BEAR-HUMAN CONFLICT MANAGEMENT PLAN

KATMAI NATIONAL PARK AND PRESERVE

ANIAKCHAK NATIONAL MONUMENT AND PRESERVE

ALAGNAK WILD RIVER

Revised March 2006

This plan is approved and rescinds all previous bear management plans issued for KATM/ANIA/ALAG

Approved by: _____

Superintendent Date

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1.0 INTRODUCTION

Katmai National Monument was established on September 24, 1918. It was subsequently enlarged by three executive orders, then enlarged and re-designated Katmai National Park and Preserve by the Alaska National Interest Lands Conservation Act (ANILCA) (PL 96-487) of 1980. Several enlargements of the park were for the explicit purpose of protecting brown bears (*Ursus arctos*) and their habitat. Katmai provides habitat for one of the largest protected populations of Alaskan brown bears (Sellers et al. 1998). Brown bears in Katmai are recognized as a resource of major significance for the enjoyment of park visitors. Because of the protected status of the population, it is also of inestimable scientific value.

The National Park Service (NPS) was established to "regulate the use of ... national parks ... and to conserve ... the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired..." (NPS Organic Act, 16 USC 1). Senate Report 96-413 set forth that wildlife management for NPS areas in Alaska would "...strive to maintain the natural abundance, behavior, diversity, and ecological integrity of native animals as part of their ecosystem." ANILCA (section 1301(b)(2)) requires a description of the programs and methods employed to manage wildlife; this information is documented in the Resource Management Plan (NPS 1999a). The Bear-Human Conflict Management Plan is an integral component of the Resource Management Plan and functions to provide operational guidelines for the management of interactions between bears and people in Katmai (NPS 1986). Per the Park's General Management Plan, the Bear-Human Conflict Management Plan provides management guidance for "minimizing human impacts on bear behavior and patterns of use" (NPS 1986:48).

The objectives of the Katmai bear management program are:

1. Retain the natural population dynamics of bears,

2. Allow their natural patterns of feeding and habitat use to continue,

3. Preclude a learned orientation of bears toward people,

4. Minimize bear-human conflicts, and

5. Provide opportunities for humans to learn about, observe, and appreciate bears.

The management guidelines presented in this plan are based on fundamental principles of learning and behavior and on the current information available on brown bears. This plan emphasizes the prevention of bear-human conflicts (categories defined in Appendix 1), but provides for responsive measures when preventive management is insufficient. The procedures discussed in this plan are intended to be guidelines that permit some flexibility when warranted. All actions described in this plan will be conducted consistent with NEPA requirements.

2.0 MANAGEMENT AREAS

2.1 Frontcountry

l. **Residence areas** are areas within the immediate vicinity of occupied or actively used permanent structures, plus areas of altered vegetation contiguous therewith, at Brooks Camp (Fig. 1), the Brooks Lake residence area, Lake Camp, and the concession and privately operated lodges at Grosvenor, Nonvianuk, Enchanted, Kulik, and Battle lakes. The Naknek Lake beach and Oxbow marsh, both adjacent to Brooks Camp, are not considered parts of the Brooks Camp residence area. However, to the extent possible, vegetation between the Naknek Lake beach trail and the primary camp trail that parallels it, extending from the generator to the Lodge, should be managed as part of the Brooks Camp residence area.

2. **Camps and campgrounds** include the Brooks Camp campground (Fig. 1) and other designated NPS campgrounds, established camps such as Aniakchak, Amalik, Nonvianuk, Swikshak, and Fure's Cabin, and any long term camps (established in the same location for >14 days). Short-term camps (established in the same location for up to 14 days) established by visitors or NPS personnel are not considered frontcountry areas in this plan.

3. **Intensive human use areas** - Areas receiving high seasonal use including the Lake Camp area, the Brooks River (Fig. 2), the Brooks River road, and the Three Forks overlook area.

2.2 Backcountry

The backcountry includes all other areas of the Park and Preserve.

3.0 PREVENTIVE MANAGEMENT

The objective of preventive management is to preclude confrontations and consequently the need for responsive management. All aspects of this program must be consistently implemented for it to be successful.

3.1 Education

Human safety and the preservation of a natural bear population depend largely on well-informed and conscientious human behavior. Information on proper human behavior around bears, proper food storage, possible bear behavior during encounters with humans, and related Park regulations must be made available to all visitors. Visitors will be provided several opportunities to obtain this information.

Responses to letters of inquiry from prospective park visitors should include a Park newspaper or other written material addressing bear safety, preferably related to the visitor activity mentioned in the inquiry.

Specific points concerning bear safety and human behavior toward bears are listed in Appendix 2. Rules for human behavior around bears are general guidelines. They will be interpreted, applied, and enforced in a practical manner. No one will receive special privileges regarding human behavior around bears. If NPS staff violates these rules as a necessary part of their visitor protection or resource management duties, they should explain their actions to nearby visitors.

3.1.1 Visitor Centers

King Salmon - The staff of the King Salmon Visitor Center (VC) will be trained to answer questions about bear behavior, bear viewing, and safety concerns. VC displays will include information about bears. Park newspapers, informational brochures, and hunting regulations will be available. In addition, the Alaska Natural History Association (ANHA) will sell books about bears, and bear videos will be shown on request.

Brooks Camp - All Brooks Camp visitors are required to receive an NPS-approved bear orientation (36 CFR 13.66(c)(8)). This orientation will be provided by a Ranger at the Brooks Camp VC, or by a guide authorized to provide the information to his/her clients directly through the Brooks River Guide Training Program (BRGTP). A bear safety video will be available at the VC in French, German, and Japanese for non-English-speaking visitors. The orientation will include current information on bear activity in the area, Park regulations, and safety considerations. All visitors will be notified of the food storage caches available for their use. Specific information will be given to anglers regarding fish storage procedures and to campers, backpackers, and boaters regarding proper food handling and storage. Visitors who receive a bear orientation at the VC will be provided buttons which they will be asked to wear throughout their stay to indicate that they have received a bear orientation.

Visitors will be advised of the bear orientation requirement and of the need for proper human behavior around bears through contact with the staff at the King Salmon office, at the King Salmon VC, and through Park interpretive materials. Commercial operators bringing passengers to Brooks River are required as part of their Commercial Use Authorization (CUA) to send their passengers directly to the VC upon arrival there.

3.1.2 Display Boards and Wayside Exhibits

Display boards at the Lake Camp boat dock, the Brooks Camp VC, the Brooks Lake landing area, and the Brooks Camp campground will include a summary of regulations and recommendations concerning bears, food storage, and fishing.

3.1.3 Interpretive Activities

Bears will be the subject of a Brooks Camp evening program at least once a week. The program should contain information on safe behavior around bears in addition to a major theme concerning natural history, ecology, or behavior. Introductions to all evening programs should include basic bear safety information, explanations of current bear issues and reasons for hazing that may have occurred that day, and provide an opportunity for visitors to ask questions about bears.

Park staff will become knowledgeable enough about bears to educate visitors about bear behavior and proper human behavior around bears. Whenever uniformed rangers are with people who are viewing a bear, they should be prepared to provide interpretation of the behavior of the bear, as appropriate.

3.1.4 Informational Handouts

The Park newspaper(s) and other printed materials will feature information on bear safety and provide additional information through articles that discuss proper conduct around bears for people that are engaged in certain activities, such as fishing or hiking. The Park newspaper, as well as other information brochures, will be available at Park facilities and the King Salmon VC. A list of currently available informational handouts is included in Appendix 3.

3.1.5 Brown Bear Booster Program

The Brown Bear Booster Program was developed to reward Brooks Camp visitors for outstanding behavior around bears. Pins will continue to be made each year and awarded to visitors when appropriate.

3.1.6 Brooks Camp Signs

Signs will be posted at the head of the Brooks Falls trail, and on the Brooks Falls platform and boardwalk system entry gates, with information on visitor hours and proper human behavior, under the direction of the Brooks District Ranger. Signs will also be posted indicating what areas of the river are open to retention of legally caught fish and where picnicking is prohibited.

3.1.7 Staff Training: Bear Safety and Behavior

NPS Staff - Training for all NPS field staff will include current information about bear safety and behavior and Katmai bear management policies and practices. It will cover the reasons for our policies and potential problems to watch for. Training will be provided by Resource Management staff, other knowledgeable NPS staff, or guest biologists annually during seasonal orientation (see Appendix 4 for staff training handouts).

Brooks Lodge Staff - The Brooks Lodge Manager will be contacted each spring by the Katmai Concessions Chief to set up a staff training session on bear safety, behavior, and management. This training will be provided by Resource Management staff, other knowledgeable NPS staff, or guest biologists, and may be offered jointly with some of the NPS staff training.

Guides - Materials provided to CUA operators will include information about Katmai bear management policies and practices.

3.1.8 Staff Training: Firearms

Appropriate NPS personnel, including Resource Management staff, will receive the necessary training to qualify for authorization to carry a firearm for wildlife management. Excerpts from Alaska Region Policy 110-006, which specifies training and procedures necessary for authorization to use firearms in wildlife management, are included as Appendix 5. In addition, hazing rounds (4.1.3) may only be used by NPS personnel that have received specific training in use of the rounds during firearms training, to include: (1) review of the information presented in section 4.1.3 and Appendix 9 of this plan regarding use of hazing rounds, as well as a general review of the Park's Bear-Human Conflict Management Plan; (2) range practice using hazing rounds; and (3) discussion of management scenarios involving use of hazing rounds in conjunction with the range practice.

3.2 Human Food, Garbage, and Harvested Fish and Game

A bear's sense of smell is acute beyond what we can imagine. Brown bears can apparently distinguish human from non-human animals by the traces of scent left in tracks (Herrero 1985). Visitors and staff must understand that it is absolutely futile to hide food or other odorous substances from bears. They must be stored such that bears cannot get to them. Similarly, it must be understood that the slightest food residue can attract a bear to a campsite; therefore, food must not be prepared, consumed, or stored nearby.

For situations not specifically addressed in this section, lack of proper food security is demonstrated whenever a bear obtains human food or garbage. If a bear obtains food from a storage container, that system is not bear proof and must be replaced or modified so that it is.

3.2.1 Federal and State Regulations and Their Interpretation

Feeding of wildlife is prohibited under federal regulations (36 CFR 2.2(a)(2); Appendix 6). Food, beverages, garbage, harvested fish, and related items identified in the Superintendent's Compendium must be kept secure from bears as specified in the Compendium (Appendix 6). A primary approved method for securing food in the backcountry is use of bear resistant containers (BRC). Refer to Appendix 6 for details.

State of Alaska regulation 5 AAC 92.230 (Feeding of Game) states that "A person may not intentionally feed a moose (except under terms of a permit issued by the department), bear, wolf, fox, or wolverine, or negligently leave human food, pet food, or garbage in a manner that attracts these animals. . ." Also 5 AAC 92.410 Taking Game in Defense of Life or Property says in part: ". . . (2) the necessity for taking is not brought about by the improper disposal of garbage or a similar attractive nuisance . . ." In addition, 18 AAC 60.010 Solid Waste Accumulation, Storage, and Treatment states that "(a) A person may not store accumulated solid waste in a manner that causes . . . (2) the attraction or access of domestic animals, wildlife, or disease vectors . . ."

The State's enforcement of these regulations is mainly responsive. If a party complains about a problem bear, the State generally requires that the food and garbage handling at the residence, camp, etc. be completely bear proof before any action will be taken against the animal. The State's definition of "bear proof" is based on the proven effectiveness or ineffectiveness of the system and not specific construction guidelines (i.e., if a bear is obtaining food or garbage, the current system is not "bear proof" and must be modified or replaced until it is).

Business and other public operations must be inspected and obtain permits as required by 18 AAC Chapter 60. This regulation requires that garbage be handled in a "sanitary" manner (i.e., not attracting or accessible to animals or attracting or harboring flies). Heavy, securely covered containers are required in areas where bear problems have previously occurred. In this case there are limited guidelines for "bear proof." However, if problems are occurring, the storage practice must be changed or the permits can be revoked and fines levied.

3.2.2 Bear Resistant Containers (BRCs)

A limited supply of BRCs will be available from the Brooks Camp VC and the King Salmon VC. BRCs can also be rented and purchased from numerous businesses in Anchorage and Fairbanks.

3.2.3 Human Food and Garbage

A. Frontcountry

(1) Residence Areas:

(a) Brooks Camp

Within the Brooks Camp Developed Area (all park areas within a 1.5 mile radius of the Brooks Falls platform), food consumption or possession is prohibited along Brooks River, and picnicking is restricted to the Brooks Camp campground, the Brooks VC food cache, the Brooks Lake picnic area, and a site that may be designated each year in the employee housing areas (36 CFR 13.66(c)(9); Appendix 6).

There are food caches near the Brooks Camp VC, in the Brooks Camp campground, and at the Brooks Lake picnic area where food and other odorous items may be stored (Superintendent's Compendium 36 CFR 13.66(c)(4); Appendix 6). Food may also be stored in closed vehicles or buildings. Garbage must be placed in indoor trash cans. Garbage containers will be emptied regularly by NPS staff to prevent large accumulations of garbage.

All NPS and concession garbage will be stored in the incinerator building. All organic and other burnable garbage will be incinerated by NPS maintenance staff frequently enough to prevent accumulation in the building. Non-burnable garbage will be removed from the park. Garbage must be removed from employee seasonal residences and lodge guest rooms during long periods of human absence from camp facilities such as overnight or during long breaks. The Brooks Lodge Manager should be informed of these procedures to ensure that they are followed by concession employees.

Food may not be stored on boats or planes moored on the Naknek Lake and Brooks Lake beaches unless secured per regulation (see 3.2.1 and Appendix 6). Further, all fish must be stored in facilities specifically designated for fish storage (36 CFR 13.66(c)(4); Appendix 6).

At the end of the season, Brooks Camp (and Brooks Lake) drains and sewer lines will be flushed with water. No food or other attractants will be stored in NPS or concession buildings during the winter.

(b) Other Residence Areas

Grosvenor Lodge should be closed similarly to Brooks Lodge. The Chief of Concessions will request that the Grosvenor Manager ensure that buildings are clean and contain no food at closing.

The food and garbage handling and storage procedures specified in this plan should be conveyed to the managers and owners of lodges on private land within the park to preclude the development of problems that might endanger park visitors.

(2) Camps and Campgrounds:

(a) Brooks Camp

Proper food and garbage handling for the Brooks Camp campground will be explained to campers when they receive their campground permit. Food must be stored in the food cache except when it is being prepared or consumed. Food should be prepared and consumed in the wooden shelters or on the nearby picnic tables. Food will not be prepared over the fire rings. The only approved outdoor location for washing of dishes

and cooking utensils is the water spigot located adjacent to the campground food cache or other designated areas (36 CFR 13.66(c)(6); Appendix 6). Food particles should be removed and deposited in the garbage bin before dishes/utensils are rinsed. Picnic tables should be wiped off with water after use. All odorous items such as toothpaste and soap will also be stored in the food cache. Garbage must be placed in the proper bins in the food cache. NPS staff will remove garbage several times each week to prevent a large accumulation of garbage from developing.

(3) Other Intensive Human Use Areas:

Garbage will not be left in Three Forks cabin overnight; no food or other attractants will be stored in the cabin during the winter.

B. Backcountry

Backpackers will be encouraged to reduce food odors by avoiding odorous foods and wrapping food in plastic. While camping, food and odorous substances should be stored at least 100 yards from the campsite. Food, food containers, garbage, and harvested fish must be secured as previously described (Appendix 6). Additional information for visitors regarding backcountry camping is included in Appendix 2.

Suggestions for temporary backcountry camps established by NPS personnel or associated researchers are included in Appendices 4 and 8. Camps maintained for several days or more will be encouraged to employ structural methods (e.g., electric fences) to enhance food security.

3.2.4 Spills

If a food, garbage, or sewage spill occurs, it should be cleaned up as soon as possible. If the site is in a residence area, the ground on which the spill occurred should be covered with chlorinated lime, pine oil, or other appropriate substance to minimize its attractiveness to bears.

3.2.5 Angling and Fish Storage

A. Brooks Camp

Upon arrival at the Brooks Camp VC, anglers hoping to keep a salmon will be able to obtain a fish freezing bag. Upon catching a fish that will be kept, the angler must immediately bag the fish and carry it to the Fish Freezing Facility where it may be stored whole until the end of their stay (36 CFR 13.66(c)(4); Appendix 6). No fish cleaning facilities are available to the public at Brooks Camp. Fish retention at Brooks River is limited to one fish per day (36 CFR 13.66(a)(3); Appendix 6), and State of Alaska regulation limits fish retention to below the floating bridge.

B. Other Areas

Anglers should be encouraged to store any legally caught fish whole, rather than cleaning them on site. The CUA specifically prohibits cleaning of fish and depositing of fish parts at Big River. Any cleaning of fish should be done where there is flowing water to clean all blood and remains away from the site. Fish entrails should be disposed of by puncturing the air bladder and depositing in deep fast-flowing water, and should not be deposited where they may affect campers (for example, upstream of a campsite), ideally at least 30 yards from any shoreline. All harvested fish should be stored immediately in a sealable plastic bag or airtight container and must be secured per regulations (Appendix 6).

3.2.6 Recommendations Regarding Legally Harvested Game

The following general precautions are recommended for hunters: (1) arrangements should be made to transport game out as soon after harvest as possible; (2) because bears are typically first attracted by the gut pile, reduce the risk by moving all the meat at least 100 yards, and preferably more, from the kill site once meat has been removed from the carcass and prepared for transportation out of the area; (3) mark the kill site/gut pile and the meat storage site with flagging so it is easily spotted (and remove it upon leaving); (4) meat in the field should be stored at least 500 yards away from camp in a location that is visible from a distance, and it should be suspended at least 15 ft up (if this is not possible, alternative storage should be planned in advance; portable electric fences are an inexpensive way to protect the meat); (5) game should be dressed away from camp and any equipment that has come into contact with blood/animal remains should be washed thoroughly and left with the cache; and (6) any game cache left for any period of time should be approached thereafter from upwind, slowly and cautiously, and while making lots of noise. If a bear does find the cached meat, leave it for the bear. Trying to scare the bear off could provoke an attack, and it is illegal to kill a bear in this situation (5 AAC 92.410).

3.3 Other Man-Made Items as Possible Bear Attractants

Whenever man-made items are in bear habitat, they are susceptible to damage from bears. A bear will investigate, often by chewing, an item or structure that it has not previously encountered in that location (Herrero 1985). New signs are commonly damaged. Bears may show interest in petroleum products (Katmai NPP bear management report form records), paint, and oils such as linseed. Precautions should be taken whenever these materials are used.

3.3.1 Brooks Camp

No personal property other than motorboats and planes may be left unattended except on the Brooks Lodge porch, in the Brooks Camp campground, and in designated equipment caches (36 CFR 13.66(c)(10); Appendix 6). A gear storage shed is located outside the VC for baggage which does not contain food. Loose gear should not be stored on boats moored on the Naknek

Lake and Brooks Lake beaches in the Brooks River area. Any such property will be removed by Rangers and secured in gear caches. Written notification will be left in the boat informing the owner as to the location of his/her property. To avoid damage by bears, gear that should be secured includes fuel hoses and plastic fuel containers, seat cushions, etc. After the above precautions are taken, off-anchoring the boat is the best way to keep a bear from investigating it closely.

3.4 Animal Carcasses

3.4.1 Frontcountry

A. Large Animal Carcass Detected Before a Bear Begins Feeding on It

If the carcass is in an area where a closure will not be effective (for example, near a regularly used trail), or it is within 200 yards of a residence area or campground during the primary visitor season of June-September, an attempt should be made to move the carcass to an area with fewer people or where people can be more easily controlled by closures or patrols. At Brooks River, this action will be under the direction of the Brooks District Ranger, Brooks Camp Manager, or the Chief Ranger, in consultation with the Resource Management Chief and/or Park Wildlife Biologist. In all other areas at Brooks River, the decision to move the carcass is at the discretion of Brooks District Ranger, Brooks Camp Manager, or the Chief Ranger, in consultation with the Resource Management Chief and/or Park Wildlife Biologist. An emergency closure (see 4.1.5) may also be considered.

B. Bear Feeding on Carcass

At Brooks River, the area surrounding the site of a bear feeding on a carcass should be closed to all human activity if possible (see 4.1.5). The area should be patrolled to enforce that closure and to determine when the carcass is consumed and the bear has left. At that point, the area could be opened. Carcass situations can be extremely hazardous, and they should not be investigated without armed backup. Hazing the bear away from the carcass should only be considered if a closure will not be effective and public safety is a concern. Because attempting to move a bear away from a carcass may elicit defensive behavior by the bear, it should be undertaken cautiously, and should involve use of a vehicle or aircraft if possible. The Superintendent, Brooks Camp Manager, Brooks District Ranger or Chief Ranger, and Park Wildlife Biologist or Resource Management Chief should be involved in any such decision.

3.4.2 Backcountry

Carcass situations can be extremely hazardous, and they should not be investigated without armed backup. Carcasses should be investigated when safely possible (by approaching from upwind, slowly and cautiously, and while making lots of noise, and only in situations with good visibility) to determine the cause of death. If poaching is suspected, the carcass can be collected

for evidence. Otherwise, the carcass should be left alone to avoid disturbing animals scavenging on it.

3.5 Structural Methods

Passive structural methods will be used to help prevent conflicts that could result in the need for responsive management.

3.5.1 Brooks Camp Platforms and Boardwalks

See 3.7.2 for managing human use of the platforms and boardwalks.

There are three designated bear viewing structures available at different locations along the south side of Brooks River from which visitors can view and photograph bears (Superintendent's Compendium 36 CFR 13.66(d); Appendix 6): (1) Brooks Falls (Falls platform), (2) the Riffles several hundred yards below the falls (Riffles platform), and (3) south side of the lower river near Brooks Camp (Lower River platform; Fig. 2). Access to the Falls and Riffles platforms is via a trail that leads to elevated boardwalks. The boardwalks are intended to reduce the frequency of human-bear interactions that could occur should people attempt to reach the viewing platforms via ground-level trails. The boardwalks are not intended for use as viewing platforms.

Small platforms have been erected for bear research and monitoring. These are not official viewing platforms and will only be used by NPS employees for official duties. When not being regularly used, ladders or the entire platforms should be removed.

3.5.2 Barriers/Fencing

A. General

Bears usually avoid barriers across their travel routes and follow the path of least resistance. Bear movements may potentially be guided by removing obstructions in combination with strategic placement of barriers. Drift fencing has been used to block potential travel routes into Brooks Camp from the north and east in some years since 1984 (Norris 1996). Continuous drift fencing has not been used to avoid trapping a bear in camp. At Brooks Camp, a maternal female that habitually left her cubs in a tree that was adjacent to a heavily used foot trail was successfully deterred from using the tree by fencing the base of the tree and placing a life-sized color-photo of a large boar mounted on plywood there. At Brooks River, actions of this nature should be coordinated between Resource Management staff tasked to bear management and the Brooks Camp Manager.

Portable electric fence use will be encouraged in the backcountry to deter bears from investigating campsites. Backcountry camps established by NPS personnel or associated

researchers for several days or more may employ structural methods to enhance security (see Appendices 4 and 8 for suggestions regarding backcountry camps). Brooks Lodge uses electric fencing around the dining hall and office after closing and electric fencing is used to deter bear investigation of some buildings and other facilities at Brooks Camp. Grosvenor Lodge has used electric fencing to deter bears during darkness. Kulik Lodge has used electric fencing around the food storage building at night and around the septic system continuously. However, electric fences generally deter only curious bears, not determined bears that are attracted by food within the fence.

B. Brooks Camp Campground Electric Fences

To reduce the frequency of bears entering the Brooks Camp campground, an electric fence is maintained around its perimeter during the visitor season. The campground fence will be periodically inspected and tested by NPS personnel to insure that it is intact and functioning properly. Fence gates must be kept closed at all times.

The fence is intended to help reduce incidents of property damage in the campground; however, it will not deter a bear intent on getting past the barrier. Human safety in the campground ultimately depends on consistently secure food and garbage storage.

3.5.3 Bear Boards

Boards, plywood sheets with nails driven through them, or boards reinforced with metal should be placed over windows and doorways, around building foundations, and/or on walls when closing Brooks Camp to deter bears from investigating and damaging buildings. Bear boards may also be used on backcountry cabins when deemed necessary.

3.6 Trail Brushing

Thinning of brush adjacent to frontcountry trails should be considered in areas where human-bear interactions are frequent and close encounters might be reduced through improved sight distance.

3.7 Human Behavior

3.7.1 General Parkwide Guidelines

The following guidelines apply throughout the Park. See 3.2 for food, garbage, and harvested fish and game handling and storage guidelines.

A. Wildlife Distance Requirements

Approaching a bear or any large mammal within 50 yards is prohibited. In addition, continuing to occupy a position within 50 yards of a bear that is using a concentrated food source (including, but not limited to, animal carcasses, spawning salmon, and other feeding areas) is prohibited, as is continuing to engage in any fishing activity within 50 yards of a bear. These prohibitions do not apply to persons engaged in a legal hunt; on a designated bear viewing structure; acting in compliance with a written protocol approved by the Superintendent; or who are otherwise directed by a park employee (36 CFR 13.66(d), Superintendent's Compendium 36 CFR 1.5(a)(2); Appendix 6). The distance requirements (referred to as the "50 yard distance rule" throughout this document) will be enforced reasonably, recognizing that its intent is to minimize human impacts on bear access to habitat and bear behavior while providing for visitor access. The intent of the rule is not to require people to withdraw in an unsafe manner when they suddenly find themselves at close quarters; however, those situations can largely be avoided by following the basic guidelines in this section and Appendix 2. Background information regarding the distance requirements, as well as the related issue of habituation to people, is included in Appendix 7. It is also important to note that 36 CFR 2.2 prohibits the "feeding, touching, teasing, frightening or intentional disturbing of wildlife nesting, breeding or other activities" at any distance.

B. Reducing the Likelihood of Surprise Bear-Human Encounters

To reduce the chances of surprise human-bear encounters, people should avoid brushy areas and places with abundant bear food when possible. To help eliminate the element of surprise in bear-human encounters, humans should make noise whenever they are walking in bear habitat, especially in dense vegetation or other low-visibility settings, to alert bears of their presence. Methods include shouting, clapping, singing, and using noise-makers such as loud bells, whistles, and air horns. However, the human voice may be more readily identifiable to a bear than some artificial noisemakers. At Brooks Camp, visitors will be discouraged from using whistles and air horns. If these devices were frequently used in the area, bears could become habituated to the sounds, thus reducing their effectiveness as hazing tools.

C. Angler Behavior near Bears

Continuing to engage in any fishing activity within 50 yards of a bear is prohibited. Persons engaged in fishing are required to immediately terminate fishing activity by releasing any fish from the line and removing the line and hook from the water (Superintendent's Compendium 36 CFR 1.5(a)(2); Appendix 6). If an angler is unable to release a fish immediately, the line should be immediately broken or cut. If anglers are unable to break their lines, they should be encouraged to replace them with lighter line.

If an angler possessing a fish is approached by a bear, he should not yield the fish to the bear unless he feels his physical safety is jeopardized. The angler should move to a secure location

with the fish if possible. If not, the angler may return the fish into the water and move away, even if the fish is dead. This procedure will reduce the likelihood that the bear will associate the fish with the angler. However, experience indicates that unless a considerable amount of time passes before the bear recovers the released fish from the water, the bear may make that association. Anglers that observe a bear obtain a fish that was released under these conditions should report the incident as soon as possible to NPS staff.

3.7.2 Brooks Camp

A. General

Bears will be given the right-of-way except in residence areas. NPS staff should ask people seen within 50 yards of a bear to move away. Rangers must intervene in cases of harassment or self-endangerment. After the person has moved away from the bear, the person's motivation and safe behavior around bears should be discussed.

Ranger patrols should be conducted regularly along the Brooks River and in the Brooks Camp area throughout the summer and fall when large numbers of bears and humans are using the area to prevent confrontations, to monitor human behavior and bear activity, and to identify and correct any situations that could lead to bear-human conflicts (e.g., property left unattended, food or garbage left unsecured, picnicking outside designated sites, etc.). But it is also the responsibility of all employees to be alert for and to follow up on situations such as food stored improperly, property left unattended, bears trespassing in residence areas, and other situations that could lead to bear-human conflicts.

Camping is prohibited within the Brooks Camp Developed Area, which includes all areas within a 1.5-mile radius of Brooks Falls, except within the Brooks Camp campground (36 CFR 13.66(c)(1) and Superintendent's Compendium 13.66(c)(1)(i); Appendix 6).

B. Naknek Beach

The Naknek Lake beach at Brooks Camp will remain open as a bear use area. When a bear is present on the beach, humans should withdraw from the beach to avoid blocking the corridor. Humans should use the trails rather than the beach for travel to avoid disturbing bears. However, the 50 yard distance rule applies to people using these trails—people should not use the trails to walk past or view bears at closer than this minimum distance. Similarly, people should not crowd the edges of the electric fence around the campground to view bears closer than 50 yards away.

C. Lower River

It is beneficial to have a ranger stationed on the lower river platform and the Brooks Camp trail corner (see Fig. 1) when bears and people are active there. Resource staff stationed at Brooks Camp should annually evaluate the need for any minimal selective brushing of the trail in the

vicinity of the corner to improve visibility toward the beach, and work with maintenance staff to accomplish any brush removal in this area. People should not linger or set up cameras on the ground below the Lower River platform because this may inhibit bear movement through the area. Also, it is difficult for large groups of people to quickly move onto the platform when a bear is suddenly detected at close range. When there are many bears fishing in the river, people should not linger on the bridge or on the trail between the corner and bridge to avoid inhibiting bear movements along the river and to avoid being trapped by bears. People should not linger on the steps or access ramp or sit on the platform railings. The platform area considered acceptable for viewing of bears consists only of the deck areas past the top of the access ramp and stairs. The gates to the platform must be kept closed.

D. Falls Trail

People need to follow the 50 yard rule along the Brooks Falls trail. When a bear is observed within this distance of the trail, people must back up and wait for the bear to move or circle around them, maintaining the proper distance. When a bear is encountered using the trail, it may be preferable to move off the trail to allow the bear to continue along its route. If there are problems with the nature of bear-human interactions along the trail, the Brooks Camp Manager can impose a system involving Ranger escorts. This system should be coordinated to fit safety needs and availability of NPS staff.

E. Boardwalks, Falls Platform, and Riffles Platform

The elevated boardwalks that lead visitors from the Brooks Falls trail to the covered platform, Riffles platform, and Falls Platform are not intended as viewing platforms. Activity of people on the boardwalk may cause some bears to abandon normal travel routes. Therefore, people should be encouraged to move directly to the covered platform and viewing platforms and not linger to view/ photograph bears from the boardwalks. The gates to the boardwalk and platforms must be kept closed.

The Finding of No Significant Impact (FONSI; NPS 2000) for construction of the elevated boardwalks and Riffles platform specified that the Riffles platform and covered platform will each be managed for a maximum of 25 people. In future years, NPS staff may review bear monitoring data to determine whether those numbers can be increased to the design capacity of 40 people without significantly affecting bear behavior. The Falls platform will be managed for 40 people, which is its design capacity (NPS 1999b). The Falls and Riffles platforms and boardwalks are closed from 10 pm to 7 am from June 15 through August 15 (36 CFR 13.66(c)(2); Superintendent's Compendium 36 CFR 13.66(d); Appendix 6).

Visitors should be encouraged to limit their stay on the Falls and Riffles platforms, and to rotate to allow room for newcomers. When day-use increases in July and voluntary compliance is not sufficient, it will be necessary to maintain a waiting list. The Ranger taking names will coordinate with NPS staff stationed at the various structures to send people back and forth to the

Falls and Riffles platforms. The implementation of this system is the responsibility of the Brooks Camp Manager.

The area within 50 yards of the ordinary high water marks of the Brooks River from the Riffles Bear Viewing Platform to a point 100 yards above Brooks Falls is closed to entry from June 15 through August 15, unless authorized by the Superintendent (36 CFR 13.66(c)(3); Appendix 6). A designated route through the closed area will be posted in the Brooks Camp VC. State of Alaska regulations also prohibit fishing within 100 yards of fish ladders, such as the ladder at Brooks Falls, unless otherwise posted by ADF&G (5 AAC 75.050(a).

F. Brooks River in Autumn

Research indicates that the number of bears intolerant of close proximity to people increases from one or two individuals at the beginning of September to nearly half of all bears by October (Olson et al. 1990, Olson 1993, Olson et al. 1997a); This includes females with young, the class most likely to respond defensively toward humans, who typically begin using the river during the second week of September (Olson et al. 1992, Olson 1993, Olson and Gilbert 1994, Olson et al. 1997a). This may result in a higher probability of charges and similar reactions in close human-bear encounters. In addition, during the fall bears feed on spawning salmon throughout the river, so bear activity in the vicinity of Brooks Camp tends to be higher than during July, and with a general increase in bear use evident through at least the third week of September (Olson et al. 1992, Olson 1993, Olson and Gilbert 1994, Olson et al. 1997a,; Olson, NPS, unpublished data 2001-2005).

However, anglers and bear viewers continue to fly in for day trips into October when weather permits; and limited campground use continues. Therefore, some NPS employees should remain at Brooks Camp at least through the first week of October to make visitor contacts and to monitor bear and human use of the area. Bear monitoring should continue as late in the fall as possible. The responsive management program should be continued to whatever extent is realistic.

3.7.3 Backcountry

To minimize conflicts between bears and campers, camping is prohibited in the core Hallo Bay meadows from May 15th through July 15th (Superintendent's Compendium 36 CFR 13.18(a)(1); Appendix 6).

