

BEAR MANAGEMENT PLAN
SEQUOIA AND KINGS CANYON NATIONAL PARKS

APRIL 1992 REVISION

Prepared by
UNITED STATES DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
SEQUOIA AND KINGS CANYON NATIONAL PARKS
THREE RIVERS, CALIFORNIA 93271

TABLE OF CONTENTS

| | <u>PAGE</u> |
|--|-------------|
| I. INTRODUCTION | 1 |
| II. BEAR MANAGEMENT GOAL | 1 |
| III. BEAR MANAGEMENT OBJECTIVES | 1 |
| IV. HUMAN/FOOD MANAGEMENT POLICIES | 1 |
| <i>--- PREVENTIVE MANAGEMENT ---</i> | |
| A. Construction and Use of Bear-Resistant Facilities | |
| 1. Developed Areas | 1 |
| 2. Backcountry Areas | 2 |
| B. Education | 3 |
| C. Enforcement | 5 |
| D. Coordination of Garbage Pickup and Area Cleanliness | 5 |
| <i>--- RESPONSIVE MANAGEMENT ---</i> | |
| E. Aversive Conditioning | 6 |
| F. Area Closures | 7 |
| G. Bear Handling | |
| 1. Criteria and Guidelines for Handling | 7 |

| | |
|--|----|
| 2. Capture/Immobilization | 8 |
| 3. Tagging/Gathering Biological Statistics | 9 |
| 4. Release/Relocation | 10 |
| 5. Destruction/Disposal | 11 |

--- *INFORMATION MANAGEMENT* ---

| | <u>PAGE</u> |
|---|-------------|
| H. Monitoring and Evaluation | |
| 1. Biological Monitoring | 13 |
| 2. Bear Information Management System (BIMS) | 13 |
| 3. Bear Management Program | 13 |
| I. Research | 13 |
| J. Reporting and Evaluation | |
| 1. Reports from Field Personnel | 15 |
| 2. Reports to Field Personnel | 15 |
| 3. Miscellaneous Reports | 15 |
| 4. Bear Management Plan | 15 |
| V. MINIMUM STANDARDS FOR BEAR MANAGEMENT | 16 |
| VI. APPENDIX | |
| A. Location of Bear-Resistant Food Storage Facilities | 20 |
| B. Forms | 22 |
| C. Special Regulations Applicable to Bear Management | 25 |
| D. Responsibilities | 26 |

Bear Management Plan
Sequoia and Kings Canyon National Parks

I. INTRODUCTION

Black bears (*Ursus americanus*) are an important wildlife resource generally found below timberline throughout both Parks. Though most of the bears subsist on natural foods, others have learned to forage for human foods.

Human food may become available to bears from several sources: intentional feeding by visitors, improper use of bear-proof garbage cans, inadequate garbage collection schedules, inadequate design of garbage and/or food storage facilities, improper food storage, and food left unattended. Once bears discover human food, they often alter their wild behavior and foraging habits to continue to obtain it. The ensuing conflicts between bears and humans result in damaged property, personal injuries, and destruction of some bears. The unnatural behavior and resultant losses are unacceptable.

II. BEAR MANAGEMENT GOAL

To restore and perpetuate the natural distribution, ecology, and behavior of black bears free of human influences.

III. BEAR MANAGEMENT OBJECTIVES

- A. To eliminate the availability of human food sources and human activities which may significantly modify bear populations.
- B. To minimize and mitigate human/bear interactions that result in a learned orientation of bears toward people, a negative experience for people and/or a need to destroy bears.
- C. To provide opportunities for visitors to understand and appreciate the black bear in its natural environment.

IV. HUMAN/FOOD MANAGEMENT POLICIES

PREVENTIVE MANAGEMENT

- A. Construction and Use of Bear-Resistant Facilities
 - 1. Developed Areas
 - a. All outdoor garbage cans and garbage dumpsters will be designed to be bear-proof. Any design which is found to be too complicated for proper visitor use or otherwise ineffective will be replaced with a design known to be successful.

Bear Management Plan
Sequoia and Kings Canyon National Parks

- b. Additional bear-proof garbage cans and/or dumpsters will be installed where containers occasionally overflow. The area's Sub-district Maintenance Foreman will determine when additional garbage cans or dumpsters are needed.
- c. Bear-proof food storage lockers will be installed and maintained in front country campgrounds with human/bear problems. Food locker volume will be adequate to handle all food brought by 95 percent of the users. Communal bear-proof storage will be provided near the campground for excess food.

2. Backcountry Areas

- a. Bear-proof food storage facilities may be installed, signed, and maintained in backcountry areas with human/bear problems. Facilities may include food storage lockers, bear poles, or pulley-type bear cables in descending order of preference. Recommendations for backcountry food storage facilities will be submitted by either the Fish and Wildlife Biologist or by the area Sub-district Ranger following consultation with the other, reviewed by the Environmental Management Committee, and approved by the Superintendent. Sub-district or District Rangers will provide materials for the facilities and signs marking them, and they will periodically inspect and arrange for their maintenance as needed to assure the same (or higher) standard as when installed. Recommendations to remove food storage facilities follow the same procedure and shall include evidence that the facility is not needed. A biannual survey of all backcountry bear facilities will be conducted by the Fish and Wildlife Biologist and the Sierra District Ranger. The survey will include a report of location, condition, type and recommendations of backcountry bear facilities.
- b. Lockers may be placed in backcountry areas in response to existing or potential problems following the criteria below:
 - Lockers may only be placed near or adjacent to maintained trails in sites that are already impacted by humans and/or in the most durable site available (based on flora, soil, proximity to water, slope, space).
 - Lockers may be spaced at five to ten mile intervals and must provide sufficient storage space for all users 95 percent of the time.

