Government ownership and administration. Tribal land is considered private land.

Remove: place in captivity, relocate to another location, or kill.

SNF: Shoshone National Forest

Take: to remove.

TFG: Shoshone and Arapaho Tribal Fish and Game Department.

Tribal land: Tribal trust, allotted, and fee-title Indian-owned land within the exterior boundaries of Wind River.

Tribes: the Eastern Shoshone and Northern Arapaho Tribes of the Wind River Reservation.

Ungulate: hoofed animal.

WGFD: Wyoming Game and Fish Department

YGBCC: Yellowstone Grizzly Bear Coordinating Committee – the local sub-committee of the IGBC responsible for the Greater Yellowstone Area. Tribes are members.

Literature Cited

Anderson, C.R., M.A. Ternent, and D.S. Moody. 2002. Grizzly bear-cattle interactions on two grazing allotments in northwest Wyoming. *Ursus* 13:247-256.

Barber, S.M., L.D. Mech, and P.J. White. 2005. Yellowstone elk calf mortality following wolf restoration: bears remain top summer predators. *Yellowstone Science* 13(3):37-44.

Bureau of Indian Affairs. 2002. Range Unit Information for 2001. 55pp.

Bureau of Indian Affairs. 2004. Wind River Reservation Forest Management Plan.

Interagency Conservation Strategy Team. 2007. Final conservation strategy for the grizzly bear in the Greater Yellowstone Area. 160 pp.

Interagency Grizzly Bear Study Team. 2005. Reassessing methods to estimate population size and sustainable mortality limits for the Yellowstone grizzly bear. 67 pp.

Keane, R.E. and S.F. Arno. 1993. Rapid decline of whitebark pine in western Montana: evidence from 20-year remeasurements. *Western Journal of Applied Forestry* 8(2):44-47.

Landenburger, L., R.L. Lawrence, S. Podruzny, and C. Schwartz. 2006. Mapping whitebark pine distribution throughout the Greater Yellowstone Ecosystem. ASPRS Conference. 11 pp.

Lockwood, S.T., L. I. Knox, D.D. Bjornlie, and D.J. Thompson. 2008 Wind River Indian Reservation grizzly bear camera study. Wyoming Game and Fish Department. 8 pp.

Mattson, D.J. and D.P. Reinhart. 1994. Bear use of whitebark pine seeds in North America. Pages 212-220 in W.C. Schmidt and F.-K. Holtmeier (eds). *Proceedings -- International Workshop on Subalpine Stone Pines and their Environment: the Status of Our Knowledge*. General Technical Report INT-GTR-309. Ogden, Utah: U.S. Forest Service Intermountain Research Station. Found on website <http://www.conifers.org/pi/pin/albicaulis.htm>.

Mattson, D.J., B.M. Blanchard, and R.R. Knight. 1991. Food habits of Yellowstone grizzly bears, 1977-87. *Canadian Journal of Zoology* 69:1619-1629.

Mattson, D.J. and C. Jonkel. 1990. Stone pines and bears. Pages 223-236 in W.C. Schmidt and K.J. McDonald, compilers. *Proceedings-symposium on whitebark pine ecosystems: ecology and management of high-mountain resource*. U.S. Forest Service. General Technical Report INT-270.

Schwartz, C.C., M.A. Haroldson, G.C. White, R.B. Harris, S. Cherry, K.A. Keating, D. Moody, and C. Servheen. 2006. Temporal, spatial and environmental influences on the demographics of grizzly bears in the Greater Yellowstone Ecosystem. *Wildlife Monograph* 161.

Schwartz, C.C., S.D. Miller, and M.A. Haroldson. 2003. Grizzly bear. Pages 556-586 in G.A. Feldhamer, B.C. Thompson and J.A. Chapman, editors. *Wild mammals of North America: biology, management, and conservation*. Second edition. The Johns Hopkins University Press, Baltimore, Maryland.

Schwartz, C.C., M.A. Haroldson and K. West. 2008. Yellowstone grizzly bear investigations: annual report of the Interagency Grizzly Bear Study Team. 125 pp.

White, G.C. 1996. Two grizzly bear studies: moth feeding ecology and male reproductive biology. Ph.D. Thesis, Montana State University, Bozeman. 79 pp.

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FOOD STORAGE

Protect your family and wildlife. Store all foods and attractants properly. Make them unavailable to wildlife at night and when unattended during the day.

ATTRACTANTS ARE:

Food, beverages, toiletries, game meat, carcass parts, processed livestock food, pet food and garbage.

UNAVAILABLE MEANS:



Hung at least 10 feet high and 4 feet from any vertical support.



Stored inside a bear-resistant container or hard sided vehicle.



Game meat, if properly stored, at least 100 yards from sleeping area, recreation site, or Forest Service Trail System.



Game meat, if left on the ground, at least one-half mile from any sleeping area or recreation site, and 200 yards from a Forest Service System Trail.

Coolers ARE NOT Bear-Resistant!



BEAR SAFETY FOOD STORAGE PRECAUTIONS STRONGLY RECOMMENDED BETWEEN MARCH 1 AND DECEMBER 1.



PLEASE KEEP A CLEAN CAMP!

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HUNTERS KNOW YOUR BEARS

Grizzlies are protected by State and Federal Law

Black Bear



Grizzly Bear



**Color and Size can be misleading
Look for a combination of characteristics.**

- Color varies from blond to black.
 - No distinctive shoulder hump.
 - Rump is higher than front shoulders.
 - Face profile is straight.
 - Ears are tall and pointed.
 - Front claws are 1-2 inches long and curved to facilitate climbing. Claw marks are not usually visible in tracks.
- Color varies from blond to black.
 - Distinctive shoulder hump.
 - Rump is lower than shoulder hump.
 - Face profile is dished in.
 - Ears are short and rounded.
 - Front claws are 2-4 inches long, depending on the amount of digging the bear does, and are slightly curved. Claw marks are usually visible in tracks.



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