3.8 Aircraft Take-Off, Landing, and Step-Taxi Operations

The CUA prohibits initiation of aircraft take-off or landing within 100 yards of visible bears. At Brooks Camp, the CUA permits only idle operations within 200 yards of the Brooks Camp beach; step-taxi operations and initiation of take-off are prohibited within that zone; and aircraft must maintain an elevation of 1,000 feet above ground level at all times except during take-off

and landings. These same requirements apply to private aircraft (36 CFR 2.17(d)). Pilots should be discouraged from coming ashore or departing the beach at Brooks Camp within 100 yards of any bear, as it may be difficult to see small cubs while operating a plane. Camp staff can assist pilots by waving them toward a clear section of the beach.

4.0 RESPONSIVE MANAGEMENT

The following outline will guide responsive bear management activities. General categories of human-bear conflicts are identified in Appendix 1; specific bear management scenarios are discussed in 4.2. However, it is impossible to predict every possible scenario involving bears and humans, so these guidelines are intended to be flexible. The unique factors of each incident should be considered when conducting a management response. At Brooks River, the Brooks Camp Manager, Brooks District Ranger or a Bear Management Technician will be promptly notified of any incident or management action. The Chief Ranger and/or Park Wildlife Biologist will be notified of incidents or management actions that occur in other areas of the Park. Response procedures for incidents involving bears at Brooks Camp are outlined in Appendices 9 and 10; most aspects of those procedures are applicable to backcountry situations, with modifications to communications and sources for response support. Repeated responses to address a specific management concern may indicate weaknesses in the preventive management program which should be addressed.

4.1 Techniques

4.1.1 Investigation

Whenever a bear-human conflict is reported, the people involved in the interaction, or witnesses and property owners in the case of bear-caused property damage, should be interviewed to construct a detailed account of what happened and to determine the cause and type of interaction. If the bear is still in the area and further management actions are needed, the bear should be kept in view as long as it is safe to do so, until additional support staff arrives.

4.1.2 Monitoring

The following information should be obtained: (1) the number and sex-age classes of the involved bear(s); (2) what behaviors the bear(s) are exhibiting; and (3) the number, distribution, and activities of people in the area. People in the area need to be informed about the situation and moved to a safer location if necessary. Patrols in the area should be increased to ensure all preventive management measures are being followed. The bear(s) should be observed as much as possible to detect any problem behaviors it may be exhibiting. If it continues to exhibit problem behaviors, appropriate responsive management techniques should be utilized.

4.1.3 Hazing and Aversive Conditioning

A. Background

Aversive conditioning involves pairing an aversive stimulus (such as pain or loud noise) with an undesirable behavior. This learning technique can be applied in an attempt to prevent or eliminate the expression of dangerous, potentially dangerous, or destructive behaviors by bears towards humans and their property. The intention is not to permanently drive a bear out of a general area. Properly delivered aversive conditioning can teach a bear to associate a punishing experience with its presence in a residence area or campground, the act of obtaining or eating human food, or the process of behaving aggressively or too boldly toward people. Once such an association is made, the bear will be less likely to exhibit the undesired behavior. Aversive conditioning should only be conducted when the bear is involved in one of these activities. Otherwise, the bear may associate the aversive stimulus with whatever other behavior it is engaged in at that moment. However, even if delivered while the bear is in the act, aversive conditioning cannot be assured. A bear may simply be displaced temporarily, or it may learn the wrong thing, such as to abandon the behavior only when it detects the presence of a ranger with a shotgun. Therefore, in this plan all attempts at aversive conditioning of bears will be referred to as hazing.

B. Hazing Techniques

Bears quickly learn to ignore most hazing techniques if they are exposed to them repeatedly. Therefore, a bear should only be hazed when absolutely necessary. Additional background and considerations regarding use of hazing techniques are reviewed in Appendix 9. In general, hazing techniques should be applied in a progressive manner; ultimately use the minimum tool that will safely accomplish your objective. Usually, yelling and loud noises should precede use of projectile noise makers. If these techniques fail, then rubber or plastic slugs may be used. Noise makers can be coupled with plastic or rubber slugs to potentially increase the effectiveness of the noisemakers if used on the same bear in the future.

(1) Yelling, Clapping, Banging Pots and Pans:

Yelling and other loud noises are simple actions which are often effective for displacing a trespassing bear.

(2) Air Horns:

These devices emit loud noises that can effectively displace bears that are not habituated to them. Because bears habituate to loud noises relatively quickly, they should be used conservatively, when shouting is ineffective.

(3) Hazing Rounds:

For purposes of this plan, hazing rounds refer to the deterrent projectiles described herein. Additional information regarding these rounds can be found in Appendix 9.

(a) Bird Bangers and Screamers

These noise makers are fired from a 15 mm pistol-like launcher. The launcher and ammunition can easily and unobtrusively be kept accessible in a pocket or pack. There are two types of cartridges commonly available for use with the 15 mm launcher: bangers and screamers. Bangers produce a loud firecracker-like report, while screamers generate a loud screeching sound for several seconds after detonation. The sound and visual flash of the screamer can be tracked to its origin (the person using it). Because bird bangers typically have a shorter flight range than cracker shells (discussed below), they can be more effectively used in close-range situations than cracker shells.

(b) 12 Gauge Hazing Rounds

- **Cracker Shells** propel an ignited firecracker-like projectile typically to a range of 60 yards or more (Margo Supplies Limited 2001), with a detonation time of 2 seconds or less. There is an initial small report at the muzzle, followed by a louder explosion when the firecracker detonates.

- **Plastic/Rubber Slugs** fire a 12 gauge slug of molded polyurethane or rubber. Katmai has maintained a stock of two types of these slugs—the Federal Laboratories “BD-100”, which is a plastic slug with fin-shaped stabilizer, and the Margo Enterprises “Strike Two” (or "Fiocchi"), which is a hollow rubber slug. The BD-100 round is no longer commercially available.

- **Bean Bag Rounds** were developed to reduce the chance of penetration without compromising the thumping power of a plastic slug. Several different bean bag models are available. They include the MK Ballistics “deer thumper” round, which is specifically marketed for wildlife management and the MK Ballistics “flexible baton” and Combined Tactical Systems “super sock”, which are marketed as law enforcement rounds.

(4) Bear Pepper Spray (Capsaicin Spray)

Capsaicin is a constituent chemical of cayenne peppers (*Capsicum* spp.). It is a powerful local irritant to sensory nerve endings in the exposed areas of the eye, mouth, nostril, and bronchial mucous membranes. A sufficient dose on these membranes will usually incapacitate an individual by temporarily inducing pain and eliminating visual and olfactory senses, as well as possibly inducing coughing and struggling for breath (Osol et al. 1967 in Rogers 1984). It

causes no damage to these membranes because its effects are almost exclusively on nerve endings, with little effect on capillaries or other blood vessels which could result in blistering (ibid.). Toxicity tests have shown no lasting effects to the skin or eyes (Rogers 1984).

Bear pepper spray has potential for hazing bears without causing permanent injuries. It is only effective at short ranges, frequently making it more useful than other types of deterrents for hazing bears directly approaching humans or trying to steal fish from anglers. Limitations include its short range of less than 8 yards, the influence of wind on its dispersal, the susceptibility of humans, the danger of canister leaks and accidental discharges within aircraft and other vehicles, and some reports of ineffectiveness on some bears. Recommended bear spray characteristics are reviewed in Appendix 11.

Bear pepper spray is available for check-out to Katmai employees and volunteers (Appendix 11). However, training regarding bear behavior and mechanical use of bear spay is required to obtain park-issued bear spray, along with supervisor approval. At a minimum, training should cover the information provided in Appendix 11 and the reporting requirements identified in 5.1 and 5.2. The bear pepper spray authorization form included in Appendix 11 must be completed for each Katmai staff member authorized to carry the spray. Training may be provided by knowledgeable NPS staff identified by the Chief Ranger and Park Wildlife Biologist. Pilots must always be notified when seeking to transport bear pepper spray on aircraft. It is up to the pilot to decide where spray will be stored during transport. Similar care should be exercised when transporting the spray in any other enclosed conveyance, such as an automobile. Any use of bear pepper spray, including accidental discharges or punctures, must be reported following the documentation standards specified in section 5.2 of this plan, and should also be reported to supervisors as soon as possible.

C. General Guidelines for Use of Hazing Equipment:

(1) Personnel

Only NPS employees who have qualified to carry a firearm for wildlife management and who have practiced with 12 gauge deterrent rounds will be allowed to fire shotguns and provide backup. Hazing activities should be conducted under the direction of a member of the Resource Management staff tasked to bear management if available.

All hazing rounds are potentially dangerous, even lethal, to both bears and humans. Whenever bears are hazed using 15 mm launchers or 12 gauge hazing rounds, backup should be provided by another NPS employee with a shotgun loaded with lead slugs, or the activity must occur adjacent to a hard sided structure that can provide a safe refuge. The person providing backup will be positioned relative to the person firing the hazing rounds such that they can defend that person if necessary; all personnel should have alternate escape routes available. There may be a third person using a shotgun either to augment the hazing or to

serve as an additional backup. During periods of high human use at Brooks Camp, hazing in that vicinity should not be carried out without armed backup.

(2) Hazing Rounds

At Brooks River, hazing actions should follow the bear management response procedures and the detailed guidelines for use of hazing rounds that are included in Appendix 9. In the backcountry, most of the bear management response procedures and hazing guideline information is still applicable, with the exception that radio communications would likely be limited to other backcountry personnel.

Twelve-gauge hazing rounds may be mixed in the shotgun magazine at the discretion of the person doing the hazing. Using a plastic/rubber slug or beanbag round followed with a cracker shell may increase the effectiveness of cracker shells used on the same bear in the future (McMullen 1997). For this reason, as well as because bears habituate to noisemakers rapidly, it is recommended that the combination of a plastic/rubber slug or bean bag round followed by cracker shell(s) be considered when practical.

Cracker shells or other low-velocity hazing rounds and lead slugs should not be mixed in the magazine, because of the possibility of: (1) wadding not clearing, hence blocking, the barrel; and (2) inadvertently firing a slug while hazing.

Prior to using pyrotechnic rounds, potentially affected explosive and flammable materials should be secured and the potential for igniting brush fires should be evaluated.

(3) Bear Pepper Spray (Capsaicin Spray)

As part of the responsive management program, EPA-registered bear pepper spray products designed to spray in a shotgun cloud pattern with a concentration of 1-2% capsaicin, and net contents of at least 225 grams or 7.9 ounces, may be used to haze bears at the discretion of the person doing the hazing. Only NPS personnel who have received training, which included observing or actually test spraying a canister, may carry and use bear pepper spray on duty. If used on a female with dependent young, particular caution should be exercised because the sow might respond aggressively to defend her cubs. If the bear has shown aggressive behavior toward humans, hazing should take place adjacent to a building or with lethal backup. Other aspects of the hazing should follow the procedures described for use of deterrent rounds (see Appendix 9).

D. New Hazing Techniques:

NPS staff involved with bear management activities should continue to explore new hazing techniques through personal communications with other bear managers and review of publications.

E. Hazing Techniques Not Recommended:

- **Rubber Buckshot** ("Cart-a-Buck") is inaccurate and very low impact. In 1989 Katmai bears noticeably responded to being hit with it only once in nine times (Squibb 1989).

- **Soft 12 Gauge Rubber Balls** ("Cart-A-Ball") have been found to be too inaccurate to be considered effective (Clarkson 1987).

- **Birdshot** can break skin, damage eyes, and seriously wound bears. Healing may be impaired by lead toxicity. The expanding pattern of shot with range makes birdshot more difficult for the user to control.

- **Aerial Flares** can burn bears, and should only be considered when all other methods fail. Also, they can travel farther than deterrent rounds, so there's increased possibility that the flare may travel past the bear. They are long-range deterrents; bears need to see a flare coming at them from a long distance.

4.1.4 Planned Management Actions

A planned management action involves seeking out a specific bear for hazing after is has been repeatedly engaged in food-related or dominance interactions with people. Investigation (4.1.1) and monitoring (4.1.2) should precede any planned management action. A temporary closure of an area may be necessary to safely execute a planned management action. See 4.2 for specific management response scenarios. At Brooks River, planned management actions will normally be under the direction of Resource Management staff tasked to bear management, in coordination with the Brooks District Ranger or Chief Ranger. In all other areas of the Park, such actions will be coordinated by the Park Wildlife Biologist or Resource Management Chief. Personnel involved in planned management actions must be trained in use of firearms for wildlife control situations and should have previous experience hazing bears. Color-marking of the bear involved (4.1.6) should be considered during subsequent hazing activities, particularly in backcountry situations where re-identification may prove difficult.

4.1.5 Emergency Closures

The Superintendent may close an area on an emergency basis for up to 30 days with a minimum public notice by posting the area with appropriate signs (36 CFR 13.30, 36 CFR 13.66(c)(11); Appendix 6). Upon designating an emergency closure, the Alaska Support Office and ADF&G should be notified (Area Wildlife Biologist/Area Sport Fish Biologist), and a press release distributed as soon as possible (including distribution to all Park staff). If the closure could affect commercial operations, the Chief of Concessions may determine it is necessary to send out individual notices to potentially affected commercial operators.

4.1.6 Marking

A carbon dioxide powered paint ball gun may be used for marking problem bears that otherwise could not be readily identified.

4.1.7 Immobilization and Translocation

Problem bears were translocated from Brooks Camp to other parts of the park in the past (Norris 1996). However, these actions at Katmai and other locations have rarely been successful. Bears typically return, sometimes after just a few days, even from great distances (Miller and Ballard 1982, Van Daele 1989, Norris 1996). When translocated bears do not return, the problem has merely been moved to another place rather than being solved. Therefore translocating bears will not be a management option at Katmai (NPS 1986).

Under unusual circumstances it may be appropriate to tranquilize a bear. To ensure human safety and minimize risks to the bear, this will only be conducted by someone with substantial expertise. Qualified personnel will be requested and coordinated by the Park Wildlife Biologist or Resource Management Chief through the ADF&G Area Wildlife Biologist, King Salmon. Bears injured naturally will not be tranquilized for veterinary care.

4.1.8 Destruction

NPS staff will kill a bear immediately in the defense of human life during an ongoing attack. A bear may otherwise be killed when it is determined that the continued presence of the bear will pose an unacceptable danger to humans. That determination may be made if: (1) repeated hazing efforts fail to correct behavior that poses an unacceptable danger, or (2) an animal is responsible for an injury or fatality resulting from a non-surprise unprovoked attack and the bear involved can be identified with certainty. Except in emergency situations involving a critical and immediate hazard to human safety, records for any bear identified as a possible candidate for destruction will be reviewed by a management response committee comprised of the Superintendent, Park Wildlife Biologist, Resource Management Chief, Chief Ranger, any field personnel that were involved in responding to the bear incident(s), and any other individuals invited to the committee by a designated member. The review will include evaluating the need for follow-up management actions or for improving management strategies. If the committee recommends killing the bear, this recommendation will be communicated verbally as soon as possible, followed by a written recommendation prepared by the Wildlife Biologist and signed by all committee members.

The decision to and the act of killing a bear is contingent upon positive identification of the individual animal. Once the decision to kill a bear has been made, the Park will notify ADF&G prior to the bear's destruction if possible. A minimum of two staff armed with long-guns should participate in killing the bear; ideally they should be experienced big game hunters so that they understand kill zones on large mammals and are more likely to correctly interpret damage to the

bear from behavior, blood trails, etc. The option of high-powered rifles (e.g., .375 or .458 caliber) would be preferred (Meehan and Thilenius 1983). The team must also include a staff member who the management response committee believes can positively identify the bear targeted for removal. The area will be closed and cleared of visitors before shooting the bear. The reason for killing the bear will be discussed with any park visitors who ask and will be discussed in evening programs.

A simple necropsy will be conducted to examine for parasites and gross pathology. The following will be recorded: sex, age estimate, approximate or measured weight, body length, girth, pad dimensions, reproductive status, and general condition (note obvious wounds or other injuries; apparent condition of lungs, heart, and liver; body fat). The animal should also be examined for any indications of previous handling (e.g., lip tattoo). Alaska State law (5 AAC 92.410) requires that the skull and hide with claws (pads too) attached be salvaged (see Appendix 10) and surrendered to the state immediately after a defense of life and property kill and that ADF&G be notified immediately and receive a written report describing the circumstance of the kill within 15 days. Other parts of destroyed bears can be used for research or donated to museums or universities for processing as scientific specimens. Bear parts will not be retained for personal purposes or monetary gain.

4.1.9 Removal to Captive Facility

In most cases, bears will not be removed to captive facilities. However this option may be considered in unusual circumstances, for example, cubs left orphaned due to management destruction of the mother. Any captive facility in which a bear is placed must meet American Zoo and Aquarium Association (AZA) accreditation standards, be a non-profit institution, have a USDA exhibitor's permit, and hold other requisite permits.

Any placement would require a State of Alaska permit, and should be coordinated through ADF&G (Permit Section, in Juneau, and ADF&G Area Biologist). The ADF&G Permit Section also maintains contact with the AZA Bear Taxonomic Advisory Group, which can provide recommendations regarding placement possibilities.

4.1.10 Management of Visitors

Whenever NPS staff actively manage bears, particularly when firearms are involved, visitors will be curious. Visitors will be controlled only to the extent that their safety and the efficient completion of the operation are ensured. Their curiosity should be respected. Information will be made available to them and their desires to observe and photograph will be allowed within the above constraints. NPS personnel should be prepared to respond to cameras and questions in a courteous and professional manner.

4.2 Management Response Scenarios

4.2.1 Frontcountry

A. Bear Obtains Human Food, Not in Campground:

If conditions permit, the bear should be hazed as it eats the food or, preferably, as it attempts to obtain the food (4.1.3, Appendix 9). The incident will be investigated by NPS personnel and the circumstances surrounding the bear obtaining food should be determined. A bear that establishes a pattern of obtaining human food and that can be identified with certainty may be killed if hazing fails to eliminate the behavior (4.1.8).

If the incident involves a bear obtaining garbage from a bear-resistant dumpster, that container should be inspected for damage and secured from further use after any remaining garbage is removed. The container should not be opened for use again unless measures are taken to ensure improved security. If those measures cannot be taken, a more secure alternative means for collecting garbage should be used.

B. Bear Obtains Human Food, in Campground:

If conditions permit, the bear should be hazed as it eats the food or, preferably, as it attempts to obtain the food (4.1.3, Appendix 9); consideration should be given to any fencing that may block escape paths for the bear. Electric fences should be turned off prior to any hazing. The incident will be investigated by NPS personnel and the circumstances surrounding the bear obtaining food should be determined. A description of the bear will be obtained if possible. People in the campground will be advised to use extra caution with food and odors. If an electric fence surrounds the area, the fence should be inspected and repaired. The campground should be patrolled in the early morning and late evening, and at the time of day when the incident occurred, for the next 3 days to ensure that food is secured and to determine whether the bear has been in the campground; any fencing should be inspected. If the bear has been in the campground, intensive daily patrols should continue for an additional 3 days. Again, if there is an electric fence it should be inspected and repaired; replacement with improved equipment should be considered. A temporary campground closure may be considered during which a planned management action (4.1.4) would be carried out in which NPS personnel would set up a tent in the campground, engage in activities of typical campground occupants, and wait for the bear to return. The bear should be hazed whenever it is observed attempting to enter the campground. If a bear establishes a pattern of seeking human food which cannot be broken by hazing, it is posing a clear on-going threat to human safety, and it can be identified with certainty, killing the bear may be considered (4.1.8).

C. Bear Obtains Fish from Angler:

At Brooks River, if a bear obtains a fish that it may associate with a human (i.e., when a bear obtains a fish from an angler's line, from a recently broken line, or one recently abandoned by an angler), if conditions permit, the bear should be hazed while it feeds upon the fish (4.1.3, Appendix 9). The incident will be investigated by NPS personnel and the circumstances surrounding the bear obtaining fish from people should be determined. A description of the bear will be sought. NPS staff should be particularly alert to a bear that may be approaching anglers for fish, and should inform any anglers contacted of the need for increased vigilance to avoid additional incidents. If the bear is identified, setting up a planned management action involving a fishing scenario with NPS staff prepared to haze the bear if it exhibits a problem behavior should be considered (4.1.3, 4.1.4, Appendix 9). A temporary river closure may also be considered (4.1.5). Copies of documentation of fish-stealing incidents and any other events leading to a closure should be provided to the ADF&G Area Sport Fish Biologist.

D. Bear Charges Person:

If a charge has just occurred and the bear is still close to the person, the person should be encouraged to talk to the bear while slowly backing diagonally away from it. Efforts will be made to calm the bear, the person, and any onlookers. After the person is separated from the bear, the bear will be monitored and people will be moved from the vicinity. If the bear is within a residence area, it may be hazed (4.1.3, Appendix 9). Personnel should exercise extreme caution and discretion to evaluate the degree of agitation of the bear before hazing it. The incident should be discussed with the involved person to attempt to identify its causes.

E. Aggressive Dominance Interaction:

In this situation, a bear challenges a human for the right of way or aggressively moves toward a human until the human moves away. There is no evidence that this was a surprise encounter or that the human was encroaching upon the bear, nor does the bear look for food at the place vacated by the person. Some potential for human injury exists.

Although little is known about such encounters, they appear to conform to the general rule that controlling the behavior of another animal is inherently reinforcing. Bears which learn that their movements will cause people to move away can develop patterns of moving towards people with the apparent object of repeatedly displacing the people, but without the apparent intent to actually reach them. To minimize the potential for this learning, it is important that people move out of the way of an approaching bear while it is still more than 50 yards away. If people wait until a bear is close, the bear is more likely to make the association that it is controlling their movements.

NPS staff should watch for bears exhibiting this behavior. If a bear is seen in the area behaving aggressively, an emergency closure can be implemented (4.1.5), so that people can be cleared

from the immediate area. Two NPS staff should intentionally encounter the bear, behaving as visitors would. If the bear exhibits dominance behavior toward them, they should haze it (4.1.3, 4.1.4, Appendix 9). If the bear does not exhibit dominance behavior, they should move away. The area can be reopened for visitor use when these management activities conclude and the bear is believed to have moved out of the closed area. These actions should be discussed with any visitors who are present. If a bear develops a pattern of unprovoked dominance behavior toward people which constitutes a significant threat to their safety, killing the bear may be considered (4.1.8).

F. Bear Enters Residence Area or Campground:

Although every effort is made to eliminate attractants that may draw bears into Brooks Camp, bears sometimes travel through or enter camp to feed on natural foods, to avoid humans or other bears, or for other reasons. NPS and concession staff will be alert for any bear that appears likely to enter Brooks Camp. Bears will be discouraged from entering Brooks Camp and other residence areas by eliminating the attractant and when conditions permit, by hazing (4.1.3, Appendix 9). These activities should be explained to any visitors that are present. An electric fence surrounding the Brooks Camp campground should prevent most bears from trespassing there. In the event that a bear does get past the fence, turning off the fence should be considered. Any campers present should group together for security. When conditions permit, the trespassing bear should be hazed (4.1.3, Appendix 9). However, any hazing will have to direct the bear towards an escape route that is not obstructed by the fence. If cubs are involved, the situation should in most cases simply be monitored until the cubs move out of the campground.

G. Bear Enters Building:

The bear will be hazed from the building by yelling, use of air horns, and pounding on the wall opposite the intended exit route of the bear. The bear should continue to be hazed using whatever means are practical until it has exited the building and retreated outside the perimeter of the residence area (4.1.3, Appendix 9). A description of the bear will be obtained if possible. People will be advised to use extra caution with food and odors. Electric fencing should be considered to prevent further incidents. If the bear obtained food from the building, follow-up response should follow a similar approach to 4.2.1.B. The area should be patrolled in the early morning and late evening, and at the time of day when the incident occurred, for the next 3 days to determine whether the bear trespasses again. If the bear is seen in the residence area, intensive patrols should continue for an additional 3 days. The bear should be hazed whenever it trespasses. If a bear establishes a pattern of seeking human food which cannot be broken by hazing, it is posing a clear ongoing threat to human safety, and it can be identified with certainty, killing the bear may be considered (4.1.8).

H. Bear on Brooks River Floating Bridge (gate left open or broken):

NPS staff should provide the bear an unobstructed escape route by clearing all human traffic from the ends of the bridge and propping the gates open if necessary. If the bear does not move off on its own, several staff should haze (4.1.3, Appendix 9) the bear from the bridge, preferably by yelling and clapping. If dependent young are involved, staff should simply try to open both bridge gates and monitor the situation. Once the bear(s) have left the area, the gates should be closed and the bridge will be inspected for damage; repairs should be made as soon as possible.

I. Bear(s) on Floatplane, in Boat, or on Viewing Platform Steps:

(1) Bear on Floatplane or in Boat

Whenever possible, the bear involved will be hazed off the plane or out of the boat by shouting or clapping; air horns may be used if this is ineffective (4.1.3, Appendix 9). Hazing should cease as soon as the bear moves off the plane or boat. Use of hazing rounds should be avoided in most instances due to property damage and/or fire hazard risks associated with their use in these circumstances (Appendix 9). The boat/plane should be inspected after the bear leaves to determine the extent of any damage and whether there was any unsecured gear involved. If so, those items should be removed and placed in a gear cache or other more secure storage area.

(2) Bear on Viewing Platform Steps

Whenever possible, the bear involved will be hazed off of the viewing platform steps by shouting, clapping, and pounding on the structure (4.1.3, Appendix 9). Hazing should cease as soon as the bear moves off of the steps and away from the structure. Because this action would be taken immediately adjacent to the river corridor where other bears may be present, care should be exercised to avoid affecting the behavior other uninvolved bears.

J. Bear Damaging Structures or Other Property outside Residence Areas

Structures outside of residence areas are likely to be investigated by bears. Therefore, some damage due to chewing, scratching, and rubbing is to be expected. In cases where a bear is observed engaged in prolonged chewing or scratching that is causing visible damage to a structure, the bear may be hazed to stop the ongoing damage (4.1.3, Appendix 9). Hazing should cease as soon as the bear moves away from the structure. In cases where such action is taken near the river corridor caution should be exercised to avoid affecting the behavior of other uninvolved bears. Repeated incidents at the same site indicate a need to consider preventative measures such as electric fencing. A similar hazing approach should be taken in the case of bears damaging other property. In the case of unattended property in the Brooks Camp Developed Area, the person to whom the property belonged will be interviewed by NPS personnel about the events leading to the incident, including the person's motivation for leaving property unattended,

as well as alternative actions that the person could have taken, and the importance of preventing bears from becoming familiar with such items. The appropriateness of a citation should be considered.

K. Bear Sleeping On or Adjacent to Trail/Road or Near Floatplane:

In most cases, people should wait for the bear(s) to move. An alternative route around the bear(s) should be considered. In the case of a bear blocking access to the Brooks River floating bridge, this could include use of a boat or plane (including aircraft pick-ups at Brooks Lake). Hazing of bears is not advised in these situations, because in addition to being inconsistent with NPS resource management guidelines (1.0), it is an inconsistent message for the bear that may reduce the effectiveness of some deterrents should they be used in any attempts to teach the bear to stay out of camp, or in other situations of management concern.

The only time that hazing may be considered as a response is when: (1) bears have been resting (defined as sleeping, or laying down) in excess of 30 minutes in a location that is preventing use of the floating bridge or access to a floatplane, (2) there are no other bears visible within 100 yards that could be affected by the action, and (3) the other options discussed in this scenario have been exhausted. Moving bears in this situation is not an attempt at aversive conditioning, therefore hazing should initially involve only shouting, clapping, and if that is ineffective, an air horn (4.1.3). Excessive use of deterrents could result in a bear abandoning use of the area, so hazing should be limited to the minimum actions necessary to move the bear. It is not the intention of the NPS to move a bear every time a person wants to cross the bridge or access a floatplane. People will have to wait when bears are actively using the area or resting for periods of <30 minutes. Hazing of females with young in this situation may only be considered if the entire family group is together and no cubs are treed. See Appendix 9 for further information regarding hazing of females with young, as well as other hazing considerations.

NPS staff should discuss any patterns that appear to be developing with delays occurring at particular locations. Measures that could prevent problematic patterns from becoming established may be considered in some cases. For example, a favored resting spot next to the trail leading to the bridge could be made less appealing through strategic placement of brush, fencing, etc. (3.5.2). Any proposed actions of this nature should be coordinated through Resource Management staff.

If repeated prolonged delays to bridge access occur due to resting bears, an additional response option that may be considered by experienced NPS staff approved by the Park Wildlife Biologist could involve use of low-level hazing techniques to attempt to dissuade a bear from digging a resting spot where it would prevent access to the floating bridge (while the behavior is ongoing). Considerations should follow those previously identified when considering hazing a bear in a traffic-delay situation. All actions of this nature must be documented in detail to evaluate their effectiveness.

L. Bear Injures Human:

See response procedures in Appendix 10. The victim and any witnesses should be interviewed to identify the events leading to the incident and to obtain a detailed description of the bear. The Ranger Division will begin an investigation. If the bear has been habitually and aggressively involved in either food-related confrontations or dominance interactions that were not provoked by the people involved, then killing the bear may be considered if it can be located and identified with certainty (4.1.8). A local closure may be necessary (4.1.5). Any such closure will be withdrawn at the earliest possible time when it is determined that a significant threat to human safety is no longer evident and all related investigations are complete. For the remainder of the season, any people that Rangers contact in the area should be informed of the incident.

M. Bear Kills Human:

See response procedures in Appendix 10. Disposition of the body, investigation, and documentation will be conducted according to the Park's Emergency Response Plan. The body should not be moved until the investigation has begun and all information about the body has been gathered and documented. The Ranger Division will immediately begin an investigation. The area will be closed and cordoned off. All witnesses should be interviewed about the events leading to the incident and the description of the bear. Witnesses should be held until the investigator has performed sufficient interviews and released them. If the bear can be identified with certainty, it may be killed (4.1.8). A necropsy should be conducted on any bear killed (4.1.8), and the bear's mouth, forepaws, and entire gastro-intestinal tract will be examined for evidence. The area closure will be withdrawn at the earliest possible time when it is determined that a significant threat to human safety is no longer evident and all related investigations are complete. For the remainder of the season, any people that Rangers contact in the area should be informed of the incident. For any bear-caused human fatality, the Superintendent will convene a Technical Board of Investigation (using format in NPS Reference Manual-50B). The Board should include the Park Wildlife Biologist, at least one ranger familiar with Park bear management activities, at least one non-NPS individual with bear management expertise and experience, and other individuals as appropriate.

4.2.2 Backcountry

A. Bear Approaches Camp Site, Food Storage Area, or Food Preparation Area:

Any food, food containers, and garbage should be immediately secured in a bear-resistant food container. Hazing should be considered if the bear appears to be intentionally approaching the camp site or food storage/preparation area. After the bear has left, the site should be evaluated to determine whether it could be relocated to a site less likely to be frequented by bears. For example, consider whether the site has good visibility relative to other potential sites, whether the site is near any bear travel corridors or bear foraging habitat, etc. See Appendices 2, 4 and 8 for further information regarding bear safety considerations when camping.

B. Bear Obtains Human Food from Backcountry Campers or Hikers:

The incident will be investigated by NPS personnel and the circumstances surrounding the bear obtaining food should be determined. Resource Management staff and/or the Chief Ranger should be notified of the incident. The area may be temporarily closed to visitor use and/or to camping (4.1.5). If the area remains open, or when the area is reopened after temporary closure, any people that Rangers contact there should be informed of the incident. If the bear has established a pattern of aggressively seeking out human food, can be identified with certainty, and attempts at hazing have failed, killing the bear may be considered (4.1.8).

C. Bear Obtains Fish from Angler:

If the area receives heavy human use, and repeated occurrences have been observed/reported, the response should generally follow that of 4.2.2.B.

D. Bear Charges Human:

A charge usually results from a close-range encounter by a bear that perceives humans as a threat. It is likely that the bear will leave the area immediately after the incident. An emergency closure (4.1.5) may be considered if repeated incidents occur. The length of the closure will be determined in consultation with the Park Wildlife Biologist and/or Resource Management Chief. The closure period should give the bear adequate time to move out of the area as its feeding patterns shift. The incident will be discussed with the involved person to identify events that led to it.

E. Bear Injures Human, No Human Food Involved:

See response procedures in Appendix 10. The area will be closed (4.1.5) and patrolled. If the injury appears to be the result of a predatory attack, and the bear is seen and can be identified with certainty, the bear will be killed (4.1.8). Otherwise, a closure will remain in effect for at least 3 days and patrols will continue. The closure will be withdrawn at the earliest possible time when it is determined that a significant threat to human safety is no longer evident and all related investigations are complete. For the remainder of the season, any people that Rangers contact there should be informed of the incident.

F. Bear Obtains Human Food and Injures Human:

See response procedures in Appendix 10. The area will be closed (4.1.5) and patrolled. If the bear is not seen, then a planned management action (4.1.4) in which a campsite is established in the vicinity of the incident in an attempt to attract the bear and take action against it should be considered. The Park Wildlife Biologist or Resource Management Chief should coordinate any such action. If the bear obtained the food aggressively, thereby injuring the camper, and the bear

is seen and can be identified with certainty, it may be killed (4.1.8). The area closure will be withdrawn at the earliest possible time when it is determined that a significant threat to human safety is no longer evident and all related investigations are complete. For the remainder of the season, any people that Rangers contact there should be informed of the incident.

G. Bear Kills Person:

See response procedures in Appendix 10. The investigation and disposition of the body will be handled as for a frontcountry area (4.2.1.L, Appendix 10). A detailed description of the bear should be obtained from any witnesses available. The area will be closed (4.1.5) and patrolled. Any bear(s) at the body upon the arrival of NPS staff will be killed (4.1.8). If the bear is not seen, then NPS personnel should consider establishing a campsite in the vicinity of the incident in order to attract the bear and take action against it. The Park Wildlife Biologist or Resource Management Chief should coordinate any such action. If a bear is seen which reasonably fits the description available, it may be killed (4.1.8).). A necropsy will be conducted (4.1.8), and the bear's mouth, forepaws, and entire gastro-intestinal tract will be examined for evidence. The area closure will be withdrawn at the earliest possible time when it is determined that a significant threat to human safety is no longer evident and all related investigations are complete. For the remainder of the season, any people that Rangers contact there should be informed of the incident. For any bear-caused human fatality, the Superintendent will convene a Technical Board of Investigation (using format in NPS Reference Manual-50B). The Board should include the Park Wildlife Biologist, at least one ranger familiar with Park bear management activities, at least one non-NPS individual with bear management expertise and experience, and other individuals as appropriate.