Bear Management Plan
Sequoia and Kings Canyon National Parks

- Locker location must be compatible with other backcountry objectives.
- c. Alternate techniques for backcountry food storage are tested by the Fish and Wildlife Biologist. The procedure for approval to construct bear facilities will be used for approval to erect experimental structures.
- d. NPS backcountry camps that have too much food to counter-balance will store their food in bear-proof food storage facilities provided by the benefiting account. These facilities will be removed when the camp is not in use except at permanent camps.
- e. Wilderness users may store food either in a bear-proof food storage locker, in a portable bear-proof canister, or suspended at least twelve feet above the ground and ten feet horizontally from a tree trunk or other vertical support using the Parks' counter-balance technique, or any combination of these techniques in descending order of preference. If all food and garbage cannot be protected by one of these methods, the wilderness users must provide 24-hour guard or equivalent protection.

Where tree damage (broken branches) and debris (ropes, sacks) from bears are evident, the counter-balance technique will be discouraged and other food storage methods will be encouraged.

Use of bear-proof food storage canisters will be encouraged by these parks in areas: (1) that lack trees or suitable tree species for counter-balancing, (2) where at least one bear is known to chew through branches to retrieve counter-balanced food, (3) within five days round-trip of a trailhead or of properly cached food, (4) that normally do not receive through traffic by long distance hikers, (5) that are pristine.

- f. All buildings within these Parks which are used for the storage, preparation, or consumption of food or similar organic material shall be constructed to be bear-resistant. Plans for new construction will be reviewed by the Fish and Wildlife Biologist with regard to potential bear problems.

B. Education

1. Information about bears will be provided to visitors. This information will include brochure(s) explaining human/bear problems and their causes, proper food storage, disposal of garbage, appropriate visitor behavior, the Parks' regulations, and proper technique to counter-balance food sacks. The brochure(s) will be given to visitors at entrance stations, with wilderness use permits, provided at visitor centers, posted

Bear Management Plan
Sequoia and Kings Canyon National Parks

on bulletin boards, and provided through concession facilities to their guests. All handouts will be reviewed for accuracy and adequacy each fall by Interpretive, Resources Management, Research, and Visitor Protection Divisions. Proposed changes will be submitted to the Fish and Wildlife Biologist for approval.

2. Where people are required to store food in vehicles or trunks, it must be clear that these regulations are the safest alternatives for food storage and will substantially decrease the likelihood of personal injury or property damage by bears. This message must be included in all written and verbal bear information.
3. As appropriate, articles about bears will be placed in the "Sequoia Bark," "The Gigantea," and newspapers. The "Sequoia Bark" will provide information on food storage and "what not to do" around bears. All articles shall be reviewed by the Fish and Wildlife Biologist before they are published.
4. The short-range visitor information radio transmission system will include a message about the bear situation. This will be prepared by Interpretive personnel in collaboration with the Fish and Wildlife Biologist.
5. Bear warning signs will be maintained at the entrance to each campground, at principal concession developments, and other potential problem areas such as certain trailheads. The signs will contain specific instructions on how to best avoid incidents.
6. The rangers will post notices to advise visitors of existing risks in areas with more than one incident or \$250 damage per week.
7. Bear-proof food storage facilities will be signed on location and/or in a handout in both front country and backcountry sites to help visitors locate them.
8. Park Rangers, Interpreters, and Fish and Wildlife Personnel have the primary responsibility for contacting visitors in areas with human/bear problems and advising them of the problem, proper food storage, proper disposal of garbage, and proper behavior around bears. However, all employees should take advantage of opportunities to provide this information to visitors.
9. Information on proper food storage and instructions not to feed or approach bears will be given at all Interpretive programs, except where this message might interfere with other objectives of the Interpreter's presentation.
10. All uniformed employees witnessing violations will explain bear management regulations to visitors and encourage them to comply. Concession employees are

Bear Management Plan
Sequoia and Kings Canyon National Parks

encouraged to assist these Parks in advising visitors about bear management regulations.

11. To effectively answer visitor questions, every National Park Service employee in Sequoia and Kings Canyon is responsible for being aware of the bear situation, bear management objectives, and of the methods being implemented to alleviate the problem. Each Division is responsible to provide opportunities for their employees to achieve this requirement preferably through attendance at annual training sessions given by the Fish and Wildlife personnel. Concession employees are also encouraged to be knowledgeable of the bear management program. This information will be made available through annual training sessions conducted by Fish and Wildlife personnel and by distribution of this Plan to each Division, District and Sub-district Office, GSI, and others upon request. Fish and Wildlife personnel will coordinate the dissemination of information. Every new employee, resident employees of the concessionaires, and persons performing contract work within these Parks will receive a packet of bear management information explaining the causes and consequences of human/bear problems, description of the bear management program, and their responsibilities for food storage, garbage disposal, and providing public information.
12. The Chief of Interpretation will designate an interpreter to be responsible for developing, coordinating, and helping to implement programs to disseminate bear management information both within and outside these Parks.
13. The Fire Management Office will provide bear management information to fire overhead and crews originating outside these Parks. On project fires, the Fire Management Officer (when possible, in collaboration with the Fish and Wildlife Biologist) will designate a Bear Management Officer to coordinate dissemination of bear management information and oversee compliance with bear management requirements.
14. Each Division is responsible for providing bear management information, as appropriate, to personnel from other parks, agencies, or organizations who are temporarily living or working within these Parks.

C. Enforcement

1. Citations will be issued only by personnel with a law enforcement commission appropriate to enforce the particular violation. All law enforcement activities by Fish and Wildlife personnel will be under the direction of the area Sub-district Ranger.

Bear Management Plan
Sequoia and Kings Canyon National Parks

2. Coolers and other food storage devices, which are left unattended and improperly stored, may be impounded by uniformed employees. The contents must be inventoried in accordance with approved procedures, and a notice, explaining the violation and where to get the item back, will be left at the site.

D. Coordination of Garbage Pickup and Area Cleanliness

1. Pickup from all solid waste containers in critical human/bear problem areas will be scheduled as late as possible to minimize the amount of garbage in the containers at night. Garbage collection will be coordinated by the Maintenance Division.
2. All Park employees are responsible to pick up food or garbage that has been improperly discarded.

RESPONSIVE MANAGEMENT

E. Aversive Conditioning

Aversive conditioning is a tactic secondary to food control. It will be used, as appropriate, to make bears fear people, to discourage bears from entering developed areas, and to make bears distrustful of human foods. Aversive conditioning must be a clearly defined act and applied consistently to achieve the desired objective. It is important that observers understand that the conditioning is an effort to avoid eventually having to destroy the bear.

Techniques that may be used to repel bears from developed areas and human food may include: making loud noises such as yelling, clapping and horns; electricity; chemical spray repellents; and throwing rocks towards bears.

Techniques that involve projectors or use of firearms will only be performed by trained, uniformed employees. These may include: sling shots, plastic slugs, or cracker shells. These techniques will only be used under the direction of Sub-district Rangers, the Fish and Wildlife Biologist or bear researchers working on aversive conditioning. All aversive conditioning techniques will only be used under the following conditions:

- (1) The event will not result in permanent injury to the bear, especially the bear's eyes.
- (2) The event is not performed from a position that could injure people or damage property.
- (3) The event (excluding rock throwing) is explained to visitors within 200 meters; observers are told this may save the bear's life.

Bear Management Plan
Sequoia and Kings Canyon National Parks

- (4) Each event involving the use of firearms is documented on a Case Incident Report or BIMS report. Each documentation will include: name of the employee; date; location; time; a description of the bear, the technique used, and the bear's reaction.

The effectiveness of the above techniques varies between different bears and under different circumstances, but generally is most effective on newly habituated bears that are not highly conditioned to foraging for human foods. Better techniques will be sought while using the available state of the art. All new or potentially controversial conditioning must have prior approval by the Superintendent.

F. Area Closures

1. Whenever bears become unacceptable problems, temporary closure of areas will be considered as a possible management option. Temporary closures are an alternative to relocation or destruction, when other management actions (visitor education, enforcement, aversive conditioning, etc.) fail. Areas considered for closure or partial closure may include: picnic areas, turnouts, campgrounds, buildings, roads, trails, trail segments, and backcountry areas.
2. Temporary closures may include either: (1) complete closure of an area to all entry except administrative (posting signs, enforcement, etc.); (2) entry only for passage through an area, but no camping or eating permitted within the closed area; or (3) closed only to camping. Temporary closures may include either front country or backcountry locations.
3. Recommendations to the Superintendent to close an area temporarily for bear management purposes will be made by the District or Sub-district Ranger through the Chief Ranger's office following consultation with the Fish and Wildlife Biologist.
4. All entrances to closed areas will be posted as prescribed in 36 CFR 1.7(a).

G. Bear Handling

1. Criteria and Guidelines for Handling
 - a. Bears will be handled only for management and research purposes. Valid causes for handling include marking potential problem bears, marking bears for identification by researchers, relocation, destruction, acquisition of biological measurements, and training for individuals responsible for handling bears.

Bear Management Plan
Sequoia and Kings Canyon National Parks

- b. Except for emergency situations to protect human life, all handling will be directed by the Fish and Wildlife Biologist, and only persons approved by the Fish and Wildlife Biologist will be in charge of any handling situation. Normally, the Wildlife Biologist will be in charge of handling for management purposes. This is to help insure proper use of the equipment and drugs, safety for both the bear and its handlers, and provide uniformity in records and biological measurements. The Fish and Wildlife Biologist will insure that either formal or informal annual training sessions are conducted to train people in the correct use of culvert traps, drugs and immobilization equipment, handling procedures, biological measurements, and how to properly complete handling reports. This training will normally be provided by the Wildlife Biologist.
- c. A licensed veterinarian will be retained for prescription and consultation on drugs, to review and provide advice on animal handling techniques, to provide training, and for consultation on veterinary problems.
- d. No tools or techniques that are not humane or cause unnecessary pain will be used to handle bears.