5.0 DOCUMENTATION OF BEAR-HUMAN CONFLICTS

Bear incidents and hazing efforts need to be documented to provide information for managing human use and bear-human conflicts throughout the park and for planning the future development or relocation of facilities in the Brooks River area.

5.1 Bear Management Report Forms (BMRF)

The Bear Management Report Form (BMRF) is the primary tool for documenting bear-human interactions throughout the Park. The form will be used to document all serious and unusual bear-human interactions (see forms and detailed instructions in Appendix 12). This includes the obvious such as bears obtaining food/garbage/fish from humans or their facilities, hazing of bears, property damage, bears behaving aggressively towards humans, human injuries/fatalities, bears killed in defense of life and property (DLP), and poaching incidents. CUA operators are required to report any discharge of bear pepper spray or signal flares (or any other device or substance intended to frighten and/or repel wildlife) in response to an encounter with a bear or any other wildlife within 72 hours of the incident. In addition, bear trespass events should be recorded on a BMRF whenever possible. Resource Management staff are responsible for

insuring this documentation; other personnel may simply relay this information to the Park Wildlife Biologist or a Bear Management Technician, or complete the forms themselves. The Park Wildlife Biologist will work with the Bear Management Technicians to compile and analyze the BMRF data and prepare an annual report.

5.2 Case Incident Reports (10-343)

A 10-343 should be completed (see example, Appendix 12) whenever a bear damages property, a bear injures or kills a human, or if a violation is involved. In those cases, a BMRF will also be completed; a copy of the 10-343 should be attached to the BMRF.

Whenever NPS personnel discharge a firearm (including discharge of a 15 mm launcher) or bear pepper spray to haze a bear (or an other mammal), or a bear charges a human, a 10-343 number will be obtained from Park Dispatch or the Chief Ranger and recorded on the BMRF (see Appendix 12). For each BMRF assigned a 10-343 number, a copy of the form will be submitted to a Bear Management Technician or the Park Wildlife Biologist for incorporation into the BMRF database, and the original form will be submitted to the Chief Ranger. Copies of the BMRF and case incident report should be provided to the Chief Ranger, the Park Wildlife Biologist, and the Superintendent.

6.0 MONITORING AND RESEARCH

This section should be further developed and expanded in future revisions.

6.1 Brooks River

6.1.1 Observational Monitoring and Research on Bear and Human Use

Evidence indicates that both bear use and human use of the Brooks River have increased concurrently over the last several decades. As human use has increased at an accelerating rate in the last several years reaching the limits of present facilities, it is unknown whether bear use of the river can continue without reduction or change of character. Research at Brooks River during the 1980s to early 1990s demonstrated negative correlations between use by bears defined as non-habituated (habituation was defined as consistent tolerance, with no discernable change in behavior, of people at 50 m or less) and human use rates, both by time of day and calendar date (Olson et al. 1990, Olson 1993, Olson and Gilbert 1994, Olson et al. 1997a,b). This research also established a foundation of baseline data on (1) rate of bear use of the river, (2) fishing rate, (3) number of bears using the river by age-class, sex, reproductive status, and degree of habituation, (4) identification of bears as individuals, and (5) rate of human use of the river.

Effects of increased human use on bears using the Brooks River could be expressed in a number of ways. (1) The number of bears using the river could simply decrease. (2) The rate of bear use

of the river could decrease. (3) More sensitive classes of bears could reduce their use of the river, e.g. sows with dependent offspring. (4) The degree of habituation, both individually and proportionally within the group of bears, could increase. (5) Fishing success could decrease. (6) The tenacity of individuals to the river as an element of their range may decline, resulting in increased turnover of individuals. (7) Use may shift away from periods or places of high human use. (8) Age-sex class and/or behavioral composition of bears using the river could shift toward increased representation of bears tolerant of close proximity with people. Nevin and Gilbert (2005) also reported for a bear viewing site in southeast Alaska that human presence appeared to have a temporal displacement effect on males, but that other subordinate age/sex classes appeared to benefit in terms of enhanced feeding opportunities in the absence of dominant males. These hypotheses can be addressed only by monitoring the aforementioned variables through several years in order to build on the database of past research. Refinements in methods may also allow the elucidation of the proximate causes of observed negative correlations of bear use and human use.

When personnel are available, data on bear and human use of the lower river should be collected from the falls, cutbank, and lower observation platforms. Observers should estimate the aforementioned variables by scan and focus-subject sampling, including counts of numbers of people present during sampling periods. Comparable data should be collected from nearby salmon streams to document the diurnal pattern of bear use and fishing success rates in the absence of human activity. Brief surveys of area streams may be made to identify other areas used by Brooks River bears.

7.0 EVALUATION AND REVISION OF PLAN

The effectiveness of management practices outlined in this plan in meeting bear management objectives will be evaluated by the park staff each year, and the plan will be revised as needed.

8.0 LITERATURE CITED

Aumiller, L.D. 1995. Habituated bears and bear viewing. Pages 1-3 *in* J. Neary, editor. Summary and notes from: workshop for bear viewing area managers. U.S. Forest Service, Admiralty National Monument, Juneau, Alaska.

Aumiller, L.D., and C.A. Matt. 1994. Management of McNeil River State Game Sanctuary for viewing of brown bears. International Conference on Bear Research and Management 9:51-61.

Beattie, J. P. l983. Brown bear/human interactions at Katmai National Park and Preserve: implications for planning and management. Senior Thesis, University of California, Santa Cruz, California.

Braaten, A.M. 1988. Adaptation of brown bears to people on an Alaskan salmon stream: a quantitative study. Thesis, Utah State University, Logan, Utah.

Braaten, A. M., and B. K. Gilbert. 1987. Profile analysis of human-bear relationships in Katmai National Park and Preserve. Final Report for National Park Service, Alaska Regional Office contract CX 9700-4-0019. Utah State University, Logan, Utah.

Clarkson, P.L. 1987. Bear deterrent study, Cape Churchill, Manitoba, 1985. File report. Northwest Territories Department of Renewable Resources, Yellowknife, Northwest Territories, Canada.

Dalle-Molle, J. L., and J. C. Van Horn. l989. Bear-people conflict management in Denali National Park, Alaska. Pages 121-127 *in* M. Bromley, editor. Bear-people conflicts – proceedings of a symposium on management strategies. Northwest Territories Department of Renewable Resources, Yellowknife, Northwest Territories, Canada.

Davey, G. 1981. Animal learning and conditioning. University Park Press, Baltimore, Maryland.

Egbert, A. L. l978. The social behavior of brown bears at McNeil River, Alaska. Dissertation, Utah State University, Logan, Utah.

Fagen, J.M., and R.F. Fagen. 1994. Interactions between wildlife viewers and habituated brown bears, 1987-1992. Natural Areas Journal 14:159-164.

Herrero, S. l985. Bear attacks: their causes and avoidance. Winchester Press, Piscataway, N. J. 287pp.

Herrero, S., and A. Higgins. 1998. Field use of Capsaicin Spray as a Bear Deterrent. Ursus 10: 533-537.

Hunt, C. 2000. Wind River Bear Institute: partners in life program, bear shepherding tips 2000. Training notes, Wind River Bear Institute, Heber City, Utah.

Jenkins, J. H., and F. A. Hayes. 1962. Studies on a useful method for repelling dogs and other animals. Animal biology file: dog repellents. U.S. Department of Agriculture, Washington, D.C.

Jope, K. L. l985a. Implications of grizzly bear habituation to hikers. Wildlife Society Bulletin l3:32-37.

Jope, K. L. l985b. Hiker behavior and the outcome of interactions with grizzly bears. Leisure Science 6:257-270.

Margo Supplies Limited. 2001. Product information provided at corporate web site: http:// www.margosupplies.com/pyroscare.htm.

McCullough, D. R. l982. Behavior, bears and humans. Wildlife Society Bulletin l0:27-33.

McLellan, B. N., and D. M. Shackleton. 1989. Immediate reactions of grizzly bears to human activities. Wildlife Society Bulletin 17:269-274.

McMullen, A. 1997. Firearms/explosives, session notes. Four unnumbered pages *in* A McMullen, editor. Bear-people conflicts workshop notes, Canmore, Alberta. Northwest Territories Department of Resources, Wildlife, and Economic Development, Kugluktuk, Northwest Territories, Canada.

Meehan, W. R., and J. F. Thilenius. 1983. Safety in bear country: protective measures and bullet performance at short range. General technical report PNW-152, U.S. Forest Service, Pacific Northwest Forest Range Experiment Station.

Miller, G. D. 1980. Behavioral and physiological characteristics of grizzly and polar bears, and their relation to bear repellents. Thesis, University of Montana, Missoula, Montana.

Miller, S. D., and W. B. Ballard. l982. Homing of transplanted Alaskan brown bears. Journal of Wildlife Management 46:869-876.

National Park Service (NPS). 1986. General management plan, land protection plan, wilderness suitability review, Katmai National Park and Preserve. U.S. Department of the Interior, National Park Service, Denver Service Center, Denver, Colorado.

NPS. 1999a. Resource management plan, Katmai National Park and Preserve. U.S. Department of the Interior, National Park Service, King Salmon, Alaska.

NPS. 1999b. Environmental assessment, Brooks River bear-viewing facility. U.S. Department of the Interior, National Park Service, King Salmon, Alaska.

NPS. 2000. Finding of no significant impact, Brooks River bear-viewing facility, Katmai National Park and Preserve. Katmai National Park and Preserve, King Salmon, Alaska.

Nevin, O.T., and B.K. Gilbert. 2005. Perceived risk, displacement and refuging in brown bears: positive impacts of ecotourism? Biological Conservation 121:611-622.

Norris, F.B. 1996. Bear Management. Pages 307-329 *in* F.B. Norris, editor. An administrative history of the Katmai and Aniakchak NPS Units, Alaska. National Park Service, Alaska System Support Office, Anchorage, Alaska.

Olson, T.L. 1993. Resource partitioning among brown bears at Brooks River in Katmai National Park and Preserve, Alaska. Thesis, Utah State Univ., Logan. 157pp.

Olson, T.L., and B.K. Gilbert. 1994. Variability in habitat use, movements, and activity of brown bears on an Alaskan river. International Conference on Bear Research and Management 9:97-106.

Olson, T.L., B. K. Gilbert, and S. H. Fitkin. 1990. Brown bear behavior and human activity at salmon streams in Katmai National Park, Alaska. Final report for NPS Alaska Regional Office contract IA 9700-7-8028. Utah State University, Logan, Utah.

Olson, T.L., B.K. Gilbert, and R.C. Squibb. 1997a. The effects of increasing human activity on brown bear use of an Alaskan river. Biological Conservation 82:95-99.

Olson, T.L., R.C. Squibb, and B.K. Gilbert. 1997b. A comparison of brown bear activity on salmon streams with and without people. Ursus 10:547-555.

Osol, A., R. Pratt, and M. Altshule. 1967. The U.S. Dispensatory and Physicians' Pharmacology. J.B. Lippincott Company, Philadelphia, Pennsylvania.

Rogers, L. L. 1984. Reactions of free-ranging black bears to capsaicin spray repellent. Wildlife Society Bulletin 12:59-61.

Schirokauer, D.W., and H.M. Boyd. 1998. Bear-human conflict management in Denali National Park and Preserve, 1982-94. Ursus 10:395-403.

Sellers, R.A., S. Miller, T. Smith, and R. Potts. 1998. Population dynamics of a naturally regulated brown bear population on the coast of Katmai National Park. Final report for cooperative interagency study, National Park Service and Alaska Department of Fish and Game, King Salmon, Alaska.

Shideler, D. 1993. Deterrent Methods. Pages 35-50 *in* J.C. Truett, editor. Guidelines for oil and gas operations in polar bear habitats. OCS Study MMS 93-0008. Final report for Minerals Management Service contract 14-35-0001-30572. LGL Alaska Research Associates, Bryan, Texas.

Schideler, D. 2000. Use of projectiles to deter bears. Training materials. Alaska Department of Fish and game, Oilfield Grizzly Bear Project, Fairbanks, Alaska

Squibb, R. 1989. Bear incident log, Katmai National Park, 1989. Katmai National Park and Preserve, King Salmon, Alaska.

Van Daele, L. 1989. Safety in bear country. Unpublished informational report, Alaska Department of Fish and Game, Division of Wildlife Conservation, Anchorage, Alaska.

Warner, S. H. 1987a. Human impacts on brown bears at Pack Creek, Admiralty Island, Alaska. Thesis, University of Alaska, Fairbanks, Alaska.

Warner, S. H. 1987b. Patterns of brown bear and visitor use of Brooks River and recommendations for management. National Park Service, Alaska Regional Office, Anchorage, Alaska.

9.0 BEAR MANAGEMENT PLAN REVISION HISTORY

1. 1986 Plan by Katherine L. Jope, Resource Management Specialist

2. 1990 Revision by Ronald C. Squibb, Resource Management Specialist

3. 1996 Revision by Hilary M. Boyd, Bear Management Technician

4. 2001 Revision by Tamara L. Olson, Wildlife Biologist

5. 2006 Revision by Tamara L Olson, Wildlife Biologist

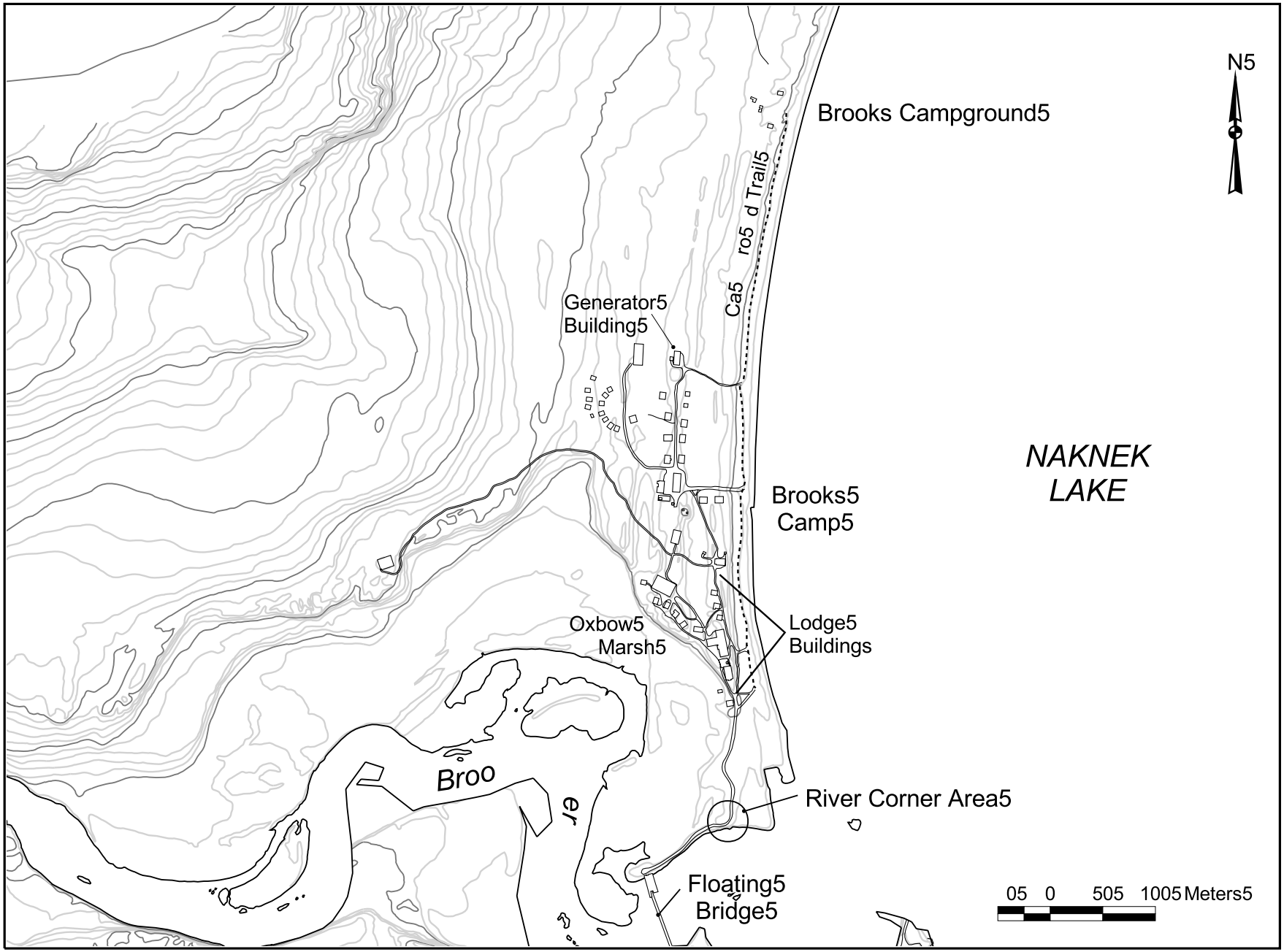

Figure 1. Location of Brooks Camp along Naknek Lake, Katmai National Park, Alaska. The Brooks Camp Residence Area includes areasd within the immediate vicinity of permanent structures, including altered vegetation therewith, except for the Naknek Lake beachd

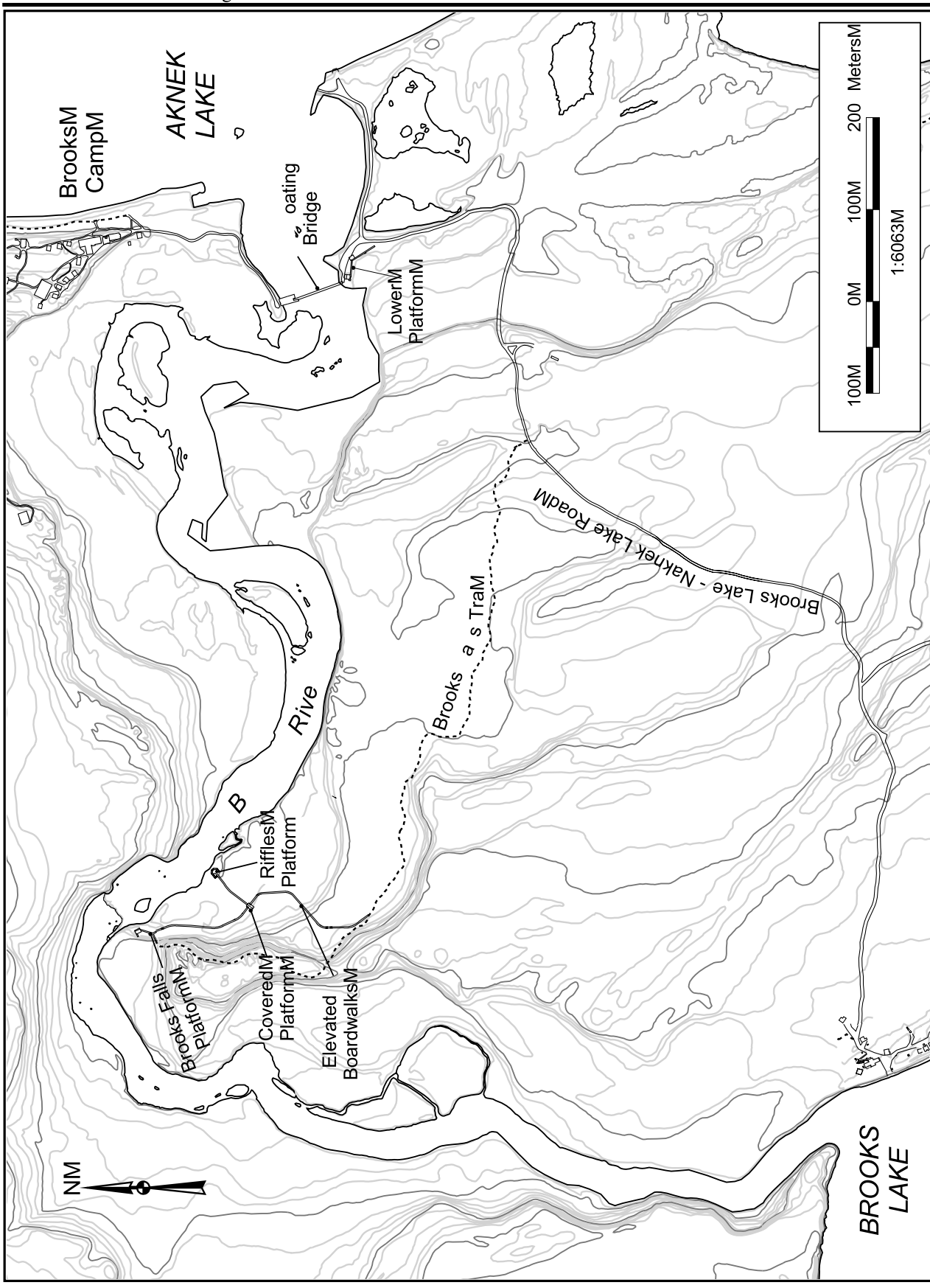

Figure 2. Brooks River vicinity, Katmai National Park, Alaska.I

BEAR-HUMAN CONFLICT CATEGORIES

For the purposes of this plan, bear-human conflicts are classified into the following categories. More than one category may apply to a particular incident.

1. **Food-Related** – Any event in which: (1) a bear obtains, or actively attempts to obtain, items that might be considered anthropogenic food, a bear actively attempts to obtain anthropogenic food; or (2) human handling, storage, or behavior related to such food was improper. Anthropogenic food sources include human food and beverages, garbage, scented toiletries, fish caught by anglers, and hunter-killed game.

   A bear that has learned to associate people or their equipment with food may persistently approach people or damage equipment even when no food is present. It has been documented at Brooks River and elsewhere in Katmai that bears who have obtained fish from anglers may subsequently approach people seeking additional food rewards. Bears' attempts to obtain people's food have resulted in thousands of dollars' worth of property damage in Katmai, generally to camping gear and buildings (Norris 1996, Katmai NPP Case Incident Records). Most bear-inflicted fatalities and injuries to campers in the national parks of Canada and the United States have involved bears that had been accustomed to obtaining people's food or garbage (Herrero 1985).

2. **Surprise** – Any event in which a bear responds when it is apparently surprised by a human at close-range, and any encounter by walking/running people when people were not aware of the bear until <10 yards away.

   If a bear perceives a person as a threat, it may run away. If it perceives that it cannot escape because either there is no escape route or the person is too close, it may charge, stopping short of the person. The person should withdraw allowing the bear to escape. If contact is made, injury is rarely severe unless the person tries to run or fight back, thereby maintaining the perceived threat. Because female bears with cubs are particularly sensitive, they are especially likely to charge when encountered at close range, although they are also more likely than other bears to avoid places where they might encounter people (Herrero 1985, Van Daele 1989). A surprise encounter is the type of interaction in which hikers have been most frequently involved.

3. **Dominance** - Involves short-term competition for space between bears and people in which one party is usually displaced. This does not include instances in which either party is surprised. The competition may sometimes be unintentional or unnoticed by the dominant party. Dominance interactions may be provoked or unprovoked on the part of the bear/human.

   Such encounters are common among bears at feeding aggregations and between bears and people at Brooks River and other commonly used salmon streams (Beattie 1983,

Braaten and Gilbert 1987, Warner 1987a,b, Braaten 1988, Olson et al. 1990, Olson 1993). Although standing up to a bear's challenge may not be practical, withdrawing may reinforce the bear's dominant behavior. This is an important consideration. Some bears, particularly adolescents and cubs, may find displacing humans to be reinforcing and repeat the behavior (Aumiller and Matt 1994), creating potentially dangerous situations. In contrast, if humans always force bears to withdraw, then they would progressively deny bears access to increasing amounts of habitat. Therefore, it is preferable to avoid both undesirable alternatives by keeping bears and humans at distances at which dominance interactions do not arise.

4. **Trespass** - A bear is within a residence area, campground, or other intensive human-use area. Bears should not be allowed to remain in these areas; they should be immediately driven out.

5. **Property Damage** - Human property is damaged by bears. This may occur in the absence of any apparent attractants.

6. **Curious Investigation** - A bear curiously and/or playfully investigates human property in a non-trespass situation without causing damage, and anthropogenic food does not appear to be involved,

7. **Human Injury / Fatality** - All incidents in which a human being is directly injured or killed by a bear.

8. **Planned Management Action** - A planned confrontation by NPS staff in which a specific bear is targeted for hazing/aversive conditioning; this category does not include reactive management responses to bears already engaged in one of the above types of conflicts.

9. **Bear Killed** - This includes bears being killed in a NPS management response action, Defense of Life and Property (DLP) kills, legal hunts, and incidents of poaching.

Information Given to Brooks Camp Visitors during Bear Orientations

All visitors stopping at the VC receive a bear safety briefing and/or view the Bear Safety video in English, German, Japanese, or French:

- Preservation of bears and their natural habitat is one of the major reasons that Katmai was established as an NPS area.
  - May encounter bears anywhere.
  - Particularly likely to encounter bears in the Brooks River area and in the vicinity of other salmon spawning streams.

- Avoid surprise encounters.
  - Be alert.
  - Make noise, particularly where visibility is low, to let bears know that a person is approaching.
  - Children must remain in the presence and under the control of their parents at all times. Children should not be allowed to run in the Brooks Camp area.

- Give bears right-of-way.
  - Regulation – Abide by the 50-yard rule as detailed in regulations.
  - Move out of bear's path; don't wait for bear to show that it is disturbed.
  - Sometimes the sight of people can impede a bear's movement. Don't force it to move out of the river, or to detour through Brooks Camp due to people on the beach. If a bear is traveling down the beach, move off of the beach and into the woods until the bear passes.
  - Never approach a bear (emphasize this to photographers).

- Keep bears from learning to perceive people as a source of food.
  - Regulations – Food and garbage must be stored securely from bears except when it is being prepared or eaten in designated locations within Brooks Camp. Do not leave food (or a pack containing food) unattended for even a moment. Gear must also be kept under immediate control at all times.
  - Regulation – No picnicking along Brooks River or on the beach of Naknek Lake is permitted (this includes all forms of food and beverage except for water).

- If approached by a bear:
  - Clap and talk calmly (don't shout) to let it know that a person is present.
  - Move slowly out of its way at an oblique angle to its direction of travel, while continuing to monitor the bear–never run.

  - Only in the rare event that a bear makes physical contact after charging, drop to the ground and play dead. Lay face-down, hands clasped behind and covering the neck and legs spread apart to brace against being flipped over. Do not fight back or make any sounds and remain in this position for some time after the bear has left.

- Report all property damage or unusual bear encounters to a Ranger.

Additional Information for Anglers

- Give bears right-of-way.
  - Regulation – Continuing to engage in any fishing activity within 50 yards of a bear is prohibited..
  - When a bear is at least 50 yards away, move out of its path. If it is in the river, move out of the river and away from the bank. Do not force a bear, by your presence, to move out of the river.
  - Never approach a bear.
  - It's useful to have a non-fishing spotter to watch for bears while you fish.
  - Regulation– Fishing is not permitted within 100 yards of Brooks Falls. In addition, the area within 50 yards of the ordinary high water marks of the Brooks River from the Riffles Bear Viewing Platform to a point 100 yards above Brooks Falls is closed to entry from June 15 through August 15, unless authorized by the Superintendent. The Superintendent may designate a route to transit through the closed area.

- Keep bears from learning to perceive people as a source of food.
  - Regulation – In the Brooks Camp Developed Area, gear must be kept on your person at all times. This practice should be followed elsewhere in the Park as well. In addition, Persons engaged in fishing are required to immediately terminate fishing activity by releasing any fish from the line and removing the line and hook from the water.
  - Stop fishing and move out of the river when a bear is nearby.
  - If you catch a fish and then see that a bear is nearby, do not reel the fish in. Slowly move away from the bear, and snap the line.
  - Any fish that is kept at Brooks River must be immediately taken to the fish-freezing facility where it will be stored frozen. The fish should be placed in a plastic bag to reduce odors as you carry it; a plastic bad may be purchased at the Visitor Center.
  - Regulation – Fish or food may not be left where it is available to bears. You may not leave a fish on the bank while you continue fishing.

- Regulation – No carried food is permitted along Brooks River.

- If approached by a bear:
  - Talk, to let the bear know that a person is present, as you move out of the river.
  - If a fish is on the line, snap the line immediately.
  - If you have a fish in your possession, put it into the river, even if it is dead, in such a way that the bear does not associate it with you.
  - A bear typically charges anglers because other anglers have taught it that it can get food from anglers. Don't reinforce that behavior.
  - Report any fish stolen by bears or aggressive approaches by bears to a Ranger.

Additional Information for Brooks Camp Campground Users

- Keep bears from learning to perceive people as a source of food.
  - Regulation – Store all food in the food cache whenever the food is not being eaten. Store

garbage and other items that have an odor, such as toothpaste, shaving lotion, soap and hand cream, in the container as well. Bears have occasionally entered the campground despite the presence of an active electric fence around it.

- Regulation – The only approved location for outdoor cleaning of cooking utensils is the spigot adjacent to the campground food cache. Discard food particles on cooking articles in the garbage container in the food cache prior to rinsing.
- Regulation – Cooking food and burning garbage are not permitted in the campground fire rings.
- Keep the gates to the electric fences surrounding the campground closed at all times.
- Do not leave food unattended for even a moment. Return it to the cache immediately after meals.
- If a bear approaches while food is present, clap and talk to the bear, and then take the food with you as you back away.
- Never abandon food to a bear – It will endanger other campers.
- Although a rare occurrence, report any observations of bears inside the campground fence to a Ranger as soon as possible.

- Avoid unnecessary close encounters with bears between the campground and Brooks Camp.
  - Check the beach for bear traffic before using the campground trail along the Naknek Lake beach. Do not use the trail to walk past bears that are close by on the beach.
  - If you are moving gear between the campground and Brooks Camp, especially if this involves a cart, check and re-check the beach for bear traffic first. Bears can move quickly along the beach. Don't press your luck by trying to move gear hurriedly in an attempt to outpace a bear to your destination. Carts sometimes get stuck, bears can move at an unpredictable pace, and other events can slow your travel. If you notice a bear while pulling a cart toward the campground, it is typically best to back up with your gear to a more secure location and give the bear plenty of room.

<u>Additional Information for Backpackers</u>

- Avoid surprising bears while hiking.
  - Always be alert.
  - Avoid high use bear areas (primarily areas with seasonally abundant food such as berry patches, salmon spawning streams, etc.) and heavily used bear trails.
  - Avoid dense brush and other areas with low visibility, especially where hearing is also hindered, as by a gurgling stream. If you must hike through such an area, make a lot of noise before entering it and while in it.
  - If you see a bear, take a moment to assess the situation and allow the bear to react. Maintaining a distance of at least 200 yards is suggested. If the bear is unaware of you, do not make your presence known; detour widely around the bear or choose another travel route. If the bear sees you, help it identify you as a person. Possibly retreat or veer off at an oblique angle, while continuing to visually monitor the bear. Females with young can be particularly sensitive to close proximity with people.
  - Carry binoculars so that you can identify questionable objects from a distance.

- Avoid attracting bears to your campsite.
  - Look for bear sign before setting up camp. Don't camp where there is evidence of bears traveling, feeding, or bedding. Don't camp near salmon streams, lake shores, or berry patches.
  - Select your campsite such that you have good visibility around it.
  - Avoid taking/using odorous foods or other items, such as scented soap, hand cream, or deodorant. Treat all odorous items, such as toothpaste, as food.
  - Keep your campsite clean.

- Store food secure from bears.
  - Inform visitor of olfactory prowess of bears.
  - Regulation – All food and beverages, food and beverage containers, garbage, harvested fish and equipment used to cook or store food must be stored in a bear resistant container (BRC) or secured within a hard sided building; within lockable and hard sided section of a vehicle, vessel, or aircraft; or by caching a minimum of 100 feet from camp and suspending at least 10 feet above the ground and 4 feet horizontally from a post, tree trunk or other object on a line or branch that will not support a bear's weight. Because of the limited availability of trees suitable for suspending food, use of BRCs is strongly advised. Wrapping food in plastic to further reduce odors is advisable.
  - Ideally, position sites of tent, food storage, and food preparation and consumption at 3 separate locations, each at least 100 yards apart at the corners of a triangular pattern. Thus, the trail of food odors will not lead bear to the tent. Consume and prepare food at a site with good visibility around it. Cooking of food should preferably be done downwind from camp.
  - Treat all odorous items, such as toothpaste, as food.
  - If taking a day hike, consider carrying all food along.
  - Wrap garbage in plastic and carry it out. Do not bury it or leave anything behind. If burning is used to reduce bulk, any food residue left must be packed out.
  - Select meals that are easy to prepare and low in odors- cooks quickly and immediately clean up afterward.
  - Menstruating women should take steps to minimize odors. Store tampons with food, wrapped in plastic and secure from bears.

- Report bear sightings or unusual bear encounters to Rangers upon return.

BEAR-RELATED INFORMATIONAL HANDOUTS LIST

Informational handouts available to visitors from the Park's field headquarters and visitor centers include:

- Bear Facts
  A fold-out brochure produced by ADF&G in cooperation with other state and federal agencies that reviews basic bear safety information relevant to traveling in bear habitat in Alaska

- Novarupta
  Park newspaper containing information on visiting Katmai, Katmai recreational opportunities, bear behavior, and bear safety

- Bear Safety in Alaska's National Parklands
  A fold-out brochure produced by the NPS Alaska Support Office that summarizes basic bear safety information relevant to hiking and camping in Alaska's national parks.