2. Capture/Immobilization

- a. In areas accessible by roads, the culvert trap is the principal device to capture bears. It will be set in the evening after visitor activity slows, and the door will be closed in the morning before 8:30 a.m. Adequate blocking will be used to insure that the trap is neither a safety hazard nor so unstable as to discourage a wary bear. Traps must be marked "Danger" in red letters on both sides.
- b. Traps will be painted a light color to reflect heat. In hot weather, trapped bears will be moved to a cool, shaded site away from campgrounds or other public use areas; bears should be hosed down with water periodically. In all weather, clean hay will be placed on trap floors to provide insulation from metal.
- c. Bears will not be kept in traps longer than 24 hours unless extraordinary circumstances prevent proper disposition within that limit. The Fish and Wildlife Biologist will make this determination, provide instructions for sustained care of the bear, and advise the Superintendent of the bear's status.
- d. Snares may be used in off-road locations to capture bears. To minimize the

Bear Management Plan
Sequoia and Kings Canyon National Parks

risk of injuring a bear, the snare will be padded and rigged to minimize shock. Within developed areas (except residence areas) or within sight of roads or trails, snares will not be set without constant surveillance. In other areas, unmanned snares will be marked at each possible approach to the snare site with warning signs.

- e. Drugs, administered by use of a drug-injecting dart, may be used as an alternative to either trapping or snaring bears. The immobilized bear may be worked on site or placed in a culvert trap for further handling and/or relocation.
- f. Trapped bears requiring immobilization will be drugged within the trap by jab stick or blow gun.
- g. Snared bears will be immobilized either by dart, blow gun, or jab stick.
- h. Each drugged bear will be monitored for respiratory difficulties, convulsions, eye reflex, cyanosis, evidence of premature recovery from the drug, and any other potential problems which, if undetected, could be hazardous for either the bear or its workers.
- i. A designated employee is responsible for a trapped animal at all times until released. Normally, the person who sets a bear trap is responsible for the animal's safety until a certified bear handler is on scene. The handler is responsible until it is safe to transfer the responsibility to other personnel. That person is then responsible for the bear until it is released.
- j. Scheduled and prescription drugs are obtained and may only be dispensed by the Parks' Drug Practitioner. Drugs may be signed out to personnel with potential need for immobilizing bears and who have either attended the Parks' course in immobilization or received equivalent training and/or experience and are deemed competent by the Parks' Drug Practitioner. The Fish and Wildlife Biologist will ensure that records are kept of drug inventory, use, and distribution to field areas. Each recipient of drugs will be responsible to see that records of drug use are sent to the Parks' Drug Practitioner monthly, see APPENDIX B. Drug accountability is the responsibility of the Parks' Drug Practitioner who will maintain records on all drug use and distribution.
- k. When sows with cubs are trapped and the cubs remain outside the trap or when cubs are trapped without mothers, every attempt will be made to reunite the mother with her cub(s) as soon as practical. If unsuccessful and

Bear Management Plan
Sequoia and Kings Canyon National Parks

the mother is not a problem bear, then she will be released where captured as soon as possible after tagging and gathering biological statistics. If the mother bear is a problem bear to be relocated and the cubs cannot be caught within 24 hours, then the Fish and Wildlife Biologist will make the decision whether: (1) the mother is released in another effort to capture the whole group; (2) the mother is held beyond 24 hours and the effort to capture the cubs is continued; (3) the cubs are abandoned, particularly if old enough to wean; or (4) the cubs are destroyed, if possible.

1. Cubs may be netted, grabbed (with caution), trapped, drugged, or snared with a "catch all" pole.

3. Tagging/Gathering Biological Statistics

- a. All bears over five months old which are captured, may be ear-tagged with numbered tags and/or tattooed. All captured bears except small cubs may have an identifying streamer attached to their tags.
- b. Whenever possible, biological and drug reaction data will be collected on all bears handled using a standardized bear field data form, see APPENDIX B. Minimum biological data are sex, weight (estimated or measured), girth, total length, reproductive condition, presence of external parasites, pelage color, injuries, and estimated age.
- c. Bears may be collared with radio transmitters for research and/or management purposes.

4. Release/Relocation

- a. Drugged bears will be attended or held in culvert traps until they appear fully capable of defending themselves from other bears and otherwise functioning normally in the natural environment.
- b. Non-problem bears will be released within 0.5 kilometer of where they were captured. Every effort will be made to avoid releasing bears in view of the general public, unless the release is part of an interpretive function approved by the Superintendent.
- c. Bear relocation will not be used as a long-term solution to human/bear problems in these parks. This is not considered effective or an ecologically sound bear management strategy. Relocation may be used as a short-term tactic only. These tactics are discussed below (d.-i.).

Bear Management Plan
Sequoia and Kings Canyon National Parks

- d. A bear will not be relocated long distances (across major drainage divides) from either the front country or backcountry unless the District or Sub-district Ranger and/or Fish and Wildlife Biologist consider a bear to be an unacceptable risk to persons or property based on documented incidents or extremely incriminating evidence, existing management practices fail to correct the problem, and destruction is the only other alternative to relocation. Relocated bears will be equipped with a radio collar whenever possible.
- e. The decision to relocate the bear will be made cooperatively by the District or Sub-district Ranger and Fish and Wildlife Biologist.
- f. Short-distance relocations may be used as a stall tactic to mitigate incidents where destruction is not warranted and the cause of the problem cannot be corrected immediately.
- g. Only bears that break into structures, vehicles, or camping gear (tents, packs, tack, etc.) will be considered for relocation.
- h. Release location will be determined by the Fish and Wildlife Biologist with the concurrence of District or Sub-district Rangers whose area may be affected. Each relocation will be considered individually to avoid areas of dense visitor use, to afford enough distance to challenge the bear's homing capability, and to be sure of adequate habitat. Biological factors, economics, and socio-political effects will be considered in selecting release sites. No bears will be relocated outside the Parks' boundaries, at South Fork Campgrounds, on the North Fork Kaweah River, at Redwood Mountain, near Mineral King, or near Grant Grove.
- i. The Wildlife Biologist will maintain records on all relocations and movement following relocations.

5. Destruction/Disposal

- a. Bears in the front country and backcountry exhibiting any of the following behavior patterns may be considered candidates for destruction:
 - (1) Bears that bluff charge, chase, or injure people in an unprovoked situation.

Bear Management Plan
Sequoia and Kings Canyon National Parks

- (2) Bears that persistently break into structures, vehicles, or backcountry camping gear (tents, packs, tack, etc.) where food has been properly stored.

Bears are not destroyed without positive identification and after all other alternative management actions have been considered.

The Bear Management Committee will review the records of bears which are candidates for destruction and discuss management alternatives. The Committee will be composed of the appropriate area District and Sub-district Ranger, Wildlife Biologist, Temporary Bear Management Park Rangers, individuals invited to the Committee meetings by designated members, the Wildlife Scientist, and the Fish and Wildlife Biologist (Chair). The Fish and Wildlife Biologist will present the Committee's majority recommendations and dissenting opinions to the Superintendent through the Chief of Resources Management in writing. When the Committee recommends destruction, the Superintendent will be advised verbally as soon as possible after the meeting, followed by a written recommendation. The Superintendent will make the final decision.

- b. Any bear approved for destruction following the above criteria or any bear that has sustained a serious injury from a person (broken bones, gut shot, broken back, etc.) may be destroyed by a qualified Ranger or Fish and Wildlife personnel as expeditiously as possible. Before any injured bear is destroyed, it should be inspected either by Fish and Wildlife personnel or someone qualified to evaluate the seriousness of the injury. Such destruction applies only to bears which can be identified with certainty. Such incidents will be thoroughly documented and reported to the Superintendent as soon as possible.
- c. If a sow with cubs must be destroyed, the Fish and Wildlife Biologist will decide whether the cubs are old enough to wean. If they are, they may be released. If they are not, the California Department of Fish and Game and/or other agencies or organizations may be contacted by the Fish and Wildlife Biologist for an outlet. If no alternative is available, the cubs will be destroyed. If the cubs cannot be captured, the Fish and Wildlife Biologist will decide what action to take from alternatives described under IV G 2k.
- d. Bears that are to be destroyed may either be drugged first and then shot, killed with a euthanasic drug, or shot while free roaming, depending on what is most desirable for safety and is the most humane procedure.

Bear Management Plan
Sequoia and Kings Canyon National Parks

- e. Except in emergency situations, bears will not be destroyed in sight of visitors.
- f. Discretion will be used so that the carcass of any bear killed is far enough from roads, trails, and high-use areas to minimize offensive odors.

Disposal along roads will be over a steep embankment. Sites will be selected to prevent multiple carcasses accumulating at any one site. Burial is an acceptable alternative, if the carcass cannot otherwise be removed from areas where it would be obnoxious to the general public. All or portions of dead bears may be sent to public museums or bona fide research facilities; such transfers will be coordinated by the Wildlife Scientist.

- g. All tags, transmitters, and markings affixed to the animal will be removed and returned to the Fish and Wildlife Biologist.
- h. No part of any Park bear will be retained by anyone for personal purposes. However, the Research Biologist should be queried regarding specimens needed for bear research. With approval of the Superintendent, bear parts may be used for interpretive purposes.

--- *INFORMATION MANAGEMENT* ---

H. Monitoring

1. Biological Monitoring

The impact of existing management practices on bear populations will be monitored for changes in bear distribution, relative abundance, sex and age ratios, seasonal movements, and behavioral changes. Whenever practical, the fate of relocated bears will be documented.

2. Bear Information Management System (BIMS)

The BIMS was established in 1978 to better record bear incidents throughout these parks. The form (see APPENDIX B) is filled out by any employee to record all bear incidents and observations from visitors and employees. An incident is defined as any event where a bear obtains human food, damages property, injures a person, or enters a structure. The Wildlife Biologist prepares an annual summary and is included in the Bear Management Report.

3. Bear Management Program

The Fish and Wildlife Biologist will review and document the adequacy of the bear management program annually in a Bear Management Report to the Superintendent (described under J-2). This may include the adequacy of pamphlets, location and content of signs, adequacy of garbage and food storage facilities, adequacy of interpretive messages regarding bears, adequacy of enforcement of food storage regulations, and general recognition and inventory of anything which may contribute to human/bear problems.

4. Bear Management Plan

The Bear Management Plan is reviewed annually by park staff and revised biannually by the Wildlife Biologist. PROPOSED CHANGES can be made by any employee at any time. An annual meeting will be held to discuss changes. Each final revision will be reviewed for comment by Division Chiefs and approval by the Superintendent.