Brooks River Bear Management: Basic Information for Employees

The objectives of the Katmai bear management program are: (1) retain the natural population dynamics of bears, (2) allow their natural patterns of feeding and habitat use to continue, (3) preclude a learned orientation of bears toward people, (4) minimize bear-human conflicts, and (5) provide opportunities for people to learn about, observe, and appreciate bears. The following guidelines were formulated with these objectives in mind.

- A bear may react defensively if surprised at close-range. Reduce the chances of sudden encounters with bears by remaining alert. To alert any bears in the vicinity to your presence, make noise, particularly where visibility is low.
- The following are prohibited: (1) approaching a bear or any large mammal within 50 yards; (2) continuing to occupy a position within 50 yards of a bear that is utilizing a concentrated food source; and (3) continuing to engage in fishing activity within 50 yards of a bear. These are minimum requirements. You may need to stay further away to avoid disturbing some animals, and to minimize the potential for a bear obtaining a fish from you while you're fishing.
- If you encounter a bear do not run. Speak to the bear in a calm voice (don't yell) and retreat slowly while keeping track of the bear. Resist any urge to move hurriedly away from a bear—a bear may quicken its pace if you rapidly retreat. If you are on a trail and a bear continues toward you, consider backing off the trail to allow the bear to pass.
- Bears are to be given the right-of-way in all but the developed areas of Brooks Camp (immediate vicinity of the buildings and the campground). If you observe a bear approaching camp along the Naknek Lake shoreline, help move people off the shoreline into camp so that the bear is not forced to move up into the residence area.
- Consumption or possession of food (including candy and gum) and drinks (other than water is allowed only in the campground, at the Visitor Center picnic area, and at the Brooks Lake picnic shelter. All food/beverages must be stored in buildings or designated food caches.
- Dispose of garbage only in approved receptacles located in buildings or storage caches. Never leave garbage unattended. If you notice that a receptacle is full or smells foul, report the situation to NPS maintenance personnel so that the situation can be attended to (or if it is an immediate issue and maintenance support is unavailable, other NPS personnel should address the situation).
- Be aware that bears do travel through camp and they could become interested in your residence if you leave food out on the counter near an open window, leave garbage in your cabin while gone for several days, etc. Keep your residence clean, and don't leave odorous items out unattended.
- Keep all packs and other gear on your person at all times. No personal property of any kind may be left outdoors unattended for any length of time in the Brooks River area except for on the lodge porch or in the campground (waders or boots left to dry on your porch = potential bear chew toys and potentially more visits by the same bear).
- If you fish in Brooks River: (1) watch for bears at all times; (2) move away as bears approach and always maintain at least the minimum 50 yard distance; (3) know how to quickly break or cut your line if you have a fish on and be prepared to do so if a bear approaches; and (4) if you are keeping a fish, immediately place it in a plastic bag and take it into camp for proper storage.
- The NPS formally documents bear management responses, as well as incidents in which bears obtain food from people, damage property, or charge people. Other interactions of note are also documented when possible. If you are involved in or witness a bear incident, please report it to a ranger and/or fill out a bear management report form (available at the ranger station and visitor center). Also, if you observe any situation of potential management concern, such as gear left unattended, aggressive behavior from a bear, or property damage, please report it to a ranger as soon as possible.

Suggestions for managing access to the floating bridge at Brooks Camp. Decisions will need to be made based on the actual behavior ofI bears present.I

SAFE CONDUCT IN BEAR COUNTRY
Some Guidelines

By

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Avoidance Deterrence Destruction

Three Tools for Safety in Bear Country

There are three important tools that you can use to avoid serious conflict and injury with bears: avoidance, deterrence, and destruction of bears. This approach is similar to that we all take towards automobile safety: if you drive defensively and responsibly, you don't need to worry about whether or not the seat belt or air bag will save your life. However, just as the seat-belt and air bag are important safety systems in automobiles, you also need to be prepared for the very rare situation where you may find yourself having to deal with an aggressive bear. Fortunately, if emphasis is placed heavily on avoidance of sudden/close encounters with bears in the first place, you will not have to worry about how to respond to a stubbornly curious bear or worse, destroy an aggressive one.

Avoidance: Your most important tool for avoiding problems with bears

Maintaining a safe distance between yourself and bears, as well as doing those things that do not attract them nor surprise them, are the most pro-active and important aspects of bear safety because the focus is on minimizing the chances of an encounter. People in bear country can do many things that will greatly reduce the chances of bear encounters. Conversely, you can also inadvertently do things that will increase the chances of an encounter, so it is important that those actions be identified and the chances of a bear encounter minimized. Successful avoidance of bear encounters can be enhanced through 1) self-education, 2) effective camp layout and design, and 3) appropriate conduct in bear country.

Self Education

- There are a number of good videos and books specifically geared towards promoting safe conduct in bear country. For example, "how to" guidebooks (e.g., *Bear Attacks - Their Causes and Avoidance* by S. Herrero, *Backcountry Bear Basics* by D. Smith, *Bear Encounter Survival Guide* by J.G. Shelton, etc) can be checked out from the library or purchased at outdoor stores. Ultimately, your personal safety is ***your*** responsibility and you can do much on your own.
- Consider contacting the agency which manages the area into which you plan to travel and asking them what the history of bear-human interactions has been for there. Most parks and refuges maintain a database of incidents on an annual basis and this information may provide guidance you can use.
- Talk to others who have been to the area and see if they have any background information which may prove useful.

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- Log onto my web page and peruse the information there on backcountry bear safety (http://www.absc.usgs.gov/staff/MFEB/tsmith.htm). I update that page frequently and have information there not only regarding the past 100 year history of bear-human confrontations in the state of Alaska but also regarding principles of safe conduct in bear country.

Let's now consider aspects of bear avoidance as they relate to the ***Camp Setting***. How to set up and maintain a safe camp is an important first step in avoiding unwanted bear encounters.

The Camp Setting

Campsite location

There are many things to consider when selecting a location for your camp which minimizes the chances of an unwanted bear encounter. Not only do you want to avoid seasonal high-use areas but also avoid doing those things that may elicit bears' attentions and subsequent curiosity. Consider these site selection criteria:

Issues of Previous Use

- Ask the land managers prior to striking out on your trip if there have been bear sightings, and certainly bear problems, in the area into which you plan to hike and camp. This could be very valuable information and at the very least will assuage unfounded fears.
- If you are using a site which has obviously had prior use, check the area for signs of obvious bear activity: diggings, scats, and the like. I'd check the fire pit to see if any old garbage remained from previous campers. If it appears that people before you have been messy and slack in their food handling, I would pack up and go elsewhere. Similarly, let's say you find bear scat in the area with the debris of ingested trash. Pack up and leave. The last thing you want is a food-conditioned bear in your camp at 2 am.

Sensory Issues (bear responses to the sights, scents and sounds associated with people)

- **Avoid areas with poor visibility** which may diminish the bear's ability to see you (and you them) at a safe distance (not only vegetation, but also topographic concerns).
- **Avoid areas that are naturally noisy** such as those near heavy wave action, rushing streams or roaring waterfalls. Such areas will deprive both you and bears the chance of hearing each other until very close... too close.
- **Avoid windy areas if possible** - areas which will whisk your scent away from the bear.

Bear Habitat Quality ("bears are where they find you")

- **Avoid bear seasonal foraging areas** (streams - berries - horsetail - sedges).

Bear Movement Corridors & Restrictions

- **Avoid areas that concentrate bear movements** (e.g., ridgelines, narrow valley constrictions, shortcuts from river to lake, etc.).
- **Use terrain and natural features to your advantage** when possible: cliffs limit approach paths; knoll tops provide good view sheds but may well advertise your presence to bears which would otherwise pay no heed...consider that too; very thick brush can passively route bears around camp; water is not necessarily a deterrent to bear approaches.

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Avoid Piquing Bear Curiosity

- Consider earth tone colors - use camouflage tarping when feasible so that your camp doesn't broadcast its presence to the greater surrounding area with its loud colors and novel shapes.
- Manage the information you send out into the environment: sight/sound/smell; THE hallmark trait of bears is curiosity and an insatiable urge to investigate the novel therefore don't advertise your location with bright colors, oddly shaped 'novel' tent outlines; keep the noise down; keep smells under control.

Camp Layout - the physical layout of campsites should be with bear safety in mind:

- Place sleeping tents in the most secure areas - space them out linearly (not in a circular pattern) which not only provides the bear more options for leaving but is also safest with regard to hazing away curious bears.
- Consider putting the most experienced people on each end of a line of tents so that someone with experience can deal with bears which may approach either end.
- Keep the cooking area, food and any scented objects at least 100 m downwind from your sleeping area.
- When laying camp out, use the vegetation and topography to your advantage: extremely thick brush limits the possible approach routes for bears and focuses your attentions in the most likely directions just as a camp backed up to a cliff has 180 degrees less concern than one in an open meadow.
- Brush in bear trails that come to camp so as to deflect their movements away from, rather than into, your camp.

Food Storage & Preparation

- Use bear-resistant containers (BRC) for food storage.
- Handle wastewater appropriately: all washing/cooking liquids should never be drained in or around camp (water from boiled pasta, etc) - bears will key in on it.
- Manage stove fuel carefully! Fuel spills are strong bear attractants, especially diesel and kerosene - refill Coleman stoves and lanterns with funnels and over spill containment.
- All excess food should be zip-locked and placed in BRC when not in use.

Management of Other Bear Attractants

- Make certain that personal tents are entirely devoid of all scented products: toothpastes, lip balms, snacks, etc.
- Odiferous objects in any tent should be stored safely so as to minimize scent (e.g., pepper sprays should be secured - especially in unfenced camps).
- Loud noises may work for/against you: bears find novelty in any form of interest so loud noises may not only alert them to your presence but may also attract them - this is also counter to a wilderness, low impact ethic.
- Human excrement/urine attracts bears and should not be near your campsite. If your camp is near the ocean, one of the most effective means of handling human waste is to discard the waste into the surf; keep a "pee bottle" (mark it well: NOT FOR DRINKING!) in your tent and discard later distantly from camp. Remember: when you are relieving yourself (particularly defecation) you are sending an attractive scent signal downwind - be wary and beware of wind direction and approach! More than a few people have been approached by a curious bear when in a somewhat compromising position...

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Other Bear Safety Considerations for Camp

- As a group, determine where your camp perimeter is and agree that when a bear comes within that perimeter that it will be hazed away; discuss a hazing strategy (begin with low level hazing and increase it until the desired effect is achieved) and agree to it.
- As a group, discuss what you will do should a bear come to camp in the night: who will respond with deterrents and who will back them up; what if a bear is near a tent? How do you respond as a camp?
- Discuss what to do should someone be attacked - these things should be discussed in camp and everyone clear on the action plan.
- As a group, discuss the use of bear hazing options and the need to carry them at all times; what is required/what is not; leaving camp unattended - who is responsible for what?
- What about headphones/walkman use? These seem inappropriate for outdoor use...but if someone must have them then make sure that someone else is listening.
- *Make certain that bear deterrents are available while cooking* - don't get caught with nothing available or in its case... deterrents in packs are useless.
- Make certain that your tent is set up well at night before retiring: have a flashlight handy, as well as bear pepper spray and a flare gun or other scare device. Be prepared for the worst case scenario and you will sleep better

Bear Safety beyond Camp

Be a Defensive Hiker in Bear Country

- How close do you approach a bear? (Katmai NP has the 50 yd rule; Denali NP has a 1/4 mile; minimum distances are location-specific and you should be aware of guidance for the area into which you are venturing)
- Minimize the chances for a surprise encounter (be terrain smart) - avoid brushy areas, salmon streams in late summer/fall; bears rest about anywhere and you should be aware of them whenever visibility is poor; bears like "lookout" locations so be prepared to encounter day beds on promontories, hillsides, etc. Pick your paths carefully - NOTE THE WIND DIRECTION!
- Make noise *appropriately* - alert bears to one's presence.
- Be aware of bear activity as a function of time of day, and season.

Bear Safety Gear

- Prudence suggests that you carry at least 2 bear deterrents at all times - these must be accessible if they are to be of any use to you; you also must consider which may be of use on any given day (high winds avoid bear pepper spray, etc).
- In many areas leaving a pack on a river bank is unwise and at Brooks River is against Park regulations - bears are very curious and have torn up many packs in this manner - do not leave gear unattended OR out of your safe keeping while conducting field work.
- Consider carrying the following on yourself when hiking in bear country: (a) a roomy day pack which can shift up to cover the neck and head; (b) bear pepper spray in holster on belt or on pack strap - very convenient location; (c) flare gun in holster in convenient location; (d) sheath knife on belt; (e) small first aid kit; (f) flashlight if anticipated that I may be hiking at night; (h) satellite phone or handheld radio; and (i) binoculars will help you spot bears from a safe distance

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Be Aware of Bears & Bear Behaviors

- When you encounter a bear, size up its behavior immediately: is it aware Of your presence? is it showing interest in you? is it acting abnormally? (e.g., stumbling, running in circles, attacking inanimate objects - all signs of rabies disease) does it track your movements and reorient its movement so that it will intercept you? Is it treating you as a potential prey item? (e.g., positioning so that it is at an advantage, quartering around you as if determining an attack strategy).

Group Size and Bear Safety

- The larger the group, the safer it is so hike together when possible. Hiking spaced widely *increases the probability of contact should an aggressive bear be surprised* and should be discouraged. Walk as a group, talk and pay attention, particularly in low visibility areas.
- Never split up and never run when approached by a bear - group together and do not let a pushy bear split you up.

Aversive Conditioning - Active Bear Deterrence

The Camp Setting - Topics That Should Be Discussed Among Camp Participants

- Establishment of a hazing perimeter: its defense and use of deterrents (~ 10 m).
- Which deterrent options can be used when and where (particularly focusing on the issue of appropriate distance and effectiveness).
- Armed backup - its necessity and use (second person position); emphasize that hazing is an aggressive act and may precipitate a charge.
- Ready availability of aversive conditioning equipment (e.g., guns, bear pepper spray, etc.).
- Establishing a hazing strategy for day and night - run through some mock scenarios.
- Making sure that night time tent arrangement provides for ready access to bear deterrents and their use (i.e., that in each tent at least 2 deterrents are on hand plus powerful flashlights so that you can see the bear).

Destruction - A Last Resort

Killing a bear may be the only alternative if the bear has injured someone and is an ongoing threat.

- Your first shot must be your best - shoot for the 'center of mass.'
- Aim for the shoulder for your second shot - keep shooting until the bear stops moving. Chest shots guarantee death and a good blood trail to the carcass.
- Notify your supervisor and park dispatch of the incident as soon as possible (park managers will notify ADF&G).
- State of Alaska DLP laws require you to salvage the hide, with claws attached, and the skull. Don't make this even more of a loss− carefully salvage the hide so that it can be sold for conservation purposes. Careless (needless) knife cuts through the hide make it considerably less valuable (see "Skinning Bears" handout in Appendix 10 of the Katmai Bear-Human Conflict Management Plan).
- If a bear is killed near camp the bear's carcass must be adequately disposed of, including entrails and blood if possible. Failure to move the carcass will result in it attracting other bears and further exacerbating a bad situation. You may have to move camp if you cannot deal with the carcass effectively

EXCERPTS FROM ALASKA REGION POLICY 110-006, MANAGEMENT OF FIREARMS AND AMMUNITION

The Alaska Region shall provide training, firearms, and ammunition resources for non-law enforcement needs sufficient to carry out the National Park Service's mission in a safe manner for employees. Training, firearms, and ammunition will be managed per all NPS and DOI regulations and guidelines.

Non-law enforcement employees shall not take direct action in a law enforcement situation; may carry weapons only with the approval of their superintendent; and must notify and have concurrent approval of the respective park superintendent when they will be in a Park with firearms. The use of non-law enforcement firearms may be further restricted by the park superintendent.

The training program must consist of at least:

A. Contents of classroom component of firearms training course: Basic firearms safety review; legal aspects of firearm use including state laws; policy review, including accountability and security; non-lethal spray (optional—if presented should include use, handling, storage, and transportation); animal behavior (optional).

B. Shooting proficiency component: This portion of the firearms training course will take place on a firing range under an authorized firearms instructor. The target will be an animal silhouette at a distance of 15 yards. Proficiency will require that 70 percent of the shots be on target and that all sequences be fired within the allowable 25 seconds. Each sequence will be shot twice. Proficiency will also require the shooter to demonstrate proper safe handling of the firearms.

Shotguns: two sequences of fire consisting of magazine capacity for the shotgun, plus one (i.e., Remington 870, 4 rounds in magazine, plus 1). The shooter will start with a full magazine and an empty chamber. The weapon will have the action closed and the safety on. On the command to fire, the shooter will be required to fire the rounds in the magazine, then reload and fire the one additional round, within 25 seconds. Upon completion, the shooter will open the action and ensure that the safety is on. Repeat.

Rifles: two sequences of fire consisting of magazine capacity for the rifle, plus one. The shooter will start with a full magazine and the action closed on an empty chamber, safety on. On the command to fire, the shooter will fire the rounds in the magazine, then reload and fire one additional round, within 25 seconds. Upon completion, the shooter will open the action and ensure that the safety is on. Repeat.

United States Department of the Interior
National Park Service - Alaska Region

REQUEST TO USE AND CARRY NON-LAW ENFORCEMENT FIREARMS IN ALASKA

Full Name:_____ Job Title:_____

Park: _____ Area/District: _____

Account Number:_____

Employee will use firearm for ____ wildlife protection or ____ Other (please explain)
_____

Recommended: _____ _____.
Supervisor Date

Recommended: _____ _____
Superintendent Date

Firearms Training and Annual Qualification

Dates Attended Initial Firearms Training Class: _____

Instructors Name & Agency (print): _____

Qualified with Firearm _____ __ by _____
(70% or greater) Date Approved Instructor

_____ by _____
Date Approved Instructor

Authorization dates: From _____ To _____

List parks for this request: _____

Information if personal weapon to be used

Firearm(s) to be used: Caliber: _____ Make: _____ Model: _____

Serial Number: _____ Registered Owner: _____

Employee Criminal History Certification

I certify that I am not a convicted felon and/or have not been convicted of a domestic violence charge and/or I am not wanted by any law enforcement agency.

_____ _____

Printed full name: Last, First and Middle Date

_____

Employee Signature

For Park Use

I certify the above individual has met all of the requirements of the regional Management of Firearms and Ammunition policy, 110-006.

I certify the individual has submitted an NACI, as required by the NPS, and the background has been successfully adjudicated.

The individual has/has not completed an optional criminal history check. If completed, the individual has satisfactory passed the check.

Comments: _____

_____

Park Senior Law Enforcement Officer

Privacy Act Statement

Section 552(k)(5) of Title 5 of the U.S. Code, authorizes collection of this information. The primary use of this records is to identify employees having security clearance and their degree of security clearance. Disclosures outside the Department of the Interior may be made, (1) to the U. S. Department of Justice related to litigation or anticipation litigation, (2) of information indicating a violation or potential violation of a statue, regulation, rule, order or license, to appropriate Federal, State, local, or foreign agencies responsible for investigating or prosecuting the violation or for enforcing or implementing the statue, rule, regulation, order, or license, (3) from the record of an individual in response to an inquiry from a Congressional offices made at the request of that individual, (4) to a Federal agency which has requested information relevant or necessary to its hiring or retention of an employee, or issuance of a security clearance, license, contract, grant, or other benefit, (5) to Federal, State, or local agencies where necessary to obtain information relevant to the hiring or retention of an employee, or the issuance of a security clearance, contract, license, grant, or other benefit.

Where the employee identification number is your Social Security Number, collection of this information is authorized by Executive Order 9397. Furnishing the information on this form, including your Social Security Number, is voluntary, but failure to do so may result in disapproval of this request.

If your agency uses this information furnished on this form for purposes other than those indicted above, it may provide you with an additional statement reflecting those purposes.

KATMAI NATIONAL PARK AND PRESERVE
ANIAKCHAK NATIONAL MONUMENT AND PRESERVE
ALAGNAK WILD RIVER

Compendium 2006

National Park Service (NPS) regulations applicable to the protection and equitable public use of units of the National Park System grant specified authorities to a park superintendent to allow or restrict certain activities. NPS regulations are found in Titles 36 and 43 of the Code of Federal Regulations (CFR) and created under authority and responsibility granted the Secretary of Interior in Titles 16 and 18 of the United States Code. The following compendium comprises a listing of NPS regulations that provide the Superintendent with discretionary authority to make designations or impose public use restrictions or conditions in park areas. The applicability and scope of the compendium is articulated in 36 CFR Sections 1.2 and 13.2, and 43 CFR Section 36.1.

The larger body of NPS regulations that do not provide discretionary authority to the Superintendent is not cited in this compendium. A complete and accurate picture of regulations governing use and protection of the unit can only be gained by viewing this compendium in context with the full body of applicable regulations found in Titles 36 and 43 CFR. *Please contact Katmai National Park and Preserve, PO Box 7, King Salmon, Alaska 99613 at (907) 246-3305 for questions relating to information provided in this compendium.*

For the purpose of this compendium, the term "parks," "park areas," or "park units" will refer to Katmai National Park and Preserve, Aniakchak National Monument and Preserve, and the Alagnak Wild River. The regulations contained within this compendium apply to all of these areas unless otherwise specified.

TITLE 36 CODE OF FEDERAL REGULATIONS

PART 1. GENERAL PROVISIONS

1.5 Closures and public use limits

(a)(2) Designated areas for specific use or activity or conditions

Wildlife Distance Conditions
(see also 13.61(b) for Aniakchak and 13.66(d) for Katmai)

- Approaching a bear or any large animal within 50 yards is prohibited.
- Continuing to occupy a position within 50 yards of a bear that is utilizing a concentrated food source, including but not limited to, animal carcasses, spawning salmon, and other feeding areas is prohibited.
- Continuing to engage in any fishing activity within 50 yards of a bear is prohibited. Persons engaged in fishing are required to immediately terminate fishing activity by releasing any fish from the line and removing the line and hook from the water.
    - *It was noted that numerous anglers are engaging in the above mentioned activity and it has allowed bears to acquire fish from people on two different*

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

occasions. This poses resource and safety concerns since it may condition bears to associate humans and food.

- The prohibitions do not apply to persons
  (i) engaged in a legal hunt
  (ii) on a designated bear viewing structure
  (iii) in compliance with a written protocol approved by the Superintendent
  (iv) if otherwise directed by a park employee

Areas that possess abundant fish and wildlife attract large numbers of visitors and present high potential for personal injury and altering wildlife behavior. These restrictions on activities that bring people in contact with wildlife are intended to apply a minimum buffer zone around wildlife. It does not imply that 50 yards is always a safe distance from which to observe wildlife. It also does not imply that retreating from a bear is always the best course of action.

A written determination of need per 36 CFR § 1.5(c) is attached.

See specific sections in this document for additional information regarding visiting hours, public use limits, and closures.

1.6(f) Compilation of activities requiring a permit

- Scientific research, 1.5
- Possessing a loaded, operable, *or* accessible weapon in the former Katmai National Monument, 2.4(d)
- Collecting research specimens, 2.5
- Operating a power saw in developed areas, 2.12(a)(2)
- Operating a portable motor or engine in undeveloped areas, 2.12(a)(3)
- Operating a public address system, 2.12)(a)(4)
- Air delivery, 2.17(a)(3)
- Using designated fee areas or facilities, 2.23(b)
- Noncommercial soliciting, 2.37
- Using, possessing, storing, or transporting explosives, blasting agents, or explosive materials, 2.38(a)
- Using or possessing fireworks and firecrackers, 2.38(b)
- Special events, 2.50(a)
- Public assemblies and meetings, 2.51(a)
- Sale and distribution of printed matter, 2.52(a)
- Grazing, 2.60(a)(1), (2)
- Residing on federal lands, 2.61(a)
- Installing a monument or other commemorative installation, 2.62(a)
- Commercial notices or advertisements, 5.1
- Commercial operations, 5.3
- Commercial photography or filming, 5.5

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

- Construction or repair of any building, structure, facility, road, trail, or airstrip on federal lands, 5.7
- Mining operations (9.9(a)) or an approved Plan of Operations (in lieu of permit))
- Cabins on federal lands-
  - General use and occupancy, 13.17(e)(1), (2)
  - Commercial fishing, 13.17(e)(3)
  - Subsistence-exclusive use, 13.17(e)(4)(i)
  - Temporary (over 14 days) facilities in Preserve for taking of fish and wildlife, 13.17(e)(7)
  - Cabins otherwise authorized by law, 13.17(e)(8)
- Using aircraft access for subsistence activities in the Monument, 13.45(a), 13.45(b)(1)
- Cutting of live standing timber greater than 3 inches in diameter for non-commercial subsistence uses, 13.49(a)(1)
- Access to inholdings where access is not made by aircraft, snowmachine, motorboat or non-motorized surface transportation, 43 CFR 36.10(b)
- Salvaging, removing, possessing aircraft, 43 CFR 36.11 (f)(3)(ii)
- Helicopter landings, 43 CFR 36.11(f)(4)
- Off-road vehicle (ORV) use, 43 CFR 36.11(g)(2)
- Temporary access across federal land for survey, geophysical or exploratory work, 43 CFR 36.12(c)

PART 2. RESOURCE PROTECTION, PUBLIC USE AND RECREATION

2.1(a)(4) Designated areas for collection of dead wood on the ground for firewood

Dead and downed wood may be collected for use as fuel for campfires within the former Katmai National Monument.

Superseded by 13.20(c)(4), (d) and 13.49(b) in the **1980 ANILCA Preserve and Park additions**.

2.1(a)(5) Designated areas and conditions for walking on, climbing, entering, ascending, descending, or traversing an archeological or cultural resource, monument, or statue

No designated areas or conditions.

2.1(b) Designated trails

No restrictions on walking or hiking.

2.1(c)(1)-(3) Designated fruits, nuts, berries, and unoccupied seashells to harvest by hand and collection restrictions

In the former Katmai National Monument, all edible fruits, berries, nuts and unoccupied seashells may be gathered by hand for personal use or consumption.

Superseded by 13.20(c)(1) and 13.49(b) in the **1980 ANILCA Preserve and Park additions**.

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

2.2(d) Established conditions and procedures for transporting lawfully taken wildlife through park areas

See also 13.21(d)(5).

2.2(e) Designated areas for wildlife viewing with artificial light

No areas designated for closure.

2.3(d)(2) Fresh waters designated as open to bait fishing with live or dead minnows or other bait fish, amphibians, nonpreserved fish eggs or fish roe

No waters are designated as open to bait fishing, except the Naknek River where bait may be used in accordance with state law pursuant to 13.66(b)(1). Subsistence fishing by federally qualified rural residents is allowed in accordance with 36 CFR part 13 and 50 CFR part 100.

2.3(d)(8) Designated areas open for fishing from motor road bridges and public boat docks

All areas open to fishing from motor road bridges and public boat docks except the floating bridge in the Brooks Camp Developed Area.

> *The floating bridge at Brooks Camp is the primary travel route between visitor services provided at Brooks Camp and the viewing platforms along the river. For the safety of visitors no fishing from the bridge will be allowed.*

2.4 (a)(2)(i) Carrying, using, or possessing weapons at designated locations and times

Weapons and traps may not be carried within the former Katmai National Monument. (Note: see 2.4(a)(3) authorizing the possession of unloaded weapons that are either inoperable or inaccessible and in a vehicle or vessel).

See 13.19(b) for all other areas.

2.10(a) Camping: conditions and permits

Superseded in part by 13.18(a), 13.66(c)(1).

2.10(d) Food storage: designated areas and methods

(1) Definition: A *bear resistant container* (BRC) means an item constructed to prevent access by a bear. BRC's include—

- Items approved by the Department of Interior and Agriculture's Interagency Grizzly Bear Committee (http://www.fs.fed.us/r1/wildlife/igbc/);
- Items approved by the National Park Service's Sierra Interagency Black Bear Group (http://www.nps.gov/seki/snrm/wildlife/sibbwg.htm);
- Any additional items listed by the State of Alaska, Department of Fish and Game, Division of Wildlife Conservation (http://www.wildlife.alaska.gov/aawildlife/containers.cfm#lightweight), with the

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

- concurrence of the Superintendent;
- Park provided metal food lockers at some coastal campsites; and
- Items approved by the Superintendent.

(2) Throughout the park, all food and beverages, food and beverage containers, garbage, harvested fish and equipment used to cook or store food must be stored in a bear resistant container (BRC) or secured—

- Within a hard sided building;
- Within lockable and hard sided section of a vehicle, vessel, or aircraft; or
- By caching a minimum of 100 feet from camp and suspending at least 10 feet above the ground and 4 feet horizontally from a post, tree trunk or other object on a line or branch that will not support a bear's weight.

Note: This does not apply to:

- Legally taken game.
- Food that is being transported, consumed, or prepared for consumption.
- The use of bait for trapping and hunting under the provisions of state and federal law.

The intent of these designations is to prevent bears and other wildlife from obtaining and habituating to food and garbage, thus protecting wildlife and park visitors alike. We strongly recommend that dishes and cooking equipment be securely stored; but clean and odor free items are not required to be stored in secure containers. Ice chests and coolers, tents, dry bags or stuff sacks, plastic packing boxes (Totes, Action Packers, etc) and unmodified kayaks are not generally approved as BRC. The park offers bear resistant containers for temporary use to the public. The containers are free of charge and can be picked up at the park's visitor centers in King Salmon and Brooks Camp.

A written determination of need per 36 CFR § 1.5(c) is attached

See also 13.66(c)(4) for requirements in the Brooks Camp Developed Area.

See attached Brooks Camp Developed Area Map.

2.11 Picnicking: designated areas

Superseded by 13.18(b).

2.13(a)(1) Fires: designated areas and conditions

No designated areas.
See also 13.66(c)(5) for Brooks Camp Developed Area.

2.14(a)(2) Sanitation and refuse: conditions using government receptacles

Dumping of household, commercial, or industrial refuse brought into the park is prohibited.

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

2.14(a)(5) Sanitation: designated areas for bathing and washing

No designated areas.
See 13.66(c)(6) for Brooks Camp Developed Area.

2.14(a)(7) Sanitation: designated areas for disposal of fish remains

There are no areas designated.

2.14(a)(9) Sanitation: designated areas for disposal of human waste in undeveloped areas

Human waste will either be removed as trash or deposited in individual, one time use cat-holes dug at least 100 feet from any surface fresh water source and at least 6 inches deep.

> *This requirement is intended to ensure that proper disposal of human waste occurs in the backcountry to protect water quality and visitor health and safety. The restriction of 6 inches deep is to prevent the disturbance of cultural resource sites.*

2.14(b) Sanitation: conditions concerning disposal, carrying out of human waste

All toilet paper and other sanitary products shall be packed out as trash or burned.

2.15(a)(1) Areas designated as closed to pets

No designated areas. Pets must be leashed or physically restrained at all times. See 13.66(c)(7) for the Brooks Camp Developed Area.

2.15(a)(3) Conditions for leaving pets unattended and tied to an object

No conditions at present.

Leaving pets unattended and tied to an object is prohibited.

2.15(a)(5) Pet excrement disposal conditions

No conditions at present.

2.15(b) Conditions for using dogs in support of hunting activities

No conditions at present.

2.16 (a)-(c) Horses and pack animals

Superseded by 43 CFR 36.11(e).
Access for subsistence purposes under 36 CFR 13.46(a) supersedes this section.

2.17(a)(1) Aircraft operation

Superseded by 43 CFR 36.11(f)(1).

2.17(a)(2) Aircraft operation near docks, piers, swimming beaches and other designated areas

No areas prohibited.

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

2.17(c)(1) Conditions for removing downed aircraft
Superseded by 43 CFR 36.11(f)(3)(ii).

2.18(c) Snowmobiles: designated areas for use No areas designated for snowmachine use. Superseded in part by 43 CFR 36.11(c). Superseded by 36 CFR 13.46 for subsistence uses.

2.19(a) Winter activities on roads and in parking areas: designated areas
Roads and parking areas open to vehicle traffic in the winter are designated as open to winter activities.

2.19(b) The towing of persons on skis, sleds, or other sliding devices by motor vehicle or snowmobile is prohibited, except in designated areas or routes
No designated areas.

2.20 Skating and skateboards
Superseded by 43 CFR 36.11(e).

2.21 Smoking All public buildings are closed to smoking unless specifically permitted and signed as a designated smoking area. Smoking is prohibited within 100 feet of the park fuel and aviation gas storage facility.

These restrictions are intended to protect public safety from fire or explosion around fuel storage and dispensing facilities.

2.22 Property: leaving property unattended for longer than 24 hours
Superseded by 13.22, 13.66(c)(10), (e).

2.35(a)(3)(i) Alcoholic beverages: areas designated as closed to consumption
No areas designated as closed.

2.38(b) Fireworks: permits, designated areas, and conditions
No areas designated for use of fireworks.

2.51(e) Public assemblies/meetings: designated areas for public assemblies A permit from the superintendent is required for all public assemblies or meetings. Areas for assemblies or meetings will be designated on the permit.

2.52(e) Sale and distribution of printed matter: areas designated for such use
A permit from the superintendent is required to sell or distribute printed matter. Areas for assemblies or meetings will be designated on the permit.

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

2.60(a)(3) Designated areas for grazing

Grazing of pack or saddle animals by private parties, not to exceed 14 days, is authorized without a permit. Any feed brought in must be "weed-free."

These restrictions seek to lessen the impact of extended camps on vegetation and minimize the risk of nonnative plant invasion.

2.62(b) Memorialization: designation of areas for scattering ashes

All areas are open to scattering of ashes without a permit.

PART 3. BOATING AND WATER USE ACTIVITIES

3.3 Permits

No permits required at present.

3.6(i) Boating, prohibited operations: designated launching areas

All areas are open to launching of boats.

3.6(l) Operating a vessel in excess of designated size

No maximum size designations at present.

3.20(a) Water skiing: designated waters

All waters are designated as open.

3.21(a)(1) Swimming and bathing: areas designated as closed

All areas are open to swimming and bathing.

3.23(a) SCUBA and snorkeling: designated conditions in swimming, docking, and mooring areas.

No conditions established at present.

PART 4. VEHICLES AND TRAFFIC SAFETY

4.10 Routes or areas designated for off-road motor vehicle use in Preserves

No designated routes or areas. See also 43 CFR 36.11(g).

4.11(a) Load weight and size limits: permit requirements and restrictive conditions

No restrictions at present.

4.21(b)-(c) Speed limits: designation of a different speed limit

Speed limits on the Lake Camp road are 25mph unless otherwise posted.

The reduced speed limit is for public safety. Pedestrians, bicyclists and wildlife often use the roadway and visibility is limited due to road design and vegetation.

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

4.30(a) Routes designated as open to bicycles

Superseded by 43 CFR 36.11(e).

4.30(d)(1) Wilderness closed to bicycle use

Superseded by 43 CFR 36.11(e).

4.31 Hitchhiking: designated areas

All areas are open to hitchhiking.

PART 5. COMMERCIAL AND PRIVATE OPERATIONS

5.7 Construction of buildings, roads, trails, airstrips, or other facilities

Maintenance of established landing strips utilizing non-motorized hand tools is not considered construction or repair and no permit is required.

PART 13. ALASKA REGULATIONS

SUBPART A – PUBLIC USE AND RECREATION

13.17(d)(8)(ii), (iv) Established conditions for removal of cabin for which a cabin permit has been denied, expired, or revoked

No conditions established at present (may require access permit).

13.17(e)(4)(i) Designated existing cabins, shelters or temporary facilities that may be shared for subsistence uses without a permit

No designations at present.

13.17(e)(4)(vi) Established conditions and standards governing the use and construction of temporary structures and facilities for subsistence purposes, published annually

No conditions or standards established at present.

13.17(e)(5)(i) Designated cabins or other structures for general public use

Fure's Cabin at the northeast corner of the "Bay of Islands" in the north arm of Naknek Lake is designated as a public use cabin.

13.17(e)(5)(ii) Established conditions and allocation system to manage the use of designated public use cabins

The following conditions apply to Fure's cabin at the northeast corner of the "Bay of Islands" in the north arm of Naknek Lake:

- Use of the cabin site for specific administrative uses shall have priority over all unreserved public use when deemed necessary by the park superintendent.
- All use will be conducted for recreational activity by reservation through the King Salmon office.
- No commercial overnight use is permitted at the cabin.

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

- Reservations shall be made on a first-come first-served basis beginning no earlier than January 1 of each calendar year of the intended use.
- Use will be limited to groups no larger than six and the names of all group members shall be provided at the time a reservation is requested.
- Overnight stays are limited to no more than four consecutive nights and no more than seven nights a year.
- Use of the adjacent historic tower is not permitted.
- The use of a tent within the cleared area around the cabin is prohibited.
- Alterations to the structure, marring the surface of the wood logs, framing or other components of the cabin and surrounding structures is prohibited.

This requirement allows for equitable public use of the Fure's Cabin.

13.17(e)(7)(iv)(B) Established conditions for removal of temporary facility used in excess of 14 days

Individuals must remove facility, all personal property, and return the site to its natural condition.

These conditions are intended to protect the park from impacts to vegetation and soil and to ensure that personal items are not left in the park.

13.18(a)(1) Temporary closures and restrictions to camping

Camping is prohibited in the core Hallo Bay Meadows as shown in Appendix C from May 15th through July 15th.

This restriction is intended to prevent conflicts with bears and visitors at prime feeding sites that attract bears and bear viewers while providing for overnight camping in the area.

A written determination of need per 36 CFR § 1.5(c) is attached.

13.18(a)(2) Site time limits: authorization to exceed 14 day limit at one location

No general exceptions at present.

13.18(a)(3) Designated campgrounds: restrictions, terms, and conditions

See also 13.66(c) for Brooks Camp Developed Area.

13.18(b) Picnicking-areas where prohibited or otherwise restricted

No restrictions at present. See 13.66(c)(9) for restrictions in Brooks Camp Developed Area.

13.19(b) Temporary closures or restrictions to carrying, possessing, or using firearms

There are no additional restrictions in the 1980 ANILCA Preserve and Park Additions. See 2.4(a)(2)(i) for restrictions in the former Katmai National Monument.

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

13.20(d) Collection of dead standing wood: areas designated as open and conditions for collection

No designated areas. See 2.1(a)(4), (c)(1)-(3) for restrictions in the former Katmai National Monument.

13.20(f)(1) Natural features: size and quantity restrictions for collection

See 2.1(a)(4), (c)(1)-(3) for restrictions in the former Katmai National Monument.

13.20(f)(2) Natural features: closures or restrictions due to adverse impacts

No closures or restrictions at present.
See 2.1(a)(4), (c)(1)-(3) for restrictions in the former Katmai National Monument.

13.21(e) Temporary closures to the taking of fish and wildlife No closures at present where hunting is authorized. See applicable State of Alaska hunting regulations for Katmai National Preserve, Aniakchak National Preserve, and Alagnak Wild River. Sport hunting is prohibited in Aniakchak National Monument. Katmai National Park is closed to all hunting.

13.22(b)(1)-(6) Exceptions to unattended or abandoned property

Superintendent authorizations for exceptions for unattended or abandoned property are made on a case by case basis. Contact park headquarters for more information.

13.22(c) Designated areas where personal property may not be left unattended for any time period, limits on amounts and types, manner in which property is stored

Leaving a boat, trailer, or vehicle unattended for more than 72 hours at the facilities associated with the Lake Camp launching ramp is prohibited without authorization from the Superintendent. Leaving a boat unattended at the Lake Camp dock is prohibited.

In addition to the places in the Brooks Camp Developed Area designated in 13.66(c)(10), personal property may be left unattended at the Brooks Lodge Office Porch.

13.30(h) Facility closures and restrictions

No restrictions at present.

SUBPART B – SUBSISTENCE

13.46 Closures or restrictions to the use of snowmobiles, motorboats, dog teams, and other means of surface transportation traditionally employed by local rural residents engaged in subsistence uses

See also 36 CFR 2.16, 2.17, 2.18, 3.6, 4.10, 4.30; 43 CFR 36.11(c)-(e).

13.49(a)(1) Permit specifications for harvesting live standing timber greater than 3" diameter for subsistence purposes (house logs & firewood)

Cutting of live timber for subsistence or any other purpose is not authorized in Katmai National Park. In all other areas, the Superintendent may allow subsistence harvest of

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

trees greater than 3" subject to the terms and conditions of a permit issued by the superintendent.

The above restriction serves to minimize impact to park resources, ensure that natural biodegradation processes are unimpaired, and protect against over harvest.

13.49(a)(2) Restrictions on cutting of live timber less than 3" in diameter for subsistence purposes

Cutting of live timber is not authorized in Katmai National Park. In all other areas, verbal or written permission from the Superintendent is required to cut live timber less than 3" in diameter, except as necessary to clear designated vehicle routes and airstrips.

The above restriction serves to minimize impact to park resources and protect against over harvest.

SUBPART C – SPECIAL REGULATION, SPECIFIC PARK AREAS

13.66(b) Traditional redfish fishery: conditions established by the Superintendent

No conditions at present.

13.66(c)(1)(i) Brooks Camp Developed Area (BCDA): designated camping areas

Camping is authorized at the Brooks Camp Campground only.

13.66(c)(3) Brooks Camp Developed Area (BCDA): designated route through Brooks Falls closure

A map showing the designated route is available at the Brooks Camp Visitor Center.

13.66(c)(4) Brooks Camp Developed Area (BCDA): designated facilities and conditions for food storage

Food storage facilities are provided at Brooks Campground, Brooks Lake, and Naknek Lake.

13.66(c)(6) Brooks Camp Developed Area (BCDA): designated areas for washing dishes or cooking utensils

Washing dishes or cooking utensils at locations other than the water spigot near the food cache in the Brooks Campground or other designated areas is prohibited.

13.66(c)(10) Brooks Camp Developed Area (BCDA): designated equipment caches for leaving property unattended

Brooks Camp Developed Area

Leaving property, other than motorboats and planes, unattended for any length of time within the BCDA is prohibited, except at the Brooks Lodge Porch, Brooks Campground, or designated equipment caches at the Brooks Camp Visitor Center. The Brooks Lodge

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

Office Porch is also designated as an area where property may be left unattended pursuant 13.22(c).

13.66(c) Brooks Camp Developed Area (BCDA): closures and restrictions
No closures and restrictions.

13.66(d): Wildlife distance conditions: designated bear viewing structure
There are three bear viewing structures: the platforms at the mouth of the Brooks River, the Falls and the Riffles.

The Falls and Riffles bear viewing platforms and boardwalks are closed from 10 pm to 7 am during the period June 15 through August 15. Entering or going upon these platforms and boardwalks during these hours is prohibited.

A schedule of visiting hours is required per the Finding of No Significant Impact for the Brooks River-Bear Viewing Facility. The schedule is intended to provide bears access to Brooks Falls and vicinity during the predictable period of time in which the general public is absent from viewing structures.

13.66(d): Wildlife distance conditions: written protocol for viewing bears closer than 50 yards
There is no written protocol at present.

43 CFR, PART 36 TRANSPORTATION AND UTILITY SYSTEMS (Access Regulations)

36.11(c) Temporary closures to the use of snowmachines for traditional activities
No closures at present.
See also 2.18.

36.11(d) Temporary closures to the use of motorboats
No closures at present.
See also 3.3, 3.6.

36.11(e) Temporary closures to the use of non-motorized surface transportation
No closures at present.
See also 2.16, 3.3, 3.6.

36.11(f)(1) Temporary closures to landing fixed-wing aircraft
No closures at present.

36.11(f)(3)(ii) Established procedure for salvaging and removing downed aircraft A permit is required from the Superintendent before downed aircraft may be salvaged and removed from the NPS lands; violation of the terms and conditions of the permit is prohibited.

KATM/ANIA/ALAG COMPENDIUM 2006, *Continued*

This requirement allows the Superintendent to establish terms and conditions for salvage operations as necessary to protect resources, provide for public safety, and minimize impacts on visitors.

36.11(g)(2) Use of off-road vehicles (ORV) on existing trails

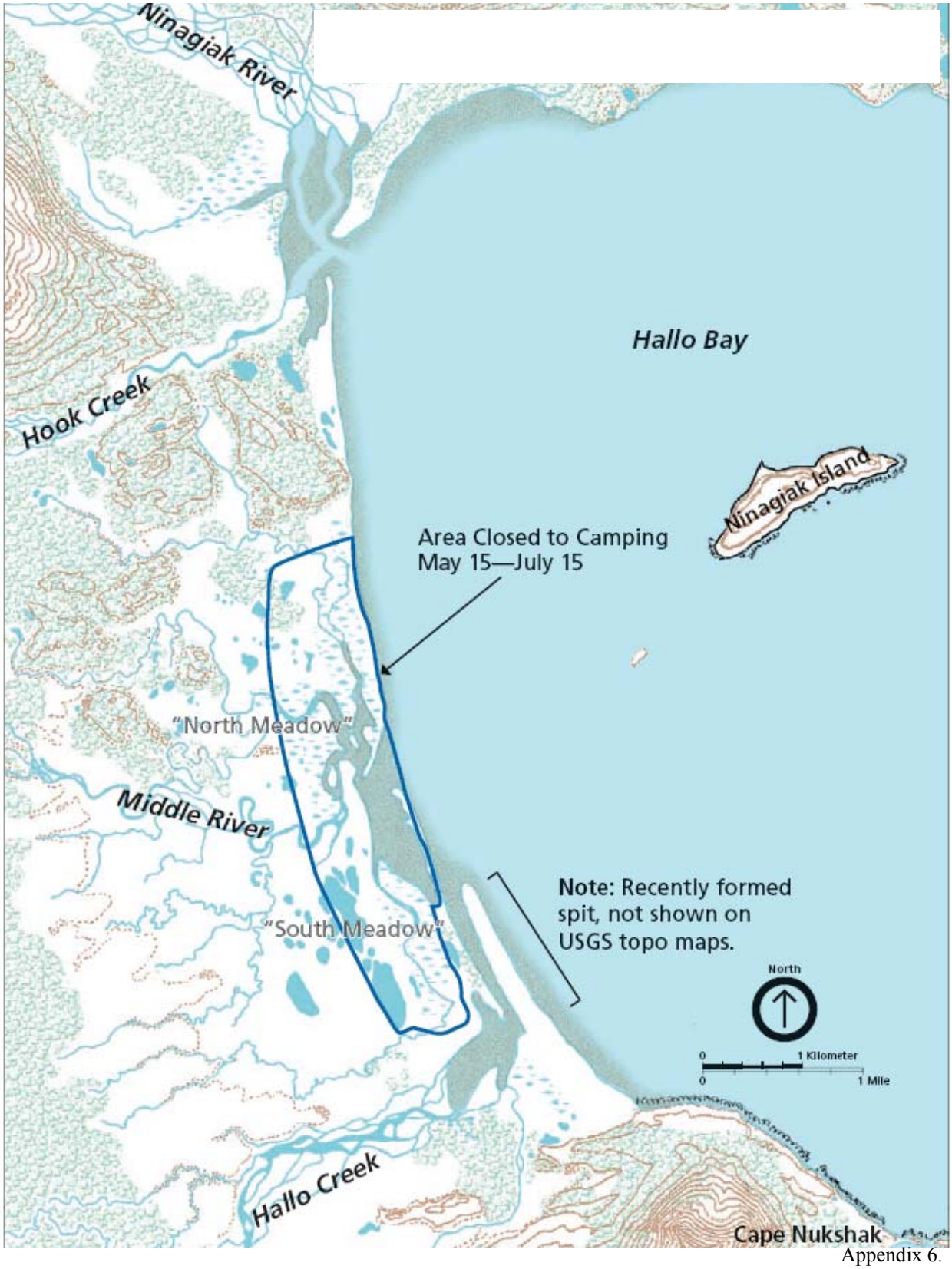
No designated trails. See also 4.10.

This compendium is approved and rescinds all previous compendiums issued for Katmai National Park and Preserve, Aniakchak National Monument and Preserve, and the Alagnak Wild River.

S. Frye Superintendent: _____ Date: _____

Attachments: 1.5 Wildlife Viewing Conditions Determination
2.10 Food Storage Determination
13.18 Camping Closure Determination Brooks Camp Developed Area Map
Hallo Bay Seasonal Camping Closure Map

Brooks Camp Developed Area
Katmai National Park and Preserve Compendium 2006


Ninagiak River
Hook Creek
Hallo Bay
Ninagiak Island
Area Closed to Camping
May 15—July 15
"North Meadow"
Middle River
"South Meadow"
Note: Recently formed spit, not shown on USGS topo maps.
North
0 1 Kilometer
0 1 Mile
Hallo Creek
Cape Nukshak

EXCERPTS FROM TITLE 36, CODE OF FEDERAL REGULATIONS (36 CFR), RELEVANT TO BEAR MANAGEMENT

36 CFR 2.2 Wildlife Protection

(a) The following are prohibited:
(2) The feeding, touching, teasing, frightening or intentional disturbing of wildlife nesting, breeding or other activities.

36 CFR 2.32 Interfering with agency functions.

(a) The following are prohibited:
(1) Interference. Threatening, resisting, intimidating, or intentionally interfering with a government employee or agent engaged in an official duty, or on account of the performance of an official duty.
(2) Lawful order. Violating the lawful order of a government employee or agent authorized to maintain order and control public access and movement during fire fighting operations, search and rescue operations, wildlife management operations involving animals that pose a threat to public safety, law enforcement actions, and emergency operations that involve a threat to public safety or park resources, or other activities where the control of public movement and activities is necessary to maintain order and public safety.

36 CFR 13.30 Closure procedures.

(a) Authority. The superintendent may close an area or restrict an activity on an emergency, temporary, or permanent basis.
(b) Criteria. . . . public health and safety, resource protection . . .
(c) Emergency closures. (4) no emergency closure or restriction shall extend for a period exceeding 30 days, nor may it be extended.
(f) Notice. . . . (1) . . . newspaper . . . post offices within the vicinity . . . local radio, and designated on a map . . . available for public inspection . . .; or (2) designated by the posting of appropriate signs; or (3) both.

36 CFR 13.66 Katmai National Park and Preserve

(a) Fishing. Fishing is allowed in accordance with Sec. 13.21 of this chapter, but only with artificial lures and with the following additional exceptions:
(3) No person may retain more than one fish per day caught on Brooks River, on the waters between the posted signs 200 yards from the outlet of Brooks lake, or on the water between the posted signs 200 yards from the mouth of the Brooks River on Naknek Lake.
(c) Brooks Camp Developed Area. For purposes of this section, the Brooks Camp Developed Area (BCDA) means all park areas within a 1.5 mile radius from the Brooks Falls Platform and is depicted on a map available at the park visitor center. Paragraphs (c)(1) through (10) of this section apply from May 1 through October 31 unless stated otherwise.
(1) Camping. (i) Camping is prohibited in all areas of the BCDA except within the Brooks Camp Campground and other designated areas.

EXCERPTS FROM TITLE 36, CODE OF FEDERAL REGULATIONS (36 CFR), RELEVANT TO BEAR MANAGEMENT, Page 2 of 2

36 CFR 13.66(c) Katmai National Park and Preserve, *Continued*

(2) Visiting hours. The Falls and Riffles bear viewing platforms and boardwalks are closed from 10 pm to 7 am from June 15 through August 15. Entering or going upon these platforms and boardwalks during these hours is prohibited.

(3) Brooks Falls area. The area within 50 yards of the ordinary high water marks of the Brooks River from the Riffles Bear Viewing Platform to a point 100 yards above Brooks Falls is closed to entry from June 15 through August 15, unless authorized by the Superintendent. The Superintendent may designate a route to transit through the closed area.

(4) Food storage. In the BCDA, all fish must be stored in designated facilities and in accordance with conditions established by the Superintendent. Storing fish in any other manner is prohibited. Employees may store fish in employee residences.

(6) Sanitation. Within the BCDA, washing dishes or cooking utensils at locations other than the water spigot near the food cache in the Brooks Campground or other designated areas is prohibited.

8) Bear Orientation. All persons visiting the BCDA must receive an NPS-approved Bear Orientation. Failure to receive an NPS-approved Bear Orientation is prohibited.

(9) Picnicking. Within the BCDA, picnicking in locations other than the Brooks Camp Visitor Center picnic area, Brooks Campground, Brooks Lake Picnic Area, and a site designated in the employee housing area is prohibited. Food consumption or possession while at the Brooks River is prohibited.

(10) Unattended property. Leaving property, other than motorboats and planes, unattended for any length of time within the BCDA is prohibited, except at the Brooks Lodge Porch, Brooks Campground, or designated equipment caches as posted at the Brooks Camp Visitor Center.

(11) BCDA closures and restrictions. The Superintendent may prohibit or otherwise restrict activities in the BCDA to protect public health and safety or park resources. Information on BCDA closures and restrictions will be available for inspection at the park visitor center. Violating BCDA closures or restrictions is prohibited.

36 CFR 13.66 Katmai National Park and Preserve, *Continued*

(d) Wildlife distance conditions.

(1) Approaching a bear or any large mammal within 50 yards is prohibited.

(2) Continuing to occupy a position within 50 yards of a bear that is using a concentrated food source, including, but not limited to, animal carcasses, spawning salmon, and other feeding areas is prohibited.

(3) The prohibitions in this paragraph (d) do not apply to persons--

(i) Engaged in a legal hunt;

(ii) On a designated bear viewing structure;

(iii) In compliance with a written protocol approved by the Superintendent; or

(iv) Who are otherwise directed by a park employee.

BACKGROUND

Bear Habituation to People

Habituation is the reduced level of response to a stimulus after repeated, inconsequential exposure. Food-conditioning is the learned association between food and/or garbage and humans and/or human development (Braaten and Gilbert 1987, Braaten 1988, Aumiller and Matt 1994). These states can occur independently of each other. Habituation occurs on a continuum and may be site-specific. Individual bears will reach varying levels of habituation following varying numbers of neutral experiences with humans (Aumiller and Matt 1994).

Research and management experience with brown bears at bear-viewing areas with rich food resources such as Brooks Camp (NPS), McNeil River (ADF&G), and Pack Creek (USFS) suggest that in some situations, habituation to humans can result in safer interactions between bears and people (Braaten and Gilbert 1987, Warner 1987a, Braaten 1988, and Aumiller and Matt 1994). Bears that are habituated to humans are less likely to respond to close-range encounters with fear-induced aggression. Conversely, food-conditioning seems to make bears more dangerous to humans (Herrero 1985, Van Daele 1989). Key points for encouraging habituation include a human presence near a food source, humans behaving consistently and predictably in ways recognizable by bears, setting and consistently defending boundaries around residence areas, and using the lowest possible response to bears (Aumiller and Matt 1994, Aumiller 1995).

However, a high degree of habituation may not be desirable when visitors are not closely supervised. As bears become more familiar with people and spend time close to them, they have an increased chance of obtaining human food or sport-caught fish, or damaging property if people behave improperly. Also, some bears that spend time close to people on the ground can learn that their movements may cause people to move away (Aumiller and Matt 1994). Bears can develop patterns of moving towards people with the apparent object of repeatedly displacing the people, but without the apparent intent to actually reach them. Such aggressive bears may eventually be destroyed if they are perceived as a threat to human safety. Therefore, it is preferable to reduce the chances of undesirable behavior developing by keeping bears and humans at distances at which a high degree of habituation is less likely to develop.

To insure human safety and minimize human impact on bears within Katmai, human behavior around bears should conform to two principles.

1. Human behavior must be such that bears do not perceive it as threatening.

A bear is more likely to respond defensively in an accidental close encounter if the human acted in a way that the bear perceived as aggressive (McCullough 1982, Herrero 1985, Jope 1985a,b, 1987, Van Daele 1989). Predictability of human behavior and temporal patterns of use will

reduce the likelihood of close encounters (Aumiller and Matt 1994, Fagen and Fagen 1994), especially with bears which are accustomed to humans and therefore will not leave an area when humans are detected.

2. Humans must consistently be a neutral stimulus to bears, one that results in neither reinforcing nor punishing consequences.

If bears suffer punishing consequences when they encounter humans, they will adjust their behavior to avoid humans (Davey 1981); thereby they will be denied habitat in areas of human use (McCullough 1982, McLellan and Shackleton 1989). Once a bear has established a pattern of obtaining food from humans or human sources, it will repeatedly approach humans for food creating dangerous situations (Herrero 1985). If bears learn that they can be aggressive with humans and control human behavior, they may find this behavior reinforcing and continue it (Davey 1981) creating dangerous situations.

Wildlife Distance Requirements

Why the Park Has a Distance Rule

Prohibition of obvious harassment is not sufficient to protect either bears or human safety. Bears live in a world of bluff and threat; they do not readily show their vulnerability or submission. Only in extreme situations will unhunted bears that are familiar with people exhibit behavior that is obvious to a naive observer, e.g. fleeing, vocalizing, or aggression, in response to people yelling or approaching. They must be pushed even to exhibit less dramatic, but fairly observable indicators of stress, such as yawning or salivating excessively. Typically, when people approach too close, or try to displace bears by shouting, the bear will continue its behavior, but slightly alter its course, so that it does not appear submissive as it withdraws from the area. Sometimes this response may take a minute or more. This tendency for the bear to appear to feign disregard makes it easy for people harassing bears to argue, and even to convince themselves, that they did not change the bear's ongoing behavior.

(1) Protection of Bears

Visitors' encounters with bears should not alter survival or reproductive rates of the bears. Bears in Katmai require access to salmon spawning streams for survival. Unscrupulous or naive anglers will displace bears from rivers by yelling, approaching, or simply repeatedly positioning themselves too close for the bear's comfort and waiting for the bear to withdraw. Bears that have not learned a tolerance of people will usually leave the river under such pressure. The popularity of sport fishing and photographing bears has resulted in concentrations of people on several rivers that are prime feeding areas for bears within Katmai. The unhunted bear population in Katmai is likely at as high a density as the resource will support. Increasing human use may deny intolerant bears access to several feeding areas for substantial periods of time. As competition increases for access to other

areas, marginally competitive bears, such as young bears and small females with cubs, will be able to put on less fat for the winter because they cannot compete with larger bears for available fishing opportunities. Thereby, they suffer reduced probabilities of survival and reproduction. Human recreational use of Katmai/Aniakchak/Alagnak should not be allowed to significantly displace wildlife from habitat.

Excessive habituation to people (becoming comfortable near people) and food-conditioning (learning people = source of food) increase the likelihood that a bear will be destroyed for nuisance behavior either inside or outside of the park. Nuisance bears are destroyed almost every year in the Naknek and King Salmon area; some of these bears may have become habituated to humans at Brooks River in Katmai. Some bears will learn to tolerate people in order to gain access to feeding and bedding areas that larger bears avoid. Such habituation can become excessive after bears repeatedly encounter people at close distances. Then these bears will more likely obtain food from people whenever people nearby make mistakes in handling their food, garbage, or freshly caught fish. Once they have learned that people are a potential source of food, these food-conditioned bears can become aggressive in seeking food from people. Further, some bears that spend time close to people on the ground can learn that their movements may cause people to move away. Bears can develop patterns of moving towards people with the apparent object of repeatedly displacing the people, but without the apparent intent to actually reach them. Such aggressive bears may eventually be destroyed if they are perceived as a threat to human safety. Thus, people repeatedly approaching and remaining near bears could reduce some bears' chances of survival.

(2) Visitor Safety

Food-conditioning is the most common factor associated with injury of people by bears in national parks (Herrero 1985:52). It cannot be overemphasized that bears which become accustomed to close proximity with people are more likely to obtain improperly stored food or garbage. Also, in Katmai, some young bears that have learned to fish for salmon near people have eventually learned to steal fish from anglers. Some bears that have acquired this behavior run at anglers who have hooked fish; although the run is not directed at the angler, an accident could result involving either the bear or water if people respond the wrong way.

Bears that have not learned to tolerate people may charge them when encountered at close distances. This response is most likely from females with young. It has been documented throughout North America (Herrero 1985), including Katmai (Olson et al. 1990, Squibb and Holmes 1992). When visitors occasionally encounter bears unaccustomed to people, if they mistakenly approach them as they have done with the more habituated bears, they may trigger a potentially dangerous charge.

Why 50 Yards?

It is obviously unsafe to allow bears and people to mingle at close distances outside a closely managed setting. More than one line of reasoning supports the distance of 50 yards that has been a

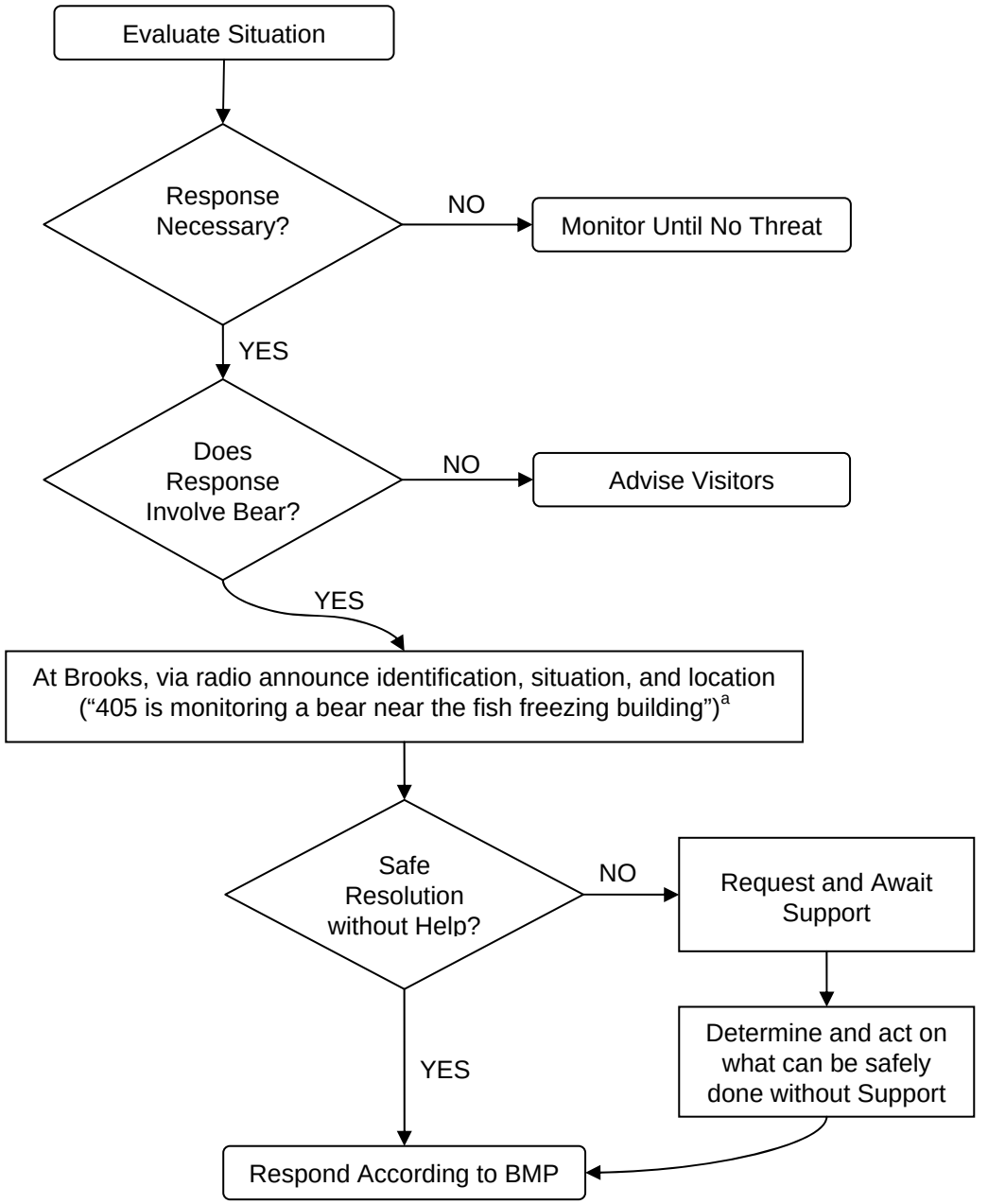
basis of successful bear management at Katmai. (1) That distance would give an angler a few seconds in which to free his fish if a bear were to try to steal it (K. Jope, NPS, pers, commun. 1992). The best way to break a bear of food-conditioned behavior is to deny it any more food rewards. (2) Most records of sudden encounters with bears that resulted in human injury indicate that the initial distance of contact was 55 yards or less (Herrero 1985:22). (3) Behavioral observations of bears at McNeil River indicated that bears may decide whether to tolerate the approach of another bear or to withdraw at a distance of about 50 yards (Egbert 1978).

SUGGESTIONS FOR NPS PERSONNEL ESTABLISHING TEMPORARY BACKCOUNTRY CAMPS[a]

Refer to Appendix 2 for backpacker and camper information, most of which is applicable.

Whenever possible, consider using an electric fence around the camp site. The fence should not be considered the defensible perimeter of the camp—that should be established at some distance outward from the fence. Users should keep in mind that electric fences can fail, and that although an electric fence is likely to deter a curious bear, it will not prevent a determined bear from entering a camp. The usual precautions that would be taken when camping without a fence should continue to be taken regardless of whether an electric fence is used. However, when an electric fence is maintained around the camp site, it may be preferable in some situations to locate the cooking and food storage areas within the same fenced area as the rest of the camp

RESPONSE TO POTENTIAL BEAR PROBLEM



[a]Bear Management Biological Technicians and/or other NPS personnel trained in bear management should respond to any radio calls that indicate need of assistance, and responders should coordinate to ensure that a sufficient number of staff respond to advise visitors and provide support.

HAZING AND AVERSIVE CONDITIONING: BACKGROUND AND CONSIDERATIONS, *Page 1 of 2*

Aversive conditioning involves pairing an aversive stimulus (such as pain or loud noise) with an undesirable behavior. This learning technique can be applied in an attempt to prevent or eliminate the expression of dangerous, potentially dangerous, or destructive behaviors by bears towards humans and their property. The intention is not to permanently drive a bear out of a general area. Properly delivered aversive conditioning can teach a bear to associate a punishing experience with its presence in a residence area or campground, the act of obtaining or eating human food, or the process of behaving aggressively or too boldly toward people. Once such an association is made, the bear will be less likely to exhibit the undesired behavior. Aversive conditioning should only be conducted when the bear is involved in one of these activities. Otherwise, the bear may associate the aversive stimulus with whatever other behavior it is engaged in at that moment. However, even if delivered while the bear is in the act, aversive conditioning cannot be assured. A bear may simply be displaced temporarily, or it may learn the wrong thing, such as to abandon the behavior only when it detects the presence of a ranger with a shotgun. Therefore, in this plan all attempts at aversive conditioning of bears will be referred to as hazing.

If hazing can be delivered without the bear being aware of its preparation, it will be more effective because its onset will be instantaneous and because the bear will be more likely to associate the aversive stimulus with its own behavior, rather than with the person delivering the punishment. Bears may learn to recognize peculiar behavior by humans, the presence of shotguns, or even individual humans.

Regardless of the technique used, it should occur as soon as possible after the behavior is exhibited to increase the probability that the animal will associate the aversive stimulus with the undesirable behavior. It may be better to attempt to displace a bear as soon as it begins trespassing in a residence area with shouting or an air horn, than to take the time to obtain other hazing equipment.