I. Research

The Parks recognize the need for bear research to provide information to both management and interpretation. Research is needed to determine the best methods to measure:

Bear Management Plan
Sequoia and Kings Canyon National Parks

bear population trends; success or failure of education, enforcement and food storage techniques; and impacts to alpine areas from bears. In addition to the Parks' own bear research, others will be encouraged to do bear research, so long as their studies are compatible with NPS policy, this Plan, and not detrimental to the existing bear population.

Bear Management Plan
Sequoia and Kings Canyon National Parks

J. Reporting and Evaluation

1. Reports from Field Personnel

| FORMS | TYPE | ROUTING | RECIPIENT | DISTRIBUTION |
|-------------------------------|--|-----------------------|-------------------------|---|
| None | Incident* | Direct by radio or | Dispatcher telephone | Fish and Wildlife Biologist or Wildlife Biologist |
| BIMS Incident/ Observation | Incident Observation | Chief Ranger's Office | RMO Clerk-Typist | Fish and Wildlife Biologist Chief of Resources Management |
| Case Incident Report | Incident (injury or major property damage) | Chief Ranger's Office | Chief Ranger's Office | Fish and Wildlife Biologist |
| BIMS Incident/ Observation | Observation | Direct | RMO Clerk-Typist | Fish and Wildlife Biologist |
| Field Data Form | Handling (biological measurements) | Direct | Wildlife Biologist | Wildlife Biologist Fish and Wildlife Biologist Research Biologist |
| Monthly Record of Drug Use | Drugs | Direct | Drug Practitioner | Files |

*Incident defined on page 13.

The reports shown above will be sent to the designated recipient the day following the incident, observation, or management action. The monthly record of drug use will be submitted on the first Wednesday of each new month.

2. Reports to Field Personnel

The annual Bear Management Report will be prepared by the Fish and Wildlife Biologist and distributed to the Superintendent's Office, Division Chiefs, District and Sub-district Offices, and to others who request it. It will be submitted before the last day in April. Special reports will be available to field areas upon request.

3. Miscellaneous Reports

- a. Twice a year, January 1 and August 1, the Wildlife Biologist will prepare a report on "bears handled" to be submitted to the California Department of Fish and Game.
- b. By February 15 of each year, the Parks' Drug Practitioner will prepare an annual report on "drug use and inventories" to be submitted to the Fish and Wildlife Biologist.

Bear Management Plan
 Sequoia and Kings Canyon National Parks

V. MINIMUM STANDARDS FOR BEAR MANAGEMENT

Program Standard: No bears routinely foraging for human food and no recurring incidents involving safety or visitor property.

| <u>Detailed Description of Standard</u> | <u>Mechanics</u> | <u>Responsibility</u> |
|--|---|--|
| A. Information | | |
| Every visitor and persons visiting these Parks on business is informed of: (1) existence of human/bear problem (2) cause of human/bear problem (3) proper food storage (4) risk of incident | pamphlets at public contact stations and with backcountry permits signs at campground entrances and trailhead ranger stations notes on permits | rangers fish & wildlife concessions mgt. |
| NPS, concession, and contract employees and incident team members are informed of: (1) existence of human/bear problem (2) cause of human/bear problem (3) proper food storage (4) risk of incident | employee package bear summary reports fire overhead information supervisors | fish & wildlife administration concessions mgt. fire management |
| Every NPS, concession, and contract employee involved in visitor contact is also trained in: (1) basic bear ecology-biology (2) basic bear behavior (3) how to make visitor contact and how to instruct visitors in food storage and garbage disposal | seasonal training sessions | fish & wildlife |

Bear Management Plan
Sequoia and Kings Canyon National Parks

| Detailed Description of Standard | Mechanics | Responsibility |
|--|------------------------------------|---|
| B. Enforcement | | |
| CFR consistent with proper food storage management procedures. | | rangers |
| Whenever bears are known to be in an area, beginning 1 hr. after sunset, every campground, parking lot, car, and rental cabin exterior is inspected for food storage-garbage disposal violations and definitive action taken to correct all observed problems. | trained personnel | rangers assisted by fish & wildlife and interpretive personnel as appropriate |
| Backcountry rangers inspect food storage at every opportunity. | trained personnel | rangers assisted by fish and wildlife personnel |
| C. Handling | | |
| Tag and streamer all bears found in developed areas and in backcountry areas with frequent (≥ 1 incident/3 nights) incidents. | trained personnel by rangers as | fish & wildlife assisted appropriate |
| Radio collar all front country bears which persistently (def. as seen or believed to have been in area at least one out of three nights) forage in developed areas or bear | trained personnel | fish & wildlife |

Bear Management Plan
Sequoia and Kings Canyon National Parks

considered candidates for aversive conditioning or involved in a relocation.

| Detailed Description of Standard | Mechanics | Responsibility |
|---|---------------------------|-----------------|
| C. Handling (continued) | | |
| <p>Consider destruction of all bears which are a threat to human safety, recurringly clout vehicles that do not contain food, recurringly break into buildings, or cause other unacceptable property damage (≥\$100/night based on documented incidents or strongly incriminating evidence.</p> | Bear Management Committee | fish & wildlife |
| D. Facilities | | |
| <p>All garbage cans, dumpsters, and other facilities handling garbage are:</p> | design | maintenance |
| <p>(1) bear-proof (2) of sufficient number to avoid overflowing</p> | | |
| <p>Every front country campground with persistent (def. bears present most nights of the week) human/bear problems will have sufficient bear-proof food storage facilities to handle all food.</p> | food lockers | maintenance |