Situations can develop in which teaching wariness of humans may be the only option available to prevent a bear from developing a dangerous behavior. For example, it is very difficult to catch a bear in the act of attempting to steal a fish from an angler. If a bear is beginning a pattern of such undesirable behavior and cannot be caught at it, the next reasonable option is to haze the bear for its proximity to humans. Similarly, a bear that is repeatedly observed boldly approaching and/or following humans within several yards should be hazed whenever it closely approaches humans. These types of situations should be evaluated by Park personnel responsible for bear management activities and acted upon appropriately.

Any aggressive act toward a bear can escalate into a need to kill the bear if the bear is injured or responds by endangering human life. Human safety, the benefits of hazing, the consequences of not hazing the bear, and danger to the bear should be evaluated in each bear management situation. Whenever possible, NPS personnel should be prepared to haze when responding to

HAZING AND AVERSIVE CONDITIONING: BACKGROUND AND CONSIDERATIONS, *Page 2 of 2*

bears exhibiting undesirable behavior, but they should not execute the procedure unless the safety of both humans and bear are reasonably assured. Hazing guidelines are included in Appendix 9. Remember that you never have to haze a bear. Staff should never feel obligated to haze a bear when safety is not assured.

Bears are individuals and may respond to conditioning differently:

- Females with cubs of the year are considered to be more sensitive than other bears (Herrero 1985). A severely aversive experience could drive them completely out of a large area, e.g., Brooks River, denying them access to food resources. Also, a maternal female will fiercely defend her young against any perceived threat. Extreme care must be taken to deliver the aversive experience directly to the sow and not to her young to avoid provoking her to charge to their defense.
- Subadults (independent bears less than 5 years old) are at the age of dispersal, establishing the pattern and range of areas that they will use throughout their lives. A severely aversive experience may cause them to avoid an area permanently. However, sub-adults are also at an important age of independent learning. If aggressive behavior towards humans or obtaining human food or garbage is not associated with punishing consequences, these behavioral patterns may persist throughout their lives.
- Some bears that are accustomed to humans (for example, at Brooks Camp) are relatively unresponsive to loud noises. Twelve gauge projectiles are often the most effective technique for these bears. The combination of targeted bear deterrent projectiles with noisemakers may teach the bear to associate noise with pain.
- Bears that have established a problem behavior pattern such as stealing fish from anglers may respond unpredictably and possibly violently if the outcome of their next attempt is a punishing experience rather than the expected reinforcing or neutral experience. Therefore NPS staff should be prepared for a violent response to aversive conditioning in such situations.
- Females in estrus have been observed near the Brooks River in June and July. NPS staff should exercise extra caution when dealing with associated boars at Brooks River and elsewhere. Courting pairs are usually preoccupied with mating activities and may simply be monitored until they move out of human proximity on their own.

These differences between classes and individuals make it necessary for NPS personnel involved with bear management activities to be able to identify age and sex classes and those habituated individuals that frequent the area. Never assume that what may appear to be a lone subadult is not a dependent yearling whose mother is nearby in cover, or that an apparent group of subadults is not a small female with two-year-olds until they have been proven so.

GUIDELINES FOR USE OF HAZING ROUNDS[a], *Page 1 of 2*

Always be sure you are communicating a clear consistent message to the bear and provide the bear a clear corridor for escape. Take time to stop and decide how to best execute a safe and effective response. In trespass events, try displacing the bear by yelling and/or using an air horn before considering use of hazing rounds. Remember that you never have to haze a bear. Staff should never feel obligated to haze a bear when safety is not assured.

1. People uninvolved should remain a safe distance away, preferably in groups at places of protective cover, and well clear of all likely escape routes for the bear.

2. Ensure that the bear has a clear and wide unobstructed escape route; check for additional bears that may be involved or could be affected.

3. Ensure escape routes are available to all hazing personnel, and ensure adequate communications with response personnel and other staff in the area. In addition, the shooter and any person carrying a back-up firearm should review contingencies and ensure safe positioning relative to each other.

4. The decision of which hazing rounds to use is that of the shooter; the identity, history, age-sex class and behavior of the bears involved should be considered (BMP, Appendix 9).

5. The person shooting the hazing rounds should announce by radio intent to shoot immediately prior to doing so. While it is theoretically desirable to avoid detection by the bear so that the bear is more likely to associate its own behavior, location, etc. with the aversive stimulus, this is usually not possible. Therefore in most cases, consider yelling at the bear just prior to shooting, or immediately following shooting; the bear may associate the yelling with the discomfort from the deterrent rounds and learn to avoid people who yell (however, this can sometimes cause the bear to face the person shouting, so this decision is at the discretion of the person shooting the hazing rounds).

7. In trespass cases, keep working the bear until it has moved outside perimeter of the site; do not shoot at the bear once it has exited the perimeter—you should stop at the perimeter so that the bear is not confused, and learns that it's safe beyond that boundary. In cases where: (a) a bear has obtained human food or garbage, or a fish from an angler; or (b) a bear that has harassed people can be positively identified, the most effective response is generally to haze the bear as intensely as possible for as long as is practical, even if that means continuing to haze the bear beyond any site perimeter as the bear flees.

8. Notify responding personnel when the action is completed so that people can resume normal activities.

9. Responders should inspect the scene to determine whether any attractants exist that need to be removed; also, it is useful to look for any spent plastic/rubber bullets or bean bags and

GUIDELINES FOR USE OF HAZING ROUNDS[a], *Page 2 of 2*

inspect them for any evidence of impact to the bear. Littered shell cases spent in the action should be recovered.

10. Response equipment should be cleaned and returned to storage

11. The person who fired the deterrent rounds should complete a BMRF; all actions involving a firearm (shotgun or 15 mm launcher) must also be documented on a Case Incident record (see BMP section 5.0).

[a]Adapted from training materials of J. Hechtel (ADF&G, pers. commun., 1996) and C. Hunt (Wind River Institute, 2000)

HAZING TOOLS: CHARACTERISTICS, LIMITATIONS, AND OBSERVATIONS, ***Page 1 of 2***

Hazing Tool	Effective Range
Bear pepper spray	1 to 5 yards
12 gauge Deer Thumper bean bag	5 to 25 yards
12 gauge Margo Strike II ("Fiocchi") rubber slug	30 to 45 yards
12 gauge BD-100 plastic slug	30 to 50 yards
12 gauge cracker shell	60+ yards
15 mm bird "screamer/howler/whistler"	100+ yards (often erratic)
15 mm bird "banger"	30 to 40 yards

General Safety Considerations:

1. Always keep guns clean--pyrotechnic rounds will ignite in the barrel of 15-mm launchers or in the barrel of a 12-gauge shotgun if they are not cleaned on a regular basis.
2. Don't ever leave any explosive or flammable substance exposed while firing pyrotechnics nearby.
3. Beware of brush fire--pyrotechnics are an ignition source.
4. Be aware of your surroundings when using deterrent rounds. In addition to human safety concerns, deterrent rounds can cause considerable damage to aircraft, etc.
5. Rounds such as rubber/plastic slugs and noisemakers are typically light-weight, and trajectory can be readily affected by wind.

Characteristics and Observations Regarding Hazing Rounds:

Bird Scare Rounds—Cartridges fall out easily (but this is the intended design—cartridges should always fit loosely in the barrel), and can be somewhat inaccurate (Shideler 1993). In addition, the cartridges can be easily damaged by exposure to moisture, and cartridges sometimes fail to explode.

Cracker Shells—In 1996 a cracker shell fired from approximately 5 yards penetrated a black bear's body cavity and then detonated, killing the bear in Denali National Park (S. Mills, NPS AKSO, pers. commun.), and there has been at least one reported case of a moose's fur being set on fire. Therefore, cracker shells should not be aimed to strike the bear. Cracker shells occasionally fail to detonate, presumably from damage to the fuse upon impact. Because of the small size of the charge used to project the firecracker, the wadding may be left lodged in the barrel. In 15 cases of hazing in 1989, the bear typically began to flee at the discharge of the shotgun well before the firecracker detonated

Plastic/Rubber Slugs—Plastic/rubber slugs can injure or kill bears and humans if used improperly. Accidental bear injuries have resulted from firing BD-100 rounds at closer than

HAZING TOOLS: CHARACTERISTICS, LIMITATIONS, AND OBSERVATIONS, ***Page 2 of 2***

advised range (R. Shideler, ADF&G, pers. commun.). NPS personnel working at Denali National
Park found that at 15 to 20 yards the BD-100 penetrated a black bear carcass only a few millimeters, that 20 to 25 yards was the best range for conditioning grizzly bears, and that the slug would bounce off, sometimes breaking skin but causing no serious injury, at that range (J. Dalle-Molle, North Cascades NP, pers. commun. to R. Squibb, Katmai NPP, 1990). At Denali the BD-100 performed well in aversively conditioning grizzly bears against continuing their behavior of approaching campsites in order to obtain human food (Dalle-Molle and Van Horn 1989, Schirokauer and Maier 1998). The BD-100 round is no longer commercially available; however, Katmai may still have a few of these rounds on hand. Given limited availability, the BD-100 round should be reserved for use in unusual circumstances where hazing efforts using other equipment have failed to correct continuing problem behavior of a specific known bear.

The flat end and hollow hour-glass shape of the Strike Two round acts to minimize the chance of penetration.

Bean Bag Rounds—Hunt (2001) suggests that most bean bag rounds are not effective at even 25 m, and that they should generally be reserved for closer-range situations.

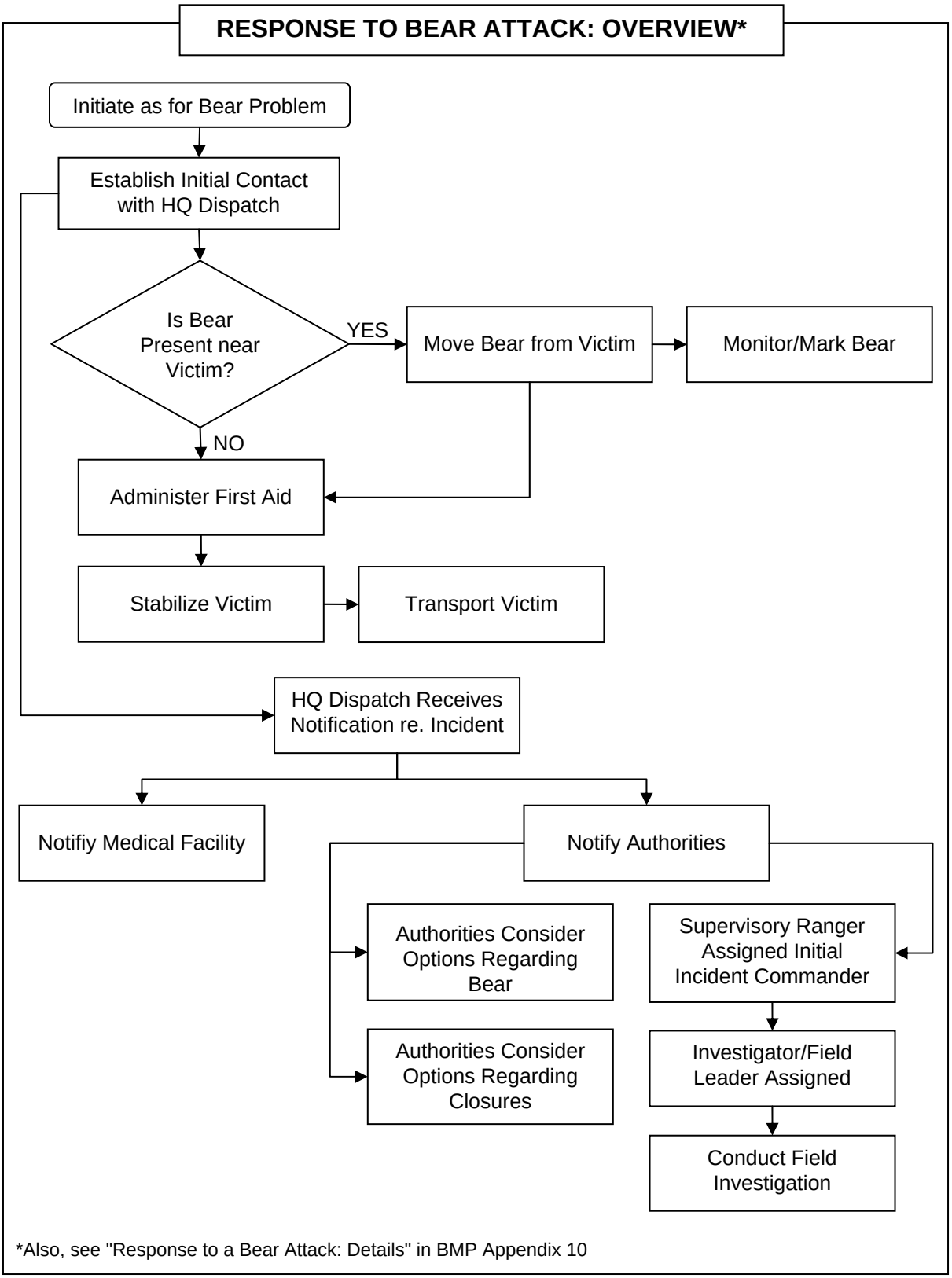
GENERAL NOTES REGARDING RESPONDING TO BEAR INCIDENTS

In all situations:

- DO NOT DEBATE response while incident is ongoing, or before public. Support each other's decisions and actions. You should have a clear understanding of what to do before a situation happens. Don't wait. Help us clarify these things now.
- REMAIN CALM and act deliberately so that your actions are appropriate.
- At Brooks Camp, after initial communication to report the situation on Channel 1 or 2, bear management traffic should be on the channel designated for those communications. Avoid excessive chatter on the radio regarding bear/human behavior.
- A Bear Management Technician should be involved in the response to all incidents if possible. Additional personnel should respond as needed to provide support and advise visitors.
- Emergency Medical Technicians should stand by and monitor the radio.

If response requires use of shotgun:

- Only personnel who have been certified and have accepted responsibility are authorized to use shotguns for wildlife management. Qualified law enforcement personnel in addition to personnel certified for bear management may use shotguns for the purpose of backing up the shooter.
- The shooter is responsible for loading her/his weapon and for the ammunition in it.
- Always carry extra rounds; as a safety consideration, staff should act as though they expect the deterrent rounds to fail.



Appendix 10.
Bear Response Procedures: Bear Attack

RESPONSE TO BEAR ATTACK: DETAILS

Initial Reaction on Scene

1. Call for staff support and advise 720 (if Brooks) and Park Headquarters—describe the situation. Radio transmissions should be limited to emergency traffic only.
2. Move bear from victim (in some situations, hazing equipment may be useful for accomplishing this). PRIMARY CONSIDERATION SHOULD BE SAFETY OF RESPONDING PERSONNEL AND VISITORS. NPS staff will kill a bear immediately in the defense of human life during an ongoing attack or in the case of other emergency life safety concerns. In all other cases, killing a bear may only be considered per the decision process detailed in section 4.1.8 of this plan.
3. Items needed for initial response (personnel); all NPS responding staff should also carry handheld radios:
   a. shotguns with slugs and hazing equipment (shooters)
   b. first aid pack (EMT)
   c. marking kit (shooters or support personnel)
   d. litter (support personnel)
4. Once able to reach the victim, administer emergency aid.
5. Other visitors and staff not involved in response activities should be removed from the immediate area, but control should be maintained over all witnesses until they can be interviewed.

Once the Situation has Stabilized

1. Keep bear under observation if it is still in the area. Mark the bear if possible. Consider response options regarding the bear involved per section 4.1.8 of this plan.
2. Maintain communications with Headquarters in King Salmon to ensure proper notifications are made (per Katmai Emergency Operations Plan).
3. Coordinate transportation to clinic with Headquarters Dispatch. Options include any suitable aircraft or boat available.
4. The Incident Commander will appoint an investigator/field leader, maintain written records of the incident and response, and keep the Superintendent and divisions chiefs apprised of the status of the incident and response.
5. Field investigations will be conducted under the direction of the appointed Investigator/Field Leader. Refer to the investigation checklist and forms contained in Appendix 10, as well as any NPS Alaska Region protocols.
6. The Incident Commander will consult with the Investigator/Field Leader, District Ranger, and resource management staff to evaluate the situation and to consider an immediate closure of the area if a significant threat to human safety exists. If a closure area is determined, closure signs, maps depicting the closed area, and a written description of the closed area should be prepared. The closure area should be cleared of people (aerial or boat-based efforts may be required in backcountry areas). Refer to section 4.1.5 of this plan for additional information regarding emergency closures. Any closure area should be posted and monitored. The District Ranger will withdraw the closure at the earliest possible time when it is determined and documented that the threat to human safety has been resolved and related investigations are complete. Patrols of the area may be necessary to make this determination.

INVESTIGATING A BEAR ATTACK[a], *Page 1 of 2*

Upon notification of a bear-caused human injury or fatality:

1. Protect the incident scene.
2. Interview all victims and witnesses and have each witness complete a witness statement form (see interview form, Appendix 10). Interview people who may have used the area recently to determine whether they saw any signs of bear activity.
3. Examine victim's clothing for hairs, punctures, and tears. If possible, collect victim's clothing for possible identification of bear blood and fur (store in cloth or paper bag). Remain in contact with medical personnel attending to the victim to obtain details. Photograph and take measurements of injuries if possible.
4. Conduct field investigations. Safety considerations must be prioritized at all times during the field investigation. Consider having one or two people on site simply to watch for and alert others to the presence of bears. The field investigation team should include bear management staff to assist with the investigation:
   a. Photograph the incident site including the victim's view of the approach into the area, as well as what is believed to have been the bear's perspective (try to identify the likely directions of the bear's approach and departure).
   b. Use a GPS to obtain coordinates for the incident location. Note reference datum, GPS model, estimated error, and time duration used for averaging (use point position averaging if available).
   c. Take measurements between known observation points: distance between the first running bear track, attack location, distance between human belongings and attack location, etc.
   d. Note weather factors: temperature, wind, lightning, rains (anything that might have contributed to the incident).
   e. Note other environmental factors such as natural sources of noise (e.g., waterfalls) and vegetation.
   f. Note all natural and human food sources.
   g. Map and sketch the location of the incident, any other evidence present, and site characteristics including game trails, water bodies, bear day beds, bear mark trees, any other obvious signs of bear activity, and locations of anything noted for (d) and (e) above. Number evidence items then photograph with numbers displayed. Include locations of numbered evidence items on scene sketch. Include north arrow on map.
   h. Measure and photograph bear foot prints at the scene (make track casts when possible).
   i. Put evidence items in numbered (per numbers assigned in (e)) evidence bags or envelopes (bear scat, blood samples, hair, personal effects, bear hair, etc.). Plastic containers should be avoided for storing most items to discourage decomposition.
   j. If the suspect bear carcass is collected, secure a cloth bag over the head and each foot of the bear. If the bear carcass cannot be collected, see Section 4.1.8 of this plan regarding

INVESTIGATING A BEAR ATTACK[a], *Page 2 of 2*

State of Alaska requirements for parts to be collected in defense of life and property situations and suggestions regarding animal necropsy (also, refer to any NPS Alaska region protocols; in the case of bear-caused fatalities, the contents the gastro-intestinal tract will be examined per 4.1.1.M and 4.2.2.G).

k. If at or near resident areas or developed areas (such as trails, campgrounds, etc.), document any patrols, campground walk-throughs, and garbage collection schedule that would have affected the immediate incident area, and collect/document any posted informational materials from points of entry (e.g., trailhead) and within incident area.

5. Obtain signed statements from all NPS employees who contacted the victim(s) prior to or following the incident (specifically include information regarding any discussion of bears).

[a]*Adapted from Glacier National Park Bear Management Field Guide*

INVESTIGATING A BEAR ATTACK[a] - Victim / Witness Interview Form, *Page 1 of 5*

Note: whenever possible, tape record all witness and victim statements, as well as other relevant investigatory material.

Date of Interview:_____ Time of Interview:_____

Name of Interviewer:_____

Victim / Witness Data: *(circle)*

Full Name:_____ Age:_____

Address:_____

City, State, Zip Code:_____

Phone:_____

Time of Incident:_____

Location of Incident:_____

_____

(Ask interviewee to identify the location on a topographic map or aerial photo and attach)

Bear Description:

Number of bears involved:_____

Coat color and other apparent physical characteristics:_____

_____

_____

Apparent age and sex of bear(s) involved:_____

_____

INVESTIGATING A BEAR ATTACK[a] - Victim / Witness Interview Form, *Page 2 of 5*

Interview Name:_____

Interview Date:_____

Incident Description, statement of witness/victim: *Include written as attachment to this form.*

Interview Checklist, Bear:

Did you see or hear any sign(s) of bear activity prior to encountering the bear? Y / N Describe:

_____

What was the bear doing when first seen?_____

_____

How far away was the bear when first seen?_____

Were there any other bears in the area? Y / N How many?_____

Age of other bears?_____

Did bear appear surprised?_____

What were bear's immediate actions upon sensing people?_____

_____

Did the bear's action change? Y / N How long after immediate actions?_____

What was the new action?_____

Apparent reason for behavior?_____

How did bear make contact?_____

_____

Was property damaged? Y / N Before or after contact with people?_____

_____

INVESTIGATING A BEAR ATTACK[a] - Victim / Witness Interview Form, *Page 3 of 5*

Interview Name:_____

Interview Date:_____

Extent of property damage:_____

_____

How did bear leave scene? (walk, run, lope, other)_____

What seemed to cause bear to leave?_____

Interview Checklist, Human:

How much noise were people making prior to the bear encounter?_____

_____

What were people doing prior to the bear encounter?_____

_____

Were people upwind or downwind of the bear?_____

How many people were in the group?_____

Where were the people just prior to the encounter?_____

_____

Was there human food present? Y / N Describe:_____
(where, what, how stored…)

_____

Was food cooked in encounter area or did other food preparation occur there? Y / N Describe:
(including cleaning of fish or other game meat)

_____

_____

What kind of fuel was used for any cooking?_____

INVESTIGATING A BEAR ATTACK[a] - Victim / Witness Interview Form, *Page 4 of 5*

Interview Name:_____

Interview Date:_____

Time from any cooking to encounter?_____

Was there harvested fish or game present? Y / N Describe:_____
(where, what, how stored…)

_____

Was there garbage present? Y / N Describe:_____
(where, what, how stored…)

_____

Were people using, or have in their possession, perfume, suntan lotion, deodorant, or other odorous substances? Y / N Describe:_____

_____

Were any women in the group menstruating? Y / N Who?:_____

What action did people take upon first seeing bear(s)?_____
(if climbed tree, how high?; if laid down and played dead, position?)

_____

What action did people take upon realizing that bear was continuing toward them?_____

_____

What action did people take upon bear making contact?_____

_____

What action did people take as bear left the area?_____

_____

If encounter occurred in backcountry camping area—

Where did the encounter occur relative to the sleeping area and relative to cooking and/or food storage area(s) (attach sketch with distance estimates if necessary)?

_____

INVESTIGATING A BEAR ATTACK[a] - Victim / Witness Interview Form, *Page 5 of 5*

Interview Name:_____

Interview Date:_____

Was an electric fence used? Y / N Describe fence:_____

_____

How was food stored?_____

Was sleeping area free of food and garbage odors? Y / N_____

Were fish remains or any other food-related remains disposed of away from camp? Y / N
How far away from camp were they disposed?_____Describe:_____

_____

Background Information, Checklist:

What date and time did the person(s) enter the park?_____

Where and how did the person(s) enter the park?_____
(identify commercial operator(s) is used)

_____

Did the person obtain a backcountry permit? Y / N Where?_____

Did the person(s) obtain written information about the park prior to their visit? Y / N
Describe:

_____

Did the person(s) talk to any NPS staff about bears, or backcountry and hiking and camping information? Y / N _____

Other Comments:_____

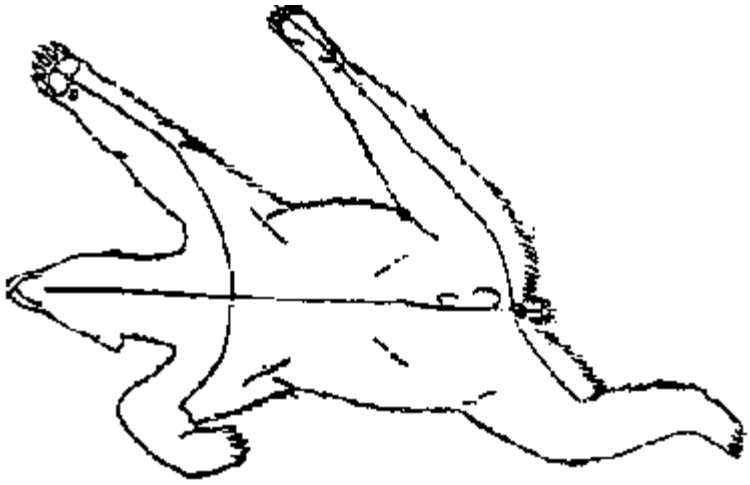
_____

_____

[a]*Adapted from Glacier National Park Bear Management Field Guide.*

SKINNING BEARS[a], *Page 1 of 3*

Knowing the proper skinning techniques for bear can make a great difference in the final product of your bear skin rug or mount. The following guidelines are the most accepted bear skinning methods used by taxidermists.



Make your preliminary cuts along the lines indicated at left. These lines generally correspond to those locations where the hair begins pointing in different directions. Remember, in most areas of the state you are required to leave evidence of sex (penis sheath, vaginal orifice) attached to the hide.

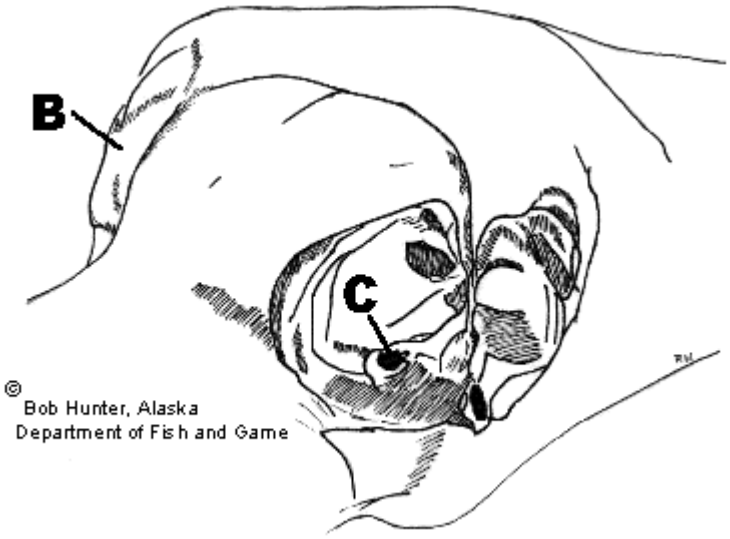
© Bob Hunter,
Alaska Department of Fish and Game

Cut around the pads of the feet to the edge of the hair line, as indicated by the dotted line. In most parts of the state, the claws must remain attached to the hide when it is presented for sealing.

Skin the paws down to the last digits. Then separate the claws from the toe bones where shown in (A) at left.

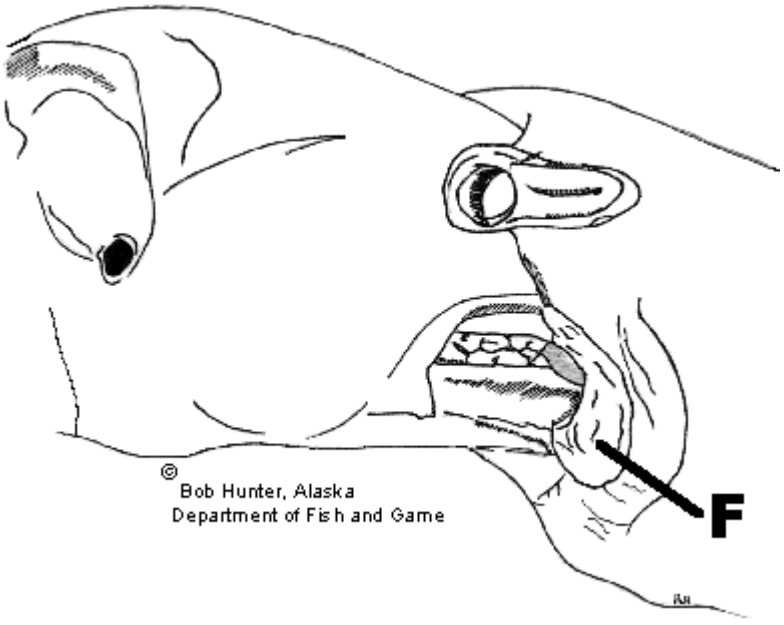
SKINNING BEARS[a], *Page 2 of 3*

Skin the bear to the back of the head. The ears will appear as lumps on the sides of the skull (B). Grab these lumps and separate them carefully by cutting them off as close to the skull as possible (C).



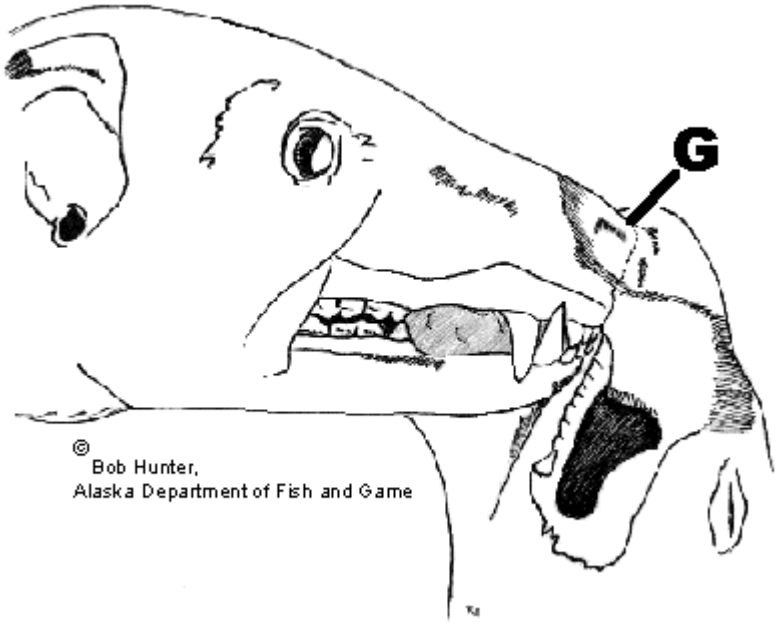
Continue skinning carefully to the eyes and cheeks. Insert a finger to the eye socket from the fur side in order to feel where you're cutting. Carefully cut through the membranes around the eye, as close to the skull as possible at (D). Next cut through the cheek tissue to expose the teeth (E).

Separate the lip tissue from the gums close to the jaw bones, leaving lots of inner lip tissue on the hide (F).



SKINNING BEARS[a], *Page 3 of 3*

Separating the skin from the gums, skin down the snout until the nose cartilage is reached. Cut down through the nose cartilage at the dotted line (G), separating the hide from the skull.



Try to get the hide to a taxidermist or into a freezer right away (within one day in warm weather or two days in cool weather). If you can't, remove as much fat and flesh from the hide as possible and salt it heavily, especially around the face and in the paws. You should use about 20 pounds of salt on an average black bear, 40 pounds on an average grizzly bear, and 80 pounds on an average brown bear. Ask your taxidermist to show you how to split the lips and eyelids properly and to turn the ears inside out before you go on your hunt. This will also help prevent spoilage.

Remember, NEVER store or transport raw hides in plastic. This is the fastest way to make the hair slip from the hide. Always store hides in burlap or in game bags out of the sun in a cool dry place.

[a]*From: http://www.wildlife.alaska.gov/index.cfm?adfg=bearhunt.skinning*

Interagency Grizzly Bear Committee

The Interagency Grizzly Bear Committee produced this position paper in an effort to provide the public with recommendations on how to select an adequate bear pepper spray. The IGBC does not promote or endorse any particular commercial product. The following are only recommendations and the IGBC does not guarantee the effectiveness of any product. However, the IGBC does recommend the use of bear pepper spray in addition to following proper bear avoidance safety techniques. For more information on how the IGBC formulated these recommendations, please see the Bear Pepper Spray Position Paper Establishment of Guidelines.

Bear Pepper Spray Position Paper

Remember: bear pepper spray is not a substitute for following proper bear avoidance safety techniques.

Selecting a bear pepper spray:

Purchase products that are clearly labeled "for deterring attacks by bears:"

- Spray concentrations should be 1.0 to 2.0% capsaicin and related capsaicinoids
- Spray should be at least 225 grams or 7.9 ounces of net weight
- Spray should be delivered from Oleoresin of Capsicum
- Spray should be in a shotgun-cloud pattern
- Spray should be delivered a minimum range of 25 feet
- Spray should last at least 6 seconds
- Spray should be registered by the EPA

When to use bear pepper spray:

- Bear pepper spray should be used as a deterrent only in an aggressive or attacking confrontation with a bear.
- Bear pepper spray is only effective when used as an airborne deterrent sprayed as a cloud at an aggressive animal. It should not be applied to people, tents, packs, other equipment or surrounding area as a repellent.

How to use bear pepper spray:

Each person should carry a can of bear pepper spray when working or recreating in bear habitat. Spray should be carried in a quick, accessible fashion such as in a hip or chest holster. In your tent, keep bear pepper spray readily available next to your flashlight. You should also keep a can available in your cooking area. Spray should be tested once a year. Do not test spray in or near camping area. Be sure to check the expiration date on your can of bear spray.

- Remove safety clip
- Aim slightly down and towards the approaching bear. If necessary, adjust for cross wind.
- Spray a brief shot when the bear is about 50 feet away.
- Spray again if the bear continues to approach.

INTERAGENCY GRIZZLY BEAR COMMITTEE BEAR PEPPER SPRAY POSITION PAPER*, Page 2*

- Once the animal has retreated or is busy cleaning itself, leave the area as quickly as possible (don't run) or go to an immediate area of safety, such as a car, tree, or building. Do not chase or pursue the animal.