April 1992

April 1992

Bear Management Plan
Sequoia and Kings Canyon National Parks

| | | |
|---|--|------------------------------------|
| Every building which bears break into with any regularity (3 times/season) will be bear-proofed or closed to use. | design concessions mgt. contractors, | maintenance park management |
|---|--|------------------------------------|

| | | |
|---|------------------|-----------------------|
| <u>Detailed Description of Standard</u> | <u>Mechanics</u> | <u>Responsibility</u> |
|---|------------------|-----------------------|

D. Facilities (continued)

| | | |
|---|--|----------------|
| Backcountry areas with persistent (avg. ≥ 1 incident/3 nights) human/bear problems will have sufficient bear-proof storage to accommodate all backcountry users there. | construction rangers maintenance | resources mgt. |
|---|--|----------------|

E. Research and Monitoring

| | | |
|---|--------------------|-----------------|
| Provide alternatives to mitigate human influences. | research studies | research |
| Be able to recognize changes in the relative numbers, sex, and age class distribution of bears as related to existing management. | monitoring program | fish & wildlife |
| Maintain records of all tagged bears. | trained personnel | fish & wildlife |
| Be able to monitor movements of collared problem bears whenever desired for management purposes. | trained personnel | fish & wildlife |

Bear Management Plan
Sequoia and Kings Canyon National Parks

VI. APPENDIX

A. Location of Bear-proof Food Storage Facilities

Bear Management Plan
Sequoia and Kings Canyon National Parks

A. Location of Bear-proof Food Storage Facilities (continued)

Bear Management Plan
Sequoia and Kings Canyon National Parks

B. Forms

1. Monthly Record of Drug Use

Bear Management Plan
Sequoia and Kings Canyon National Parks

2. Field Data Form

Bear Management Plan
Sequoia and Kings Canyon National Parks

3. BIMS Incident/Observations

Bear Management Plan
Sequoia and Kings Canyon National Parks

C. Special Regulations Applicable to Bear Management

- (1) For the purpose of the following food storage restrictions, "food items" shall be defined as food, drinks, toiletries and soaps. Garbage, including empty cans, food wrappers, etc., must also be stored or disposed consistent with these regulations. Dirty, non-disposable tableware and cookware must be washed, or else stored as food.
- (2) In front country areas provided with bear-proof food storage lockers:
 - (A) All food items must be stored in the bear-proof food storage lockers provided.
 - (B) Where there is more food than the food storage lockers will hold, non-odorous food items may be stored inside a vehicle trunk or, if the vehicle has no trunk, must be placed as low in the vehicle as possible, and covered from sight with the vehicle doors and windows closed.
- (3) In front country areas not provided with bear-proof food storage lockers:
 - (A) In residences and lodgings: All food items must be stored inside the building so that food is not visible from the exterior of the building.
 - (B) In all other areas: all food items must be stored inside a vehicle trunk or, if the vehicle has no trunk, such items must be placed as low in the vehicle as possible and covered from sight with the vehicle doors and windows closed.
- (4) Notwithstanding sections (2) and (3) above, persons with vehicles that contain built-in refrigerators may store food inside those vehicles, provided it is covered from sight and the vehicle and windows are closed.
- (5) In backcountry areas: All garbage and food items must be stored in one of the following ways: (a) in a bear-proof food storage locker, (b) in a portable bear-proof food storage canister, or (c) suspended at least twelve feet above the ground and ten feet horizontally from a tree trunk or other vertical support using the Parks' counter-balance technique (method is shown in Parks' "Bears and Wilderness Food Storage" handout). The counter-balance technique may not be used when a food storage locker is available. Only those items described in (1) may be stored in food storage lockers. Backpackers camping above timberline and parties using stock are exempt from this requirement provided that 24-hour presence is maintained to safeguard food and garbage not stored as described above.
- (6) The foregoing food storage regulations do not apply to food, drink or similar organic material that is being transported, consumed or prepared for consumption.

Bear Management Plan
Sequoia and Kings Canyon National Parks

D. Responsibilities

1. Superintendent

- a. Responsible for the Bear Management program.
- b. Approves/disapproves the destruction of problem bears, except in emergencies, and fatally injured animals.
- c. Approves/disapproves revisions to the bear management program.

2. Resources Management Division

a. Chief of Resources Management

1. Supervises the Fish and Wildlife Biologist.
2. Oversees the bear management program.

b. Fish and Wildlife Biologist

1. Coordinates and monitors the bear management program.
2. Monitors impacts of bear management program on bear population when these are not being monitored by bear researchers.
3. Directs management of bear handling operations.
4. Makes cooperative decision with District or Sub-district Rangers that a bear be relocated.
5. Makes decisions on release sites for bears to be relocated.
6. Makes recommendations to destroy bears and approves methods of destruction.
7. Prepares written reports to the Parks, the Regional Office, and the California Department of Fish and Game.
8. Maintains liaison with Parks' bear researchers.
9. Makes recommendations for new bear-proof food storage installations and coordinates annual backcountry bear facilities survey.
10. Supervises the Wildlife Biologist.