No deterrent is 100% effective, but compared to all others, including firearms, bear pepper spray has demonstrated the most success in fending off threatening and attacking bears preventing injury to the person and animal involved. The proper use of bear spray will reduce the number of grizzly bears killed in self-defense, reduce human injuries caused by bears, and help promote the recovery and survival of the grizzly bear.

BEAR PEPPER SPRAY PRECAUTIONS

Refer to the IGBC *Bear Pepper Spray Position Paper*. In addition:

- Recognize that bear pepper spray has not been proven in all cases to be effective. Bear pepper spray is only a deterrent, not a repellent. It is important that carrying the spray does not provide a false sense of security. Use of bear pepper spray should be regarded as the last course of action and by no means a substitute for sound precaution in bear country.
- Wind, heavy rain, and dense vegetation can all affect delivery of the spray (and also the degree to which the user is also dosed). If wind blows the spray back into the user's face, this could make it much more difficult to respond appropriately to a bear's behavior.
- Do not store bear pepper spray in areas that become excessively warm (for example, in direct sunlight)–overheating of the product could cause the canister to burst.
- Always consider the potential for accidental release of the spray when transporting and storing it. **Before boarding an aircraft, you must notify the pilot that you are carrying bear pepper spray, and the pilot will decide where it will be placed in/on the aircraft**.

BEAR PEPPER SPRAY FIRST AID

Bear spray is a powerful irritant. It is very likely that if you fire a canister, you will be dosed with the spray to some degree. Also, keep in mind that when trying to help someone who has been exposed to the spray, you can easily become contaminated yourself. Oleoresin capsicum (OC) produces an almost immediate burning sensation of the skin and a burning, tearing, and swelling of the eyes. When inhaled, OC causes inflammation of the respiratory tract, resulting in swelling of the mucous membranes. Asthmatics in particular can be severely affected by the spray. Most major effects of the spray typically wear off within 30 to 45 minutes. The following measures can help reduce discomfort:

- As soon as possible, move out of the contaminated area into a fresh-air environment.
- Try to relax and breathe normally.
- Check for acute pulmonary or cardiac complications arising from aggravation of pre-existing conditions, or from trauma. If present, call for emergency medical assistance.
- Flush affected areas with copious amounts of cool water (eyes could be irrigated with sterile saline solution if available). Skin should be washed with a mild non-oil based soap if available (baby shampoo could also be used on the eyes). Commercially available decontamination products can also be used to neutralize the spray without using soap and water .Avoid rubbing affected areas–only pat them dry. Also, avoid lotions and creams because they can trap any pepper on the skin.
- Remove contaminated clothing and contact lenses.

BEAR PEPPER SPRAY FIELD USE: REPORTS IN BRIEF

The effects of bear pepper sprays on all three North American bear species have been studied and/or documented (Jenkins and Hayes 1962, Miller 1980, Rogers 1984, Herrero and Higgins 1995, G. Wilker, USFWS, pers. commun.). Because responses may vary between species (Herrero and Higgins 1998), only grizzly/brown bear research is summarized here:

- Bear pepper sprays caused two caged brown bears that were induced to charge to retreat (Miller 1980).

- Literature distributed with Counter Assault states that use of the product never aggravated a situation in tests on over 300 bears performed between 1979 and 1986 by C. Jonkel and staff of the Border Grizzly Project (U. Montana).

- At Pack Creek in Admiralty Island National Monument, bear pepper spray was used against an extremely habituated brown bear twice in 1988 in situations very similar to recorded occurrences at Brooks Camp (J. Neary and K. Post, USFS, pers. commun.). The bear, which had been hand fed as a cub, had the habit of directly approaching visitors. When sprayed while exhibiting this behavior, she ran away rubbing her eyes without any aggressive response.

- Herrero and Higgins (1998) studied 66 cases in which bear pepper sprays were used in the field between 1984 and 1994, including 36 cases involving brown bears. They concluded that bear pepper sprays appear to be reasonably, but not 100% effective against sudden encounters with brown/grizzly bears. In 6 of 16 cases, a bear continued to behave aggressively even after being sprayed. In 3 of these cases, the bear injured the person using the spray. But the authors noted that use of the spray did not appear to have increased the extent of injury sustained. In 20 incidents of bears searching for human food and garbage bear pepper spray was generally effective in causing the bears to leave the area, and always stopped the undesirable behavior immediately after the bear was sprayed.

National Park Service
U.S. Department of the Interior

Katmai National Park & Preserve

Bear Pepper Spray Carry and Use **March 22, 2006**

National Park Service issued bear pepper spray may be carried on and off duty by employees, volunteers, or others from other areas working for Katmai, provided that the individual issued bear pepper spray:

1. Obtains supervisor approval.

2. Receives training in the mechanical use of bear pepper spray, decontamination, and certification.

3. Receives training in bear behavior.

The following guidelines must also be followed:

4. Before boarding an aircraft, the pilot will be notified that you are carrying bear pepper spray and the pilot will decide where it will be placed in/on the aircraft.

5. If bear pepper spray is used while on or off duty; employees will notify their supervisor as soon as possible.

6. Any use of bear pepper spray to deter a bear or other mammal will be documented on a bear management report form (BMRF) that has been assigned a case incident report number (refer to KATM/ANIA/ALAG Bear-Human Conflict Management Plan (BMP) reporting requirements). Copies of the BMRF and case incident report will be provided to the Chief Ranger, the Park Wildlife Biologist, and the Superintendent.

7. Any other use of bear pepper spray including accidental discharges or punctures, will also follow the same reporting guidelines.

Steve Frye
Superintendent

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
KATMAI NATIONAL PARK & PRESERVE
ANIAKCHAK NATIONAL MONUMENT AND PRESERVE
ALAGNAK WILD RIVER

Memorandum

To: Chief Ranger
From: Bear Pepper Spray Instructor
Subject: Authorization to carry bear pepper spray

_____ has my approval to carry and use bear pepper spray.

Supervisor:_____ Date:_____

Employee Safety Training Requirement:

I provided the above named employee with training regarding the mechanical use of bear pepper spray.

Instructor:_____ Date:_____

I have discussed situations in which bear pepper spray may be useful as well as some of the drawbacks of this chemical. I have also received training regarding bear behavior and bear safety. I accept the responsibility associated with the carrying of this chemical, and understand that all use of this chemical must be in compliance with the Katmai BMP and the Katmai Bear Pepper Spray Directive. I also understand that I must report any use of the spray per the reporting requirements identified in the Katmai BMP.

Employee:_____ Date:_____

Copy to: Bear Spray Instructor
Employee
Supervisor

EXAMPLE NARRATIVE FOR A BEAR MANAGEMENT ACTION 10-343:

SUMMARY: Park Rangers conducted a bear management action after observing a bear (or, after receiving a report of a bear) in the Brooks Camp residence area (or, exhibiting unsuitable behavior, reacting to unsuitable human behavior, etc.).

BEAR ACTIVITY: (or OBSERVATION, where observed by a ranger). At...hrs., Park Ranger.... received a report of, or observed a bear... (describe bear/human behavior and/or activity which prompted management action, use language in BMP).

BEAR MANAGEMENT ACTION: At... hrs., Rangers... responded to the (specific location, if pertinent). The rangers attempted to move the bear by... (describe specific techniques employed, including number and types of rounds fired if applicable, and the escalation of any actions as prompted by the bear's behavior...per BMP).

BEAR MANAGEMENT TEAM:
1. Team Leader: RMS Ron Squibb.
2. Back-up: Bear Tech. Greg Wilker
3. Visitor Protection/Control:
   a. Park Ranger Aleska Szweda
   b. Park Ranger Mike Welsh

DEBRIEFING: At... hrs., Team Leader... conducted a debriefing of the management action for participating team members. (Any pertinent details). A statement regarding the incident was subsequently provided to the Brooks Seasonal Supervisor for inclusion in the week's interpretive evening programs.

DESCRIPTION OF BEAR:
Class: (sub-adult, adult male, adult female, unknown, etc.)
Color: (blonde, light brown, dark brown, unknown, etc.)
Bear #, Name or ID: (ID by scars, marks, etc.)

(INJURY or FATALITY: If applicable... describe, and continue 343 with additional outline type headings, describing actions taken **as per BMP**, i.e., Investigation of Scene, Area Closures, Notifications, Dispatch of Bear, etc.)

Attachments: 1. Bear Management Report Form Record #...;
2. Photos;
3. Etc.

STATUS: Status of case, referrals to personnel, agencies, etc.

Bear Management Report Form (BMRF) Instructions
Brooks River Form

The BMRF is the primary tool for documenting bear-human interactions throughout the park. It is a means for monitoring bear activity, evaluating the bear management program, and identifying potential problems that need attention. Use the form to document all serious and unusual bear-human interactions. This includes the obvious such as bears obtaining food/garbage/fish from humans or their facilities, hazing of bears, property damage, bears behaving aggressively towards humans, human injuries/fatalities, bears killed in defense of life and property (DLP), and poaching incidents.

It is unnecessary to document innocuous events in which human behavior was appropriate and reasonable and bears were behaving naturally and non-aggressively outside of residence areas, i.e., do not try to complete a report for every time that visitors happen to be within 50 yards of bears when the visitors appropriately try to withdraw. However, when humans behave such that one would expect a bear to respond aggressively, the interaction should be reported regardless of the bear's behavior. For example, if someone approaches a bear within a short distance or harasses it in some way, a form should be completed. This will be a subjective interpretation on your part.

Bears entering residence areas (trespasses) should be documented. It is not realistic to complete a BMRF every time a bear enters the Brooks Camp residence area; however, an effort should be made to record as many instances as possible.

A Ranger will also complete a case incident report (CIR) whenever a bear damages property, a bear injures or kills a human, or if a violation is involved. In those cases, a copy of the CIR should be attached to the BMRF.

Whenever NPS personnel discharge a firearm or bear pepper spray to haze a bear, or a bear charges a human, a CIR number should be obtained from Park Dispatch or the Chief Ranger and recorded on the BMRF (see section 5.0, BMP). For each BMRF assigned a CIR number, a copy of the form should be submitted to a Bear Management Technician or the Park Wildlife Biologist for incorporation into the BMRF database, and the original form should be submitted to the Chief Ranger.

Visitors should be able to fill out this form with minimal assistance. When a visitor completes a BMRF, be sure to read through it to be sure it is as complete as possible and that a sufficient description of the interaction was written in the "What happened" section. Then complete as much information in the "Management Use Only" section as you can. A Bear Management Technician or the Park Wildlife Biologist can determine the "Management Consequences" if you aren't sure, assuming the interaction is sufficiently described.

BMRF Instructions, Brooks River Form, *Page 2 of 12*

If you do not have all the information requested on the BMRF, fill out as much as you can. A partially completed BMRF is better than no BMRF. Record exactly what you observed or exactly what the witnesses observed; do not fill in the missing parts or record witnesses attempts to do so. Make sure the observations described are tangible such as specific behaviors, sizes, or distances. Do not record intangible interpretations such as a bear's intent or mood.

If you are not sure whether you should fill out a form, go ahead and do it.

Brooks River BMRF:

Use this form for all interactions occurring in the Brooks River area, along the VTTS road, and near the Three Forks cabin. This includes the area within a five mile radius of camp. Use the backcountry form for all other locations.

Leave the "BMRF #" in the upper right corner of page 1 blank. A Bear Management Technician will assign each form a unique record number.

CIR number - Include the case incident report number if applicable. If a CIR was written but you don't know the number, write "Y-unknown" in pencil and the Bear Technician will add the number later.

When did the interaction happen? - Use numbers to indicate month, day, and year. Be sure to circle a.m. or p.m.

How long did it last? - Indicate the length of the interaction. Be sure to include units, i.e., hours, minutes, seconds.

Where did it happen? - Circle from the following choices:

General Location

0 Campground - Brooks Campground and vicinity, excluding the beach.
1 Beach - the beach of Naknek Lake as high as the trail just within the trees, from 50 m beyond Brooks Campground to the mouth of the river.
2 Brooks Camp - the area of the buildings and their vicinity from concessions housing and the generator to the Fish Freezing Building, and from the beach to the leach field, excluding the Pithouse and trail.
3 Mouth below bridge - mouth of Brooks River below and including the floating bridge, including the trail 25 m beyond the Fish Freezing Building, the old concessions housing area, marshy areas near the trail, and exposed land extending from the beach into the mouth.

BMRF Instructions, Brooks River Form, *Page 3 of 12*

4 Oxbow and marsh - Brooks River above the floating bridge to the upper end of the oxbow marsh, including the oxbow marsh to the foot of the bank below the Skytel.
5 Cutbank - Brooks River from Zone 4 upriver to the beginning of the riffles below Brooks Falls; include the Riffles Platform and boardwalk as part of 6 below.
6 Brooks Falls, the Riffles, and boardwalks - from 100 m above Brooks Falls to Zone 5, including the Falls Platform, Riffles Platform, boardwalks, and gathering area and immediate vicinity, excluding the riffles area of the river.
7 Upper river - from Zone 6 upriver to the river entrance.
8 Road/Falls trail/Cutbank trail - roads within 2 miles of Brooks River, the old overflow campground, Golden Squirrel Camp, the Falls Trail to the boardwalk, the Cutbank trail to the river, the residence areas and picnic area on Brooks Lake.
9 Brooks Lake residence area – the area of residence areas and their vicinity along Brooks Lake.
10 Other - Describe in the space provided. Use for other locations near Brooks River.

Brooks Camp subarea, if applicable (illustrated in Fig. 1)

0 Unknown
1 Fish freezing building and Brooks Lodge vicinity to Visitor Center (VC) - between the VC and the fish freezing building.
2 Overlook/Skytel to auditorium - Oxbow overlook to Skytel and to NPS auditorium.
3 VC to Ranger Station - between the Ranger Station and the VC.
4 NPS warehouse and NPS housing - NPS warehouse, ranger cache, incinerator building, and residence area; includes the trail that leads from warehouse down to Naknek Lake beach.
5 Leach field and Tuckerville - leach field to Tuckerville.
6 Other - Describe in the space provided.

You can further describe the location of the incident and/or attach a map or draw one in the "What happened?" section. If you are uncertain of the location category, just describe it in the "What happened" box, and a Bear Management Technician will complete this section.

People involved - List the names and addresses of the people involved in the interaction and the role each person played. Include the total number of people involved in the interaction. Indicate if the group was guided and the guide's and company's names if applicable. It is useful to identify where at least one of the people can be contacted that night if more information is needed.

Group type - Circle the group type. If "Other", describe.

Closest distance between bears and people? - How close did the bear and nearest person get during the interaction? Write a range if necessary, i.e., 20-30 yards. Be sure to include units, i.e., feet, yards, meters. Write "Unknown" or "Not Applicable" if appropriate.

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Bear descriptions - Each vertical column represents a different bear. Circle the color and age class of each bear (up to five) involved in the interaction. Add distinguishing characteristics if possible. If known, include the bear's identification number. If you are not absolutely certain of the bear's identification, qualify your suspected identification as such. Indicate the total number of independent bears involved in the interaction in the box in the upper right corner. Do not include dependent offspring in this count. If more than five bears were involved in the interaction, describe them in the "What happened?" section.

What was happening before the interaction? - Circle the activity the bear and human were engaged in immediately before the interaction occurred. If multiple bears or people interacted, circle the predominant activity exhibited by each species. For family groups, the predominant activity is typically considered that of the sow. For instance, if five people encountered a bear while three of them were fishing and two were simply watching, circle "Fishing." If someone encountered a bear family in which the sow was fishing, one cub was playing with a pine cone, and another cub was sleeping, circle "Fishing."

Choices in Bear column:

0 Unknown - There was no data or no bear was involved.
1 Stationary - The bear was standing, sleeping, suckling young, or otherwise not going anywhere.
2 Traveling (land) - The bear was walking or running to go somewhere.
3 Traveling (water) - The bear was swimming or wading to go somewhere. Do not include fishing.
4 Grazing/browsing - The bear was foraging for vegetation.
5 Fishing - The bear was apparently foraging for fish.
6 Playing - The bear was engaged in play. (Bears do not vocalize while playing.)
7 Fighting - Bears were engaged in dominance interactions with each other. This does not necessarily involve bears making physical contact with each other.
8 Eating a fish – The bear was eating a fish.
9 Not applicable
10 Other - Describe.

Choices in Human column:

0 Unknown - There was no data or no humans were involved prior to the interaction.
1 Stationary - People were not going anywhere and not involved in other activities listed.
2 Walking/wading - People were going somewhere by foot.
3 In automobile - People were in or traveling in a Cushman, Suburban, truck, bus, etc.
4 In boat - People were in or traveling in a boat. This includes fishing from a boat.
5 In airplane - People were in or traveling in a plane.
6 Photographing/filming - People were photographing, video taping, etc. bears. Report photographing other subjects as "Stationary."

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7 Fishing - People were actively fishing. Record fishing from a boat as "In boat."
8 Bicycling - People were riding bicycles.
9 In building – People were inside a building.
10 Not applicable
11 Other - Describe.

What were the predominant responses to the interaction? – Circle the response category that best describes the main, predominant, or most noteworthy behavior for each species during the interaction. Prior activities and predominant behaviors do not necessarily relate in a chain of actions and reactions, i.e., they are not meant to document that the bear did this, them the person did that, then the bear did this, etc. For example, if an angler throws rocks to move a fishing bear out of the area, the bear charges, and then the angler runs away, circle "Assault" rather than "Run" as the predominant human behavior. The predominant bear behavior is "Aggressive approach." The prior activity is "Fishing" for both the bear and the angler. If a group of three people encountered a bear while hiking to the Falls Platform, and one person talked to the bear while slowly backing away, one person played dead, and one person took a photo, the predominant human response would be recorded as "Other" with the specifics written in the blank space below the choices.

A note regarding hazing: use the guidance above to determine what the predominant behavior of humans was during the interaction. Two examples: (1) When people withdraw into a building in response to a bear in camp, then NPS staff arrive and use deterrent rounds to displace the bear, the predominant human response should be recorded as "Withdrew slowly", and the primary bear response as "Nonaggressively approached." (2) If staff responded to a trespassing bear with deterrent rounds and other people were not involved, then the predominant human response should be recorded as "Assault" and the bear's predominant behavior as "Nonaggressively approached."

Choices in Bear Column:

0 Unknown - There were no data or no bear was involved.
1 Stopped - A bear's progress was stopped by human actions.
2 Withdrew slowly - A bear left the immediate vicinity of the interaction without running.
3 Ran away - A bear ran from the immediate vicinity of the interaction.
4 Aggressively approached - A bear's attention was obviously focused on the person it approached and it exhibited aggressive behavior(s) such as vocalizing, excessively salivating, jaw popping, baring teeth, lowering its head, flattening ears, approaching on hind legs, charging, swatting forepaws against the ground, or swinging forepaws in the air. A bear that approached a human while charging another bear would be recorded as "Inadvertently approached", regardless of how terrified the human was.

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5 Nonaggressively approached - A bear moved closer to a person, gear, vehicle, or facility in the course of continuing its ongoing behavior, i.e., traveling, foraging, play, etc. It would have likely followed a similar route even if these elements had not been there. Its behavior did not include aggressive elements.
6 Stationary aggression - A bear's behavior indicated aggression focused on an object it did not approach.
7 Directed approach - A bear's movements appeared directed toward a person or object in its environment, but no aggression was expressed. For example, a bear may have appeared to be traveling or foraging, but there was an acceleration or change of direction towards the person. A bear may run at someone in a bounding lope with ears up to steal a fish off the line in the same way that a sub-adult may run at gulls to flush them. Sometimes bears, especially subadults, will approach people out of curiosity.
8 Attacked - A bear aggressively made physical contact with a person.
9 None - A bear's behavior did not appear to change in response to the interaction.
10 Not applicable
11 Other – Describe.

Choices in Human Column:
0 Unknown - There were no data or no humans were involved.
1 Stopped - Someone's progress was stopped by a bear's actions.
2 Withdrew slowly - The people left the immediate vicinity of the interaction.
3 Ran away - At least one person ran from the immediate vicinity of the interaction.
4 Aggressively approached - People approached a bear aggressively with obvious intent to displace it; includes use of air horns, shouting, and banging of pots and pans while approaching a bear. This includes vehicles used for this purpose.
5 Non-aggressively approached - People approached a bear without intending to displace it. The bear's awareness of the approach and its perception of the intent are not important.
6 Stationary aggression - People did not approach a bear, but aggressively tried to displace it. This includes stationary yelling, banging of pots and pans, and use of air horns to displace a bear.
7 Assault - Humans threw things at a bear, used chemical repellents, used deterrent rounds, or struck at a bear. Even if assault was initiated from a stationary position, report it as assault.
8 None - The people's behavior did not appear to change in response to the interaction.
9 Not applicable
10 Other – Describe.

Where did the group receive bear safety information? - Circle all that apply.
0 None - Received no information
1 Printed material (Katmai National Park) - This includes all Katmai publications, i.e., park newspaper, brochures (not Bear Facts), etc.

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2 Brooks Camp Visitor Center
3 Interpretive program, Brooks Camp
4 Ranger contact
5 King Salmon office - Katmai National Park office in King Salmon.
6 Phoned Katmai
7 King Salmon Visitor Center
8 Non-Katmai source (Who? What?) - Please describe.
9 Lodge staff - Include name of lodge.
10 Guide - Note business affiliation.
11 NPS-sponsored staff training
12 Unknown
13 Not applicable
14 Other - Describe.

Was there food in the area? - Write "Yes", "No", or "Unknown." Consider items provided by humans that a bear might eat like human food, garbage, scented toiletries, fish caught by anglers, and carcasses killed by hunters. List all of this type of food items that were in the area. Do not include natural food sources like vegetation, salmon that was not caught by anglers, and carcasses that died of natural causes.

If food was present in the area, circle the applicable food category:

1 Angler-caught fish, not secured per park regulations
2 Fish on line near bear - Fish on line within 50 m or less of a bear.
3 Beverage only, not secured per park regulations
4 Human food, not secured per park regulations - Choose this category if unsecured food or unsecured food and beverage were present.
5 Garbage containing food, not secured per park regulations
6 Harvested game – Describe how the game was stored.
7 Human food/fish/garbage secured per park regulations
8 Unknown

Was property damaged? - Write "Yes", "No", or "Unknown." Estimate the cost of the damage. If a visitor plans to put a $2.00 patch on a $500.00 tent, write $2.00. Describe the items and level of damage to each. If more space is needed, continue in the "What happened? section.

What was the source of this BMRF? - Circle the source of the report.

0 Unconfirmed rumor - Source unknown, story cannot be confirmed, or otherwise doesn't fit below
1 Personal experience - Recorder was involved in a large part of the interaction
2 Direct observation - Recorder saw most of it happen

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3 Direct report - Recorder interviewed someone who had personal experience or direct observation
4 Observed report - Recorder interviewed someone who received a direct report

What happened? - Describe the interaction in as much detail as possible. Include diagrams, drawings, etc. if helpful. Attach additional paper if necessary. This is the most important section on the form!

Report taken by - Write the name of the National Park Service staff member who completed the report. If a visitor completed the form, write the name of the staff member who helped them.

Date report taken - Write the date that the report was taken.

FOR MANAGEMENT USE ONLY - This section should only be completed by NPS staff. If you are uncertain how to complete of any of the sections, a Bear Management Technician will finish it for you.

NPS Staff Action - Circle the action NPS staff took toward the people involved in the interaction.
0 None - No action was taken or minimal communication occurred which did not include a discussion of bear safety and how the interaction could have been handled differently.
1 Interpretation - NPS staff discussed the aspects of bear safety relevant to the interaction and made suggestions for avoiding or improving similar interactions.
2 Verbal warning - Interpretation and a verbal warning that their behavior violated regulations were given.
3 Written warning - Interpretation and a written warning that their behavior violated regulations were given.
4 Citation - Interpretation and a citation notice were given.
5 Not applicable
6 Other – Describe.

Other BMRFs - Record the BMRF numbers of other interactions related to this event.

Bear Management Action - Circle the predominant action of NPS staff during or in response to the interaction. Because this section is used to evaluate the Parks' bear management program, do not include hazing conducted by other people here unless they were part of a hazing effort orchestrated by NPS personnel (but describe any hazing actions taken by other people under the "What happened" section). Also, indicate the number of people that were present during the

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management action (include in that total any people that you are aware of that were moved into buildings, etc.).

0 None - NPS staff did not respond.
1 Monitored - NPS staff monitored the situation.
2 Too late - NPS staff arrived after the interaction was over.
3 Unsuccessful hazing - NPS staff tried to haze the bear(s) out of the area, but the bear(s) would not leave (although they may have eventually left on their own).
4 Successful hazing - NPS staff drove the bear(s) out of the area by hazing them.
5 Posted warnings - Signs informing visitors about potential dangers were posted.
6 Closure - A closure was imposed as a result of bear activities.
7 Killed bear - A bear was killed by NPS staff.
8 Not applicable
9 Other – Describe.

Hazing Technique - Circle all of the hazing techniques that were used by NPS staff. Because this section is used to evaluate the Parks' bear management program, do not include hazing conducted by other people here unless they were part of a hazing effort orchestrated by NPS personnel (but describe any hazing actions taken by other people under the "What happened" section). If multiple techniques were used, describe the progression and the bear's reaction to each in the "What happened?" section. Also report the number of times each technique was used, i.e., 3 cracker shells fired. If bean bag rounds were used, specify the model (e.g., Deer Thumper).

Human Offense - Circle everything the person did that violated Park regulations and guidelines.

0 None - Nothing, or no knowledge of an offense.
1 Too close - People approached a bear to less than 50 years or remained less than 50 yards from a bear utilizing a concentrated food source.
2 Didn't yield right-of-way - People did not withdraw to let a bear continue on its path.
3 Continued fishing - An angler continued fishing when a bear was within 100 yards, or after being directed by NPS staff to stop or withdraw from the river.
4 Didn't break line - An angler tried to land a fish rather than break the line when a fish was within 100 yards, or after being directed by NPS personnel to do so.
5 Stacked fish - An angler stored a caught fish on the bank rather than immediately taking that fish to the Fish Freezing Building.
6 Improper food storage - Park regulations regarding food/garbage storage or consumption were violated.
7 Harassment - People actively harassed bears beyond what was necessary or reasonable for protection or to drive bears from the campground or residence area.
8 Gear left unattended – People left gear unattended.
9 Unknown or not applicable
10 Other - Describe.

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Primary Incident Category - Circle the primary category for the incident. If an incident falls into more than one category, identify the category that appears to have the greatest management consequences as the primary incident category, and mark any others as secondary. For example, if a bear damaged a bike while trespassing in camp, "Property damage" would be the primary incident category, and "Trespass" would be a secondary category.

1 Food related - Human food or garbage was obtained by bear; a bear stole a fish from an angler; a bear attempted either of above; or human handling, storage, or behavior related to human food, garbage, or fish was improper. A bear's attempt must be active, e.g. loitering near the incinerator building or fish freezing building. is "trespass"; whereas, attempted entry of a building containing food is "food related."
2 Surprise encounter - A bear responded when it was apparently surprised by a human at close range.
3 Dominance interaction - Competition for space occurred between bears and humans when a bear was not surprised (e.g., anglers did not withdraw for a bear coming down the river, photographers stalked too close to a bear, a taxiing floatplane displaced a bear, or a bear aggressively displaces people).
4 Trespass - A bear was within the campground or developed area (and not involved in categories 1, 2, 3, or 6—may then indicate trespass as secondary category), or a bear was on a viewing structure.
5 Planned management action - The incident was a planned action of bear management whether or not successful, excluding responses to bear incidents (e.g. closures, ambushes).
6 Property damage - A bear damaged property and the incident was not food-related.
7 Curious investigation - A bear investigated unattended property, a boat, a plane, etc., the incident was not food-related, and no property damage occurred.
8 Other - Describe.

Predominant Management Consequence - Circle predominant management consequence of the interaction; others that are secondary may be noted as such.

0 None - There were no significant management consequences.
1 Human withdrew - Humans left the general area.
2 Bear withdrew - The bear(s) left the general area.
3 Directed approach or aggression unpunished - Although physical consequences (5, 6, 7, or 8 below) did not occur, human responses to the bear's unprovoked directed approach or aggression may have resulted in undesirable learning by the bear. Incidents such as a bear repeatedly displacing human who had already gotten out of its path, or a bear rushing at anglers without stealing fish should be recorded here. An incident of a sow charging humans who could reasonably be perceived as a threat to her young should be recorded as 1 or 2 above.
4 Property damage - Property was damaged by a bear.

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5 Fish stolen - A bear obtained a fish that it may associate with humans. This includes bears taking fish off fishing lines; bears obtaining fish from recently broken lines; bears obtaining recently abandoned fish; bears removing fish from boats, planes, coolers, or other human structures; and bears obtaining fish being transported by humans.
6 Obtained human food - A bear obtained items from people or their facilities that might be considered food (whether consumed or not). This includes human food and beverages, garbage, scented toiletries, fish caught by anglers, and carcasses killed by hunters. This does not include natural food sources like vegetation, salmon that was not caught by anglers, and carcasses that died of natural causes.
7 Bear killed - This includes bears being killed as Management Actions, Defense of Life and Property (DLP) kills, legal hunts, and incidents of poaching.
8 Human contact/injury/fatality - Any incident in which direct physical contact is made between a bear and a human.
9 Trespass unpunished and unchallenged - A bear was within a residence area and was neither punished nor challenged.
10 Enhanced habituation - The interaction likely contributed to habituation of the bear to humans, their activity, or habitation, although no immediately serious consequence resulted, e.g., people remained closer than 50 yards from a bear and the bear did not obviously respond.
11 Unknown or not applicable
12 Other – Explain.

Infer proximate cause leading to interaction - Circle the cause of the interaction. Beware of observer bias. Do not guess. Circle "Unknown" unless the evidence strongly indicates a certain event. Proximate means the event immediately preceding the interaction, as opposed to ultimate cause. For instance, a proximate cause could be that an angler failed to cut his line soon enough resulting in a bear stealing the fish; do not assign an ultimate cause such as fishing is allowed in the river.

0 Unknown - If you are unsure whether to use this choice or another, then you probably do not know the proximate cause.
1 Chance event - The human behaved appropriately according to Park regulations and management plans, the bear behaved appropriately according to management plans, the bear was apparently unaware of or did not respond to the human presence, and the interaction resulted from coincidence, i.e., a surprise encounter.
2 Human error/action - A human violated Park regulations or otherwise exhibited inappropriate behavior according to management plans. Choose this category even when there was inappropriate behavior by the bear if it was triggered by inappropriate human behavior. For instance, choose this category when a bear was among the buildings because a departing float plane scared it from the beach.

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3 Bear initiated - Human behavior was entirely appropriate according to Park regulations and management plans, it was not a chance event, and bear's behavior initiated the interaction. For example, a bear entered the residence area from the beach when the beach was completely clear of human activity.

4 Not applicable

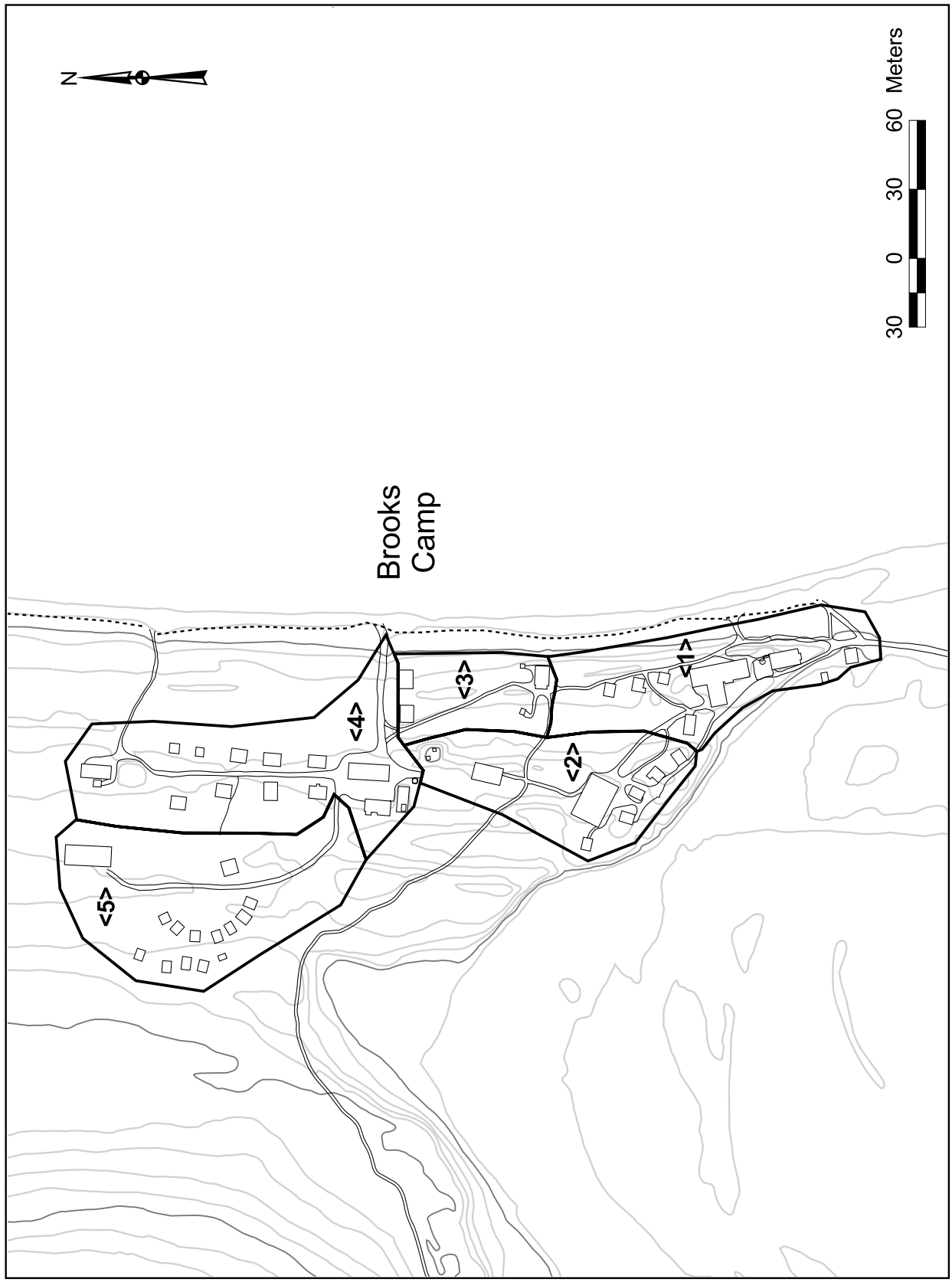

Figure 1. Approximate boundaries of subareas within Brooks Camp; the corresponding area number is indicated within each polygon.-

BEAR MANAGEMENT REPORT FORM
Katmai National Park & Preserve • Brooks River

CIR Number

BMRF Number

When did the interaction happen?

Date_____/_____/_____
Month Day Year

Time _____ am pm

How long did it last?
(Specify units-hr/min/sec)

Where did it happen?

General Location:

0 Campground
1 Beach
2 Brooks Camp
3 Mouth below bridge
4 Oxbow and marsh
5 Cutbank
6 Falls/Riffles/Boardwalks
7 Upper river
8 Road/Falls Trail/Cutbank Trail
9 Brooks Lake residence area
10 Other_____

Brooks Camp subarea, if applicable:

0 Unknown
1 Fish Freezing Bldg. and Lodge vicinity to VC
2 Overlook/Skytel to Auditorium
3 Visitor Center (VC) to Ranger Station
4 NPS warehouse and NPS housing
5 Leach field and Tuckerville
6 Other_____

PEOPLE INVOLVED (Names, addresses, role in incident)

How many people interacted with bear(s)? _____

Where will you be tonight? _____

GROUP TYPE

0 Park Visitor
1 NPS employee
2 Brooks Lodge employee
3 Guide
4 Other _____

If group was guided, specify company if known:

Closest distance between bears and people?
(Specify units-ft/yd/m)

BEAR DESCRIPTIONS

If >5 bears were involved, include additional descriptions in "What Happened" block on next page.

Total no. independent bears involved *(do not include dependent offspring in this count)*

First Bear	***Second Bear***	***Third Bear***	***Fourth Bear***	***Fifth Bear***
COLOR 0 Unknown 1 Blonde 2 Light brown 3 Medium brown 4 Dark brown 5 Black	**COLOR** 0 Unknown 1 Blonde 2 Light brown 3 Medium brown 4 Dark brown 5 Black	**COLOR** 0 Unknown 1 Blonde 2 Light brown 3 Medium brown 4 Dark brown 5 Black	**COLOR** 0 Unknown 1 Blonde 2 Light brown 3 Medium brown 4 Dark brown 5 Black	**COLOR** 0 Unknown 1 Blonde 2 Light brown 3 Medium brown 4 Dark brown 5 Black
CLASS 0 Unknown 1 Subadult 2 Adult male 3 Adult female 4 Female w/COY 5 Female w/Yrlg 6 Cub of year 7 Yearling 8 Unknown single 9 Adult single	**CLASS** 0 Unknown 1 Subadult 2 Adult male 3 Adult female 4 Female w/COY 5 Female w/Yrlg 6 Cub of year 7 Yearling 8 Unknown single 9 Adult single	**CLASS** 0 Unknown 1 Subadult 2 Adult male 3 Adult female 4 Female w/COY 5 Female w/Yrlg 6 Cub of year 7 Yearling 8 Unknown single 9 Adult single	**CLASS** 0 Unknown 1 Subadult 2 Adult male 3 Adult female 4 Female w/COY 5 Female w/Yrlg 6 Cub of year 7 Yearling 8 Unknown single 9 Adult single	**CLASS** 0 Unknown 1 Subadult 2 Adult male 3 Adult female 4 Female w/COY 5 Female w/Yrlg 6 Cub of year 7 Yearling 8 Unknown single 9 Adult single
Description/ID#	Description/ID#	Description/ID#	Description/ID#	Description/ID#

What was happening before the interaction?

Bear

0 Unknown
1 Stationary
2 Traveling (land)
3 Traveling (water)
4 Grazing/browsing
5 Fishing
6 Playing
7 Fighting
8 Eating a fish
9 Not applicable
10 Other _____

Human

0 Unknown
1 Stationary
2 Walking/wading
3 In automobile
4 In boat
5 In airplane
6 Photographing/Filming
7 Fishing
8 Bicycling
9 In building
10 Not applicable
11 Other _____

What were the predominant responses to the interaction?

Bear

0 Unknown
1 Stopped
2 Withdrew slowly
3 Ran away
4 Aggressively approached
5 Nonaggressively approached
6 Stationary aggression
7 Directed approach
8 Attacked
9 None
10 Not applicable
11 Other _____

Human

0 Unknown
1 Stopped
2 Withdrew slowly
3 Ran away
4 Aggressively approached
5 Nonaggressively approached
6 Stationary aggression
7 Assault
8 None
9 Not applicable
10 Other _____

Where did the group receive bear safety information?
(Circle all that apply)

0 None
1 Printed material (Katmai NP)
2 Brooks Camp Visitor Center
3 Interpretive program (Brooks Camp)
4 Ranger contact
5 King Salmon office
6 Phoned Katmai
7 King Salmon Visitor Center
8 Non-Katmai source (Who? What?) _____
9 Lodge staff (Lodge name?) _____
10 Guide (Affiliation?) _____
11 NPS-sponsored staff training
12 Unknown
13 Not applicable
14 Other: _____

Was there food in the area?_____

If food was present, indicate category:

1 Angler-caught fish, not secured per park regulations
2 Fish on line near bear (<50m)
3 Beverage only, not secured per park regulations
4 Human food, not secured per park regulations
5 Garbage containing food, not secured per park regulations
6 Harvested game (describe storage)
7 Human food/fish/garbage secured per park regulations
8 Other_____
9 Unknown

Comments:

Was property damaged?_____

Estimated cost of damage?_____

Describe:

What was the source of this BMRF?

0 Unconfirmed rumor
1 Personal experience
2 Direct observation
3 Direct report
4 Observed report

What happened (attach additional sheets if necessary)?

Report taken by _____(NPS staff) Date _____

FOR MANAGEMENT USE ONLY

NPS Staff Action

0 None
1 Interpretation
2 Verbal Warning
3 Written Warning
4 Citation
5 Not Applicable
6 Other_____

Other BMRFs:

Bear Management Action

0 None
1 Monitored
2 Too late
3 Unsuccessful hazing
4 Successful hazing
5 Posted warnings
6 Closure
7 Killed bear
8 Not applicable
9 Other_____

Number of people in the area during the management action:

_____

Hazing Technique ≥1

0 Yelling/Clapping
1 Air Horn
2 Cracker Shells
3 Bird Bangers
4 Screamer Siren
5 BD-100
6 Margo Strike
7 Bean Bag Round (Type?)
_____
8 Other_____

Human Offense ≥1

0 None
1 Too close
2 Didn't yield right-of-way
3 Continued fishing
4 Didn't break line
5 Stacked fish
6 Improper food storage
7 Harassment
8 Gear left unattended
9 Unknown or not applicable
10 Other_____

Primary Incident Category (secondary may be noted as such)

1 Food related
2 Surprise encounter
3 Dominance interaction
4 Trespass
5 Planned management action
6 Property damage
7 Curious investigation
8 Other_____

Predominant Management Consequence (secondary may be noted as such)

0 None
1 Human withdrew
2 Bear withdrew
3 Aggression unchallenged
4 Property damage
5 Fish stolen
6 Obtained human food
7 Bear killed
8 Human contact/injury/fatality
9 Trespass unchallenged
10 Enhanced habituation
11 Unknown or not applicable
12 Other_____

Infer proximate cause leading to interaction:

0 Unknown
1 Chance event
2 Human error/action
3 Bear initiated
4 Not applicable

Revised April 2002

Bear Management Report Form (BMRF) Instructions
Backcountry Form

The BMRF is the primary tool for documenting bear-human interactions throughout the park. It is a means for monitoring bear activity, evaluating the bear management program, and identifying potential problems that need attention. Use the form to document all serious and unusual bear-human interactions. This includes the obvious such as bears obtaining food/garbage/fish from humans or their facilities, hazing of bears, property damage, bears behaving aggressively towards humans, human injuries/fatalities, bears killed in defense of life and property (DLP), and poaching incidents.

When humans behave such that one would expect a bear to respond aggressively, the interaction should be reported regardless of the bear's behavior. This does not mean that a form must be filled out every time that someone breaks the "50-yard rule." If someone approaches a bear within a short distance or harasses it in some way, a form should be completed. This will be a subjective interpretation on your part.

Bears entering backcountry residence areas such as lodges (trespasses) should be documented. When bears investigate backcountry camps and facilities, such as the Swikshak cabin, a BMRF should be completed. All bear management activities such as hazing and closures must be reported.

A Ranger will also complete a case incident report (CIR) whenever a bear damages property, a bear injures or kills a human, or if a violation is involved. In those cases, a copy of the CIR should be attached to the BMRF.

Whenever NPS personnel discharge a firearm or bear pepper spray to haze a bear, or a bear charges a human, a CIR number should be obtained from Park Dispatch or the Chief Ranger and recorded on the BMRF (see Section 5.0, BMP). For each BMRF assigned a CIR number, a copy of the form should be submitted to a Bear Management Technician or the Park Wildlife Biologist for incorporation into the BMRF database, and the original form should be submitted to the Chief Ranger.

Visitors should be able to fill out this form with minimal assistance. When a visitor completes a BMRF, be sure to read through it to be sure it is as complete as possible and that a sufficient description of the interaction was written in the "What happened" section. Then complete as much information in the "Management Use Only" section as you can. A Bear Management Technician or the Park Wildlife Biologist can determine the "Management Consequences" if you aren't sure, assuming the interaction is sufficiently described.

If you do not have all the information requested on the BMRF, fill out as much as you can. A partially completed BMRF is better than no BMRF. Record exactly what you observed or

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exactly what the witnesses observed; do not fill in the missing parts or record witnesses' attempts to do so. Make sure the observations described are tangible such as specific behaviors, sizes, or distances. Do not record intangible interpretations such as a bear's intent or mood.

If you are not sure whether you should fill out a form, go ahead and do it.

Backcountry BMRF:

Use this form for human-bear interactions occurring in Katmai National Park and Preserve, Aniakchak National Monument and Preserve, and the Alagnak Wild River, excluding the Brooks Camp area. There is a different form for the area within a 5-mile radius of Brooks River, along the VTTS road, and near the Three Forks cabin.

Leave the "BMRF #" in the upper right corner of page 1 blank. A Bear Management Technician will assign each form a unique record number.

CIR number - Include the case incident report number if applicable. If a CIR was written but you don't know the number, write "Y-unknown" in pencil and the Bear Technician will add the number later.

When did the interaction happen? - Use numbers to indicate month, day, and year. Be sure to circle a.m. or p.m.

How long did it last? - Indicate the length of the interaction. Be sure to include units, i.e., hours, minutes, seconds.

Closest distance between bears and people? - How close did the bear and nearest person get during the interaction? Write a range if necessary, e.g., 20-30 yards. Be sure to include units, i.e., feet, yards, meters. Write "Unknown" or "Not Applicable" if appropriate.

Where did it happen? - Describe the location of the incident. Attach a map or draw one in the "What happened?" section if necessary.

People involved - List the names and addresses of the people involved in the interaction and the role each person played. Include the total number of people involved in the interaction.

Group type - Circle the group type. If "Other", describe. Indicate if the group was guided and the guide's and company's names if applicable.

What was the primary reason for the trip? - Circle all that apply and describe if "Other".

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What type of habitat were you in? - Circle the habitat type that best describes the location of the interaction. If "Other", include a description.

0 Riparian/riverine - corridor of a water course, including banks and vicinity.
1 Wetland - marshes or bogs that are not in the vicinity of a watercourse and are not tidal.
2 Beach/tideland - anything between low, low tide and the high strand line of severe winter storms; note type of beach as sand, cobble, or boulder.
3 Island - either lake or ocean; note which. If an island or bar in a river, use "0."
4 Alder/brush - dense or open shrub lands.
5 Spruce forest - any stand of conifers of reasonable size.
6 Mixed/deciduous forest - any stand of trees of reasonable size, dominated by deciduous trees.
7 Dry meadow - upland grasslands or very open shrub lands.
8 Upland tundra - dry tundra.
9 Ash sheet - exposed ash flow of 1912 eruption.
10 Lakeshore
11 Other - Describe.

Bear descriptions - Indicate the total number of independent bears involved in the interaction in the box in the upper right corner. Do not include dependent offspring in this count. Use the blank space to describe the bears. Include whatever information you think is pertinent.

What was happening before the interaction? - Circle the activity the bear and human were engaged in immediately before the interaction occurred. If multiple bears or people interacted, circle the predominant activity exhibited by each species. For family groups, the predominant activity is typically considered that of the sow. For instance, if five people encountered a bear while three of them were fishing and two were simply watching, circle "Fishing." If someone encountered a bear family in which the sow was fishing, one cub was playing with a pine cone, and another cub was sleeping, circle "Fishing."

Choices in Bear column:

0 Unknown - There was no data or no bear was involved.
1 Stationary - The bear was standing, sleeping, suckling young, or otherwise not going anywhere.
2 Traveling (land) - The bear was walking or running to go somewhere.
3 Traveling (water) - The bear was swimming or wading to go somewhere. Do not include fishing.
4 Grazing/browsing - The bear was foraging for vegetation.
5 Fishing - The bear was apparently foraging for fish.
6 Playing - The bear was engaged in play. (Bears do not vocalize while playing.)
7 Fighting - Bears were engaged in dominance interactions with each other. This does not necessarily involve bears making physical contact with each other.

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8 Eating a fish – The bear was eating a fish.
9 Not applicable
10 Other - Describe.

Choices in Human column:
0 Unknown - There was no data or no humans were involved prior to the interaction.
1 Stationary - People were not going anywhere and were not involved in other activities listed below.
2 Walking/wading - People were going somewhere by foot.
3 In automobile - People were in or traveling in a Cushman, Suburban, truck, bus, etc.
4 In boat - People were in or traveling in a boat. This includes fishing from a boat.
5 In airplane - People were in or traveling in a plane.
6 Photographing/filming - People were photographing, video taping, etc. bears. Report photographing other subjects as "Stationary."
7 Fishing - People were actively fishing. Record fishing from a boat as "In boat."
8 Bicycling - People were riding bicycles.
9 In building – People were inside a building.
10 Not applicable
11 Other - Describe.

What were the predominant responses to the interaction? – Circle the response category that best describes the main, predominant, or most noteworthy behavior for each species during the interaction. Prior activities and predominant behaviors do not necessarily relate in a chain of actions and reactions, i.e., they are not meant to document that the bear did this, them the person did that, then the bear did this, etc. For example, if an angler throws rocks to move a fishing bear out of the area, the bear charges, and then the angler runs away, circle "Assault" rather than "Run" as the predominant human behavior. The predominant bear behavior is "Aggressive approach." The prior activity is "Fishing" for both the bear and the angler. If a group of three people encountered a bear while hiking to the Falls Platform, and one person talked to the bear while slowly backing away, one person played dead, and one person took a photo, the predominant human response would be recorded as "Other" with the specifics written in the blank space below the choices.

A note regarding hazing: use the guidance above to determine what the predominant behavior of humans was during the interaction. Two examples: (1) When people withdraw into a building in response to a bear in camp, then NPS staff arrive and use deterrent rounds to displace the bear, the predominant human response should be recorded as "Withdrew slowly", and the primary bear response as "Nonaggressively approached." (2) If staff responded to a trespassing bear with deterrent rounds and other people were not involved, then the predominant human response should be recorded as "Assault" and the bear's predominant behavior as "Nonaggressively approached."

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Choices in Bear Column:

0 Unknown - There were no data or no bear was involved.
1 Stopped - A bear's progress was stopped by human actions.
2 Withdrew slowly - A bear left the immediate vicinity of the interaction without running.
3 Ran away - A bear ran from the immediate vicinity of the interaction.
4 Aggressively approached - A bear's attention was obviously focused on the person it approached and it exhibited aggressive behavior(s) such as vocalizing, excessively salivating, jaw popping, baring teeth, lowering its head, flattening ears, approaching on hind legs, charging, swatting forepaws against the ground, or swinging forepaws in the air. A bear that approached a human while charging another bear would be recorded as "Inadvertently approached", regardless of how terrified the human was.
5 Nonaggressively approached - A bear moved closer to a person, gear, vehicle, or facility in the course of continuing its ongoing behavior, i.e., traveling, foraging, play, etc. It would have likely followed a similar route even if these elements had not been there. Its behavior did not include aggressive elements.
6 Stationary aggression - A bear's behavior indicated aggression focused on an object it did not approach.
7 Directed approach - A bear's movements appeared directed toward a person or object in its environment, but no aggression was expressed. For example, a bear may have appeared to be traveling or foraging, but there was an acceleration or change of direction towards the person. A bear may run at someone in a bounding lope with ears up to steal a fish off the line in the same way that a sub-adult may run at gulls to flush them. Sometimes bears, especially subadults, will approach people out of curiosity.
8 Attacked - A bear aggressively made physical contact with a person.
9 None - A bear's behavior did not appear to change in response to the interaction.
10 Not applicable
11 Other – Describe.

Choices in Human Column:

0 Unknown - There were no data or no humans were involved.
1 Stopped - Someone's progress was stopped by a bear's actions.
2 Withdrew slowly - The people left the immediate vicinity of the interaction.
3 Ran away - At least one person ran from the immediate vicinity of the interaction.
4 Aggressively approached - People approached a bear aggressively with obvious intent to displace it; includes use of air horns, shouting, and banging of pots and pans while approaching a bear. This includes vehicles used for this purpose.
5 Non-aggressively approached - People approached a bear without intending to displace it. The bear's awareness of the approach and its perception of the intent are not important.
6 Stationary aggression - People did not approach a bear, but aggressively tried to displace it. This includes stationary yelling, banging of pots and pans, and use of air horns to displace a bear.

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7 Assault - Humans threw things at a bear, used chemical repellents, used deterrent rounds, or struck at a bear. Even if assault was initiated from a stationary position, report it as assault.
8 None - The people's behavior did not appear to change in response to the interaction.
9 Not applicable
10 Other – Describe.

Where did the group receive bear safety information? - Circle all that apply.

0 None - Received no information
1 Printed material (Katmai National Park) - This includes all Katmai publications, i.e., park newspaper, brochures (not Bear Facts), etc.
2 Brooks Camp Visitor Center
3 Interpretive program, Brooks Camp
4 Ranger contact
5 King Salmon office - Katmai National Park office in King Salmon.
6 Phoned Katmai
7 King Salmon Visitor Center
8 Non-Katmai source (Who? What?) - Please describe.
9 Lodge staff - Include name of lodge.
10 Guide - Note business affiliation.
11 NPS-sponsored staff training
12 Unknown
13 Not applicable
14 Other - Describe.

Was there food in the area? - Write "Yes", "No", or "Unknown." Consider items provided by humans that a bear might eat like human food, garbage, scented toiletries, fish caught by anglers, and carcasses killed by hunters. List all of this type of food items that were in the area. Do not include natural food sources like vegetation, salmon that was not caught by anglers, and carcasses that died of natural causes.

If food was present in the area, circle the applicable food category:

1 Angler-caught fish, not secured per park regulations
2 Fish on line near bear - Fish on line within 50 m or less of a bear.
3 Beverage only, not secured per park regulations
4 Human food, not secured per park regulations - Choose this category if unsecured food or unsecured food and beverage were present.
5 Garbage containing food, not secured per park regulations
6 Harvested game – Describe how the game was stored.
7 Human food/fish/garbage secured per park regulations
8 Unknown

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Was property damaged? - Write "Yes", "No", or "Unknown." Estimate the cost of the damage. If a visitor plans to put a $2.00 patch on a $500.00 tent, write $2.00. Describe the items and level of damage to each. If more space is needed, continue in the "What happened?" section.

What was the source of this BMRF? - Circle the source of the report.
0 Unconfirmed rumor - Source unknown, story cannot be confirmed, or otherwise doesn't fit below
1 Personal experience - Recorder was involved in a large part of the interaction
2 Direct observation - Recorder saw most of it happen
3 Direct report - Recorder interviewed someone who had personal experience or direct observation
4 Observed report - Recorder interviewed someone who received a direct report

What happened? - Describe the interaction in as much detail as possible. Include diagrams, drawings, etc. if helpful. Attach additional paper if necessary. This is the most important section on the form!

Report taken by - Write the name of the National Park Service staff member who completed the report. If a visitor completed the form, write the name of the staff member who helped them.

Date report taken - Write the date that the report was taken.

FOR MANAGEMENT USE ONLY - This section should only be completed by NPS staff. If you are uncertain how to complete of any of the sections, a Bear Management Technician will finish it for you.

NPS Staff Action - Circle the action NPS staff took toward the people involved in the interaction.

0 None - No action was taken or minimal communication occurred which did not include a discussion of bear safety and how the interaction could have been handled differently.
1 Interpretation - NPS staff discussed the aspects of bear safety relevant to the interaction and made suggestions for avoiding or improving similar interactions.
2 Verbal warning - Interpretation and a verbal warning that their behavior violated regulations were given.
3 Written warning - Interpretation and a written warning that their behavior violated regulations were given.
4 Citation - Interpretation and a citation notice were given.
5 Not applicable
6 Other – Describe.

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Other BMRFs - Record the BMRF numbers of other interactions related to this event.

Bear Management Action - Circle the predominant action of NPS staff during or in response to the interaction. Because this section is used to evaluate the Parks' bear management program, do not include hazing conducted by other people here unless they were part of a hazing effort orchestrated by NPS personnel (but describe any hazing actions taken by other people under the "What happened" section). Also, indicate the number of people that were present during the management action (include in that total any people that you are aware of that were moved into buildings, etc.).

0 None - NPS staff did not respond.
1 Monitored - NPS staff monitored the situation.
2 Too late - NPS staff arrived after the interaction was over.
3 Unsuccessful hazing - NPS staff tried to haze the bear(s) out of the area, but the bear(s) would not leave (although they may have eventually left on their own).
4 Successful hazing - NPS staff drove the bear(s) out of the area by hazing them.
5 Posted warnings - Signs informing visitors about potential dangers were posted.
6 Closure - A closure was imposed as a result of bear activities.
7 Killed bear - A bear was killed by NPS staff.
8 Not applicable
9 Other – Describe.

Hazing Technique - Circle all of the hazing techniques that were used by NPS staff. Because this section is used to evaluate the Parks' bear management program, do not include hazing conducted by other people here unless they were part of a hazing effort orchestrated by NPS personnel (but describe any hazing actions taken by other people under the "What happened" section). If multiple techniques were used, describe the progression and the bear's reaction to each in the "What happened?" section. Also report the number of times each technique was used, i.e., 3 cracker shells fired. If bean bag rounds were used, specify the model (e.g., Deer Thumper).

Human Offense - Circle everything the person did that violated Park regulations and guidelines.

0 None - Nothing, or no knowledge of an offense.
1 Too close - People approached a bear to less than 50 years or remained less than 50 yards from a bear utilizing a concentrated food source.
2 Didn't yield right-of-way - People did not withdraw to let a bear continue on its path.
3 Continued fishing - An angler continued fishing when a bear was within 100 yards, or after being directed by NPS staff to stop or withdraw from the river.
4 Didn't break line - An angler tried to land a fish rather than break the line when a fish was within 100 yards, or after being directed by NPS personnel to do so.
5 Stacked fish - An angler stored a caught fish on the bank rather than immediately taking that fish to the Fish Freezing Building.

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6 Improper food storage - Park regulations regarding food/garbage storage or consumption were violated.
7 Harassment - People actively harassed bears beyond what was necessary or reasonable for protection or to drive bears from the campground or residence area.
8 Gear left unattended – People left gear unattended.
9 Unknown or not applicable
10 Other - Describe.

Primary Incident Category - Circle the primary category for the incident. If an incident falls into more than one category, identify the category that appears to have the greatest management consequences as the primary incident category, and mark any others as secondary. For example, if a bear damaged a bike while trespassing in camp, "Property damage" would be the primary incident category, and "Trespass" would be a secondary category.

1 Food related - Human food or garbage was obtained by bear; a bear stole a fish from an angler; a bear attempted either of above; or human handling, storage, or behavior related to human food, garbage, or fish was improper. A bear's attempt must be active, e.g. loitering near the incinerator building or fish freezing building is "trespass"; whereas, attempted entry of a building containing food is "food related."
2 Surprise encounter - A bear responded when it was apparently surprised by a human at close range.
3 Dominance interaction - Competition for space occurred between bears and humans when a bear was not surprised (e.g., anglers did not withdraw for a bear coming down the river, photographers stalked too close to a bear, a taxiing floatplane displaced a bear, or a bear aggressively displaces people).
4 Trespass - A bear was within the campground or developed area (and not involved in categories 1, 2, 3, or 6—may then indicate trespass as secondary category), or a bear was on a viewing structure.
5 Planned management action - The incident was a planned action of bear management whether or not successful, excluding responses to bear incidents (e.g. closures, ambushes).
6 Property damage - A bear damaged property and the incident was not food-related.
7 Curious investigation - A bear investigated unattended property, a boat, a plane, etc., the incident was not food-related, and no property damage occurred.
8 Other - Describe.

Predominant Management Consequence - Circle predominant management consequence of the interaction; others that are secondary may be noted as such.

0 None - There were no significant management consequences.
1 Human withdrew - Humans left the general area.
2 Bear withdrew - The bear(s) left the general area.

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3 Directed approach or aggression unpunished - Although physical consequences (5, 6, 7, or 8 below) did not occur, human responses to the bear's unprovoked directed approach or aggression may have resulted in undesirable learning by the bear. Incidents such as a bear repeatedly displacing human who had already gotten out of its path or a bear rushing at anglers without stealing fish should be recorded here. An incident of a sow charging humans who could reasonably be perceived as a threat to her young should be recorded as 1 or 2 above.
4 Property damage - Property was damaged by a bear.
5 Fish stolen - A bear obtained a fish that it may associate with humans. This includes bears taking fish off fishing lines; bears obtaining fish from recently broken lines; bears obtaining recently abandoned fish; bears removing fish from boats, planes, coolers, or other human structures; and bears obtaining fish being transported by humans.
6 Obtained human food - A bear obtained items from people or their facilities that might be considered food (whether consumed or not). This includes human food and beverages, garbage, scented toiletries, fish caught by anglers, and carcasses killed by hunters. This does not include natural food sources like vegetation, salmon that was not caught by anglers, and carcasses that died of natural causes.
7 Bear killed - This includes bears being killed as Management Actions, Defense of Life and Property (DLP) kills, legal hunts, and incidents of poaching.
8 Human contact/injury/fatality - Any incident in which direct physical contact is made between a bear and a human.
9 Trespass unpunished and unchallenged - A bear was within a residence area and was neither punished nor challenged.
10 Enhanced habituation - The interaction likely contributed to habituation of the bear to humans, their activity, or habitation, although no immediately serious consequence resulted, e.g., people remained closer than 50 yards from a bear and the bear did not obviously respond.
11 Unknown or not applicable
12 Other – Explain.

Infer proximate cause leading to interaction - Circle the cause of the interaction. Beware of observer bias. Do not guess. Circle "Unknown" unless the evidence strongly indicates a certain event. Proximate means the event immediately preceding the interaction, as opposed to ultimate cause. For instance, a proximate cause could be that an angler failed to cut his line soon enough resulting in a bear stealing the fish; do not assign an ultimate cause such as fishing is allowed in the river.

0 Unknown - If you are unsure whether to use this choice or another, then you probably do not know the proximate cause.
1 Chance event - The human behaved appropriately according to Park regulations and management plans, the bear behaved appropriately according to management plans, the bear

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was apparently unaware of or did not respond to the human presence, and the interaction resulted from coincidence, i.e., a surprise encounter.

2 Human error/action - A human violated Park regulations or otherwise exhibited inappropriate behavior according to management plans. Choose this category even when there was inappropriate behavior by the bear if it was triggered by inappropriate human behavior. For instance, choose this category when a bear was among the buildings because a departing float plane scared it from the beach.

3 Bear initiated - Human behavior was entirely appropriate according to Park regulations and management plans, it was not a chance event, and bear's behavior initiated the interaction. For example, a bear entered the residence area from the beach when the beach was completely clear of human activity.

4 Not applicable

BEAR MANAGEMENT REPORT FORM
Katmai/Aniakchak/Alagnak • Backcountry

CIR Number | BMRF Number

When did the interaction happen?

Date_____/_____/_____
Month Day Year

Time _____ am pm

How long did it last (specify units-hr/min/sec)?

Closest distance between bears and people (include units-ft/yd/m)?

Where did it happen (attach map if necessary)?

PEOPLE INVOLVED (Names, addresses, role in incident)

How many people interacted with bear(s)? _____

GROUP TYPE

0 Park Visitor
1 NPS employee
2 Concession/inholder employee
3 Guide
4 Other _____

Was group guided?_____

Company Name_____

Guide Name_____

What was the primary reason for the trip?

0 Fishing
1 Hunting
2 Wildlife watching
3 Photography
4 Boating
5 Backpacking
6 NPS patrol
7 Other_____

What type of habitat were you in?

0 Riparian/riverine
1 Wetland
2 Beach/tideland_____
3 Island_____
4 Alder/brush
5 Spruce forest
6 Mixed/deciduous forest
7 Dry meadow
8 Upland tundra
9 Ash sheet
10 Lakeshore
11 Other_____

BEAR DESCRIPTIONS

Total no. independent bears involved *(do not include dependent offspring in this count)* ☐

Describe bear(s): age, sex, color, distinguishing characteristics

What was happening before the interaction?

Bear

0 Unknown
1 Stationary
2 Traveling (land)
3 Traveling (water)
4 Grazing/browsing
5 Fishing
6 Playing
7 Fighting
8 Eating a fish
9 Not applicable
10 Other _____

Human

0 Unknown
1 Stationary
2 Walking/wading
3 In automobile
4 In boat
5 In airplane
6 Photographing/Filming
7 Fishing
8 Bicycling
9 In building
10 Not applicable
11 Other _____

What were the predominant responses to the interaction?

Bear

0 Unknown
1 Stopped
2 Withdrew slowly
3 Ran away
4 Aggressively approached
5 Nonaggressively approached
6 Stationary aggression
7 Directed approach
8 Attacked
9 None
10 Not applicable
11 Other _____

Human

0 Unknown
1 Stopped
2 Withdrew slowly
3 Ran away
4 Aggressively approached
5 Nonaggressively approached
6 Stationary aggression
7 Assault
8 None
9 Not applicable
10 Other _____

Where did the group receive bear safety information?
(Circle all that apply)

0 None
1 Printed material (Katmai NP)
2 Brooks Camp Visitor Center
3 Interpretive program (Brooks Camp)
4 Ranger contact
5 King Salmon office
6 Phoned Katmai
7 King Salmon Visitor Center
8 Non-Katmai source (Who? What?) _____
9 Lodge staff (Lodge name?) _____
10 Guide (Affiliation?) _____
11 NPS-sponsored staff training
12 Unknown
13 Not applicable
14 Other: _____

Was there food in the area?_____

If food was present, indicate category:

1 Angler-caught fish, not secured per park regulations
2 Fish on line near bear (<50m)
3 Beverage only, not secured per park regulations
4 Human food, not secured per park regulations
5 Garbage containing food, not secured per park regulations
6 Harvested game (describe storage)
7 Human food/fish/garbage secured per park regulations
8 Other_____
9 Unknown

Comments:

Was property damaged?_____

Estimated cost of damage?_____

Describe:

What was the source of this BMRF?

0 Unconfirmed rumor
1 Personal experience
2 Direct observation
3 Direct report
4 Observed report

What happened (attach additional sheets if necessary)?

Report taken by _____(NPS staff) Date _____

FOR MANAGEMENT USE ONLY

NPS Staff Action

0 None
1 Interpretation
2 Verbal Warning
3 Written Warning
4 Citation
5 Not Applicable
6 Other_____

Other BMRFs:

Bear Management Action

0 None
1 Monitored
2 Too late
3 Unsuccessful hazing
4 Successful hazing
5 Posted warnings
6 Closure
7 Killed bear
8 Not applicable
9 Other_____

Number of people in the area during the management action:

_____

Hazing Technique ≥1

0 Yelling/Clapping
1 Air Horn
2 Cracker Shells
3 Bird Bangers
4 Screamer Siren
5 BD-100
6 Margo Strike
7 Bean Bag Round (Type?)
_____
8 Other_____

Human Offense ≥1

0 None
1 Too close
2 Didn't yield right-of-way
3 Continued fishing
4 Didn't break line
5 Stacked fish
6 Improper food storage
7 Harassment
8 Gear left unattended
9 Unknown or not applicable
10 Other_____

Primary Incident Category (secondary may be noted as such)

1 Food related
2 Surprise encounter
3 Dominance interaction
4 Trespass
5 Planned management action
6 Property damage
7 Curious investigation
8 Other_____

Predominant Management Consequence (secondary may be noted as such)

0 None
1 Human withdrew
2 Bear withdrew
3 Aggression unchallenged
4 Property damage
5 Fish stolen
6 Obtained human food
7 Bear killed
8 Human contact/injury/fatality
9 Trespass unchallenged
10 Enhanced habituation
11 Unknown or not applicable
12 Other_____

Infer proximate cause leading to interaction:

0 Unknown
1 Chance event
2 Human error/action
3 Bear initiated
4 Not applicable

Revised April 2002