Bear Management Plan
Sequoia and Kings Canyon National Parks

11. Reviews content of employee information packets.
12. Implements and/or approves/trains others to implement aversive conditioning.

c. Drug Practitioner

1. Purchases and inventories drugs, distributes drugs to field areas, and maintains records of drug use.
2. Prepares annual drug use reports.

d. Wildlife Biologist

1. Develops and revises the Bear Management Plan.
2. Supervises temporary Fish and Wildlife personnel (except on law enforcement/patrol activities).
3. Supervises management bear handling operations.
4. Coordinates and teaches annual bear management and bear handling training sessions for employees.
5. Develops or coordinates development of bear management information.
6. Captures, marks, measures, relocates, kills, and otherwise handles bears.
7. Advises visitors of proper food storage procedures and appropriate behavior when near bears.
8. Coordinates acquisition, distribution, and maintenance of bear management equipment.
9. Coordinates entering BIMS records into computer.
10. Accurately records BIMS and other bear management/research records.
11. Locates bears using radio telemetry equipment.
12. Assists with installation and maintenance of backcountry food storage facilities.
13. Prepares Bear Incident summaries.
14. Normally serves as Drug Practitioner.

Bear Management Plan
Sequoia and Kings Canyon National Parks

15. Maintains current files on all bear incidents, observations, handlings, relocations, individual histories, and movements following relocations.
 16. Prepares and updates employee information packets.
 17. Implements aversive conditioning.
 18. Prepares written reports to the Parks, the Regional Office, and the California Department of Fish and Game.
- e. Temporary Fish and Wildlife personnel
1. Captures, marks, measures, relocates, kills, and otherwise handles bears.
 2. Advises visitors of proper food storage procedures and appropriate behavior when near bears.
 3. Maintains bear management equipment.
 4. Accurately records BIMS and other bear management/research records.
 5. Locates bears using radio telemetry equipment.
 6. Assists with installation and maintenance of backcountry food storage devices.
- f. Clerk-Typist
1. Receives and distributes BIMS records.
 2. Assists entering BIMS records into computer.
3. Research Division
- a. Research Biologist
1. Maintains liaison and coordination with bear researchers and bear management operations.
 2. Coordinates transfer of specimens to museums or research institutions.
4. Fire Management and Visitor Protection Division
- a. District or Sub-district Rangers
1. Maintain records of drug use by Sub-district personnel and that Monthly Drug Reports are

Bear Management Plan
Sequoia and Kings Canyon National Parks

submitted.

2. Make cooperative decisions with Fish and Wildlife Biologist that a bear be relocated.
 3. Approve decisions of release locations within Sub-district.
 4. Recommend to the Fish and Wildlife Biologist that a bear be destroyed.
 5. Send personnel to bear management and/or handling training sessions.
 6. Recommend temporary area closures for bear management purposes.
 7. Direct enforcement of bear management regulations.
 8. Make recommendations for new food storage facilities and coordinate annual backcountry bear facilities survey.
 9. Assure that notices of existing risk are posted as appropriate.
 10. Arrange supervision of temporary fish and wildlife personnel during law enforcement/patrol activities.
- b. Rangers are encouraged to assist with bear handling operations.
 - c. Rangers will inform campers of proper food storage techniques and appropriate behavior near bears.
 - d. Rangers will enforce food storage compliance and other bear related regulations.
 - e. Rangers will provide the Fish and Wildlife Biologist information on bear/human conflicts.
 - f. Rangers will report bear incidents and observations in writing on the computerized form and route it to the RMO Clerk-Typist.
 - g. Rangers will post and enforce temporary area closures.
 - h. Implement and/or approve others to implement aversive conditioning.
 - i. Provide bear management information to incident overhead teams.
5. Interpretive Division
- a. Informs the Parks' visitors of the bear situation at evening programs, visitor centers, on guided

Bear Management Plan
Sequoia and Kings Canyon National Parks

walks, in radio messages, and during informal public contacts.

- b. Prepares books, pamphlets, and other materials on bears and bear management for distribution and/or sale to the public.
- c. Bear Management Information Coordinator
 - 1. Revise and repackage existing bear management information to make it more attractive and interesting.
 - 2. Develop, coordinate, and help disseminate bear management information.
 - 3. Seek and utilize new opportunities to deliver the bear management-food storage message to the public (i.e. public information broadcasts, presentations to school children, news media, local public interest broadcasts, etc.).
- 6. Maintenance Division
 - a. Modifies all solid waste disposal facilities and buildings, when necessary, to make them bear resistant.
 - b. Administers and coordinates garbage collections so as to minimize opportunities for bears to get human foods.
 - c. Insures that sufficient solid waste disposal facilities are available to prevent overflow. The means of meeting such needs will be determined by the areas' Sub-district Maintenance Foremen.
- 7. Park Safety Officer
 - a. Provides consultation on safety regarding the bear management program.
 - b. Provides bear management information relevant to safety.
- 8. Administrative Division
 - a. Provide bear information packages to new NPS and contract employees.
 - b. Insure all contractor buildings are bear-proofed or closed if bears break into them regularly (3 times per season).
- 9. Office of the Superintendent
 - a. Insure every concession visitor and persons visiting these Parks on concession business is provided

Bear Management Plan
Sequoia and Kings Canyon National Parks

bear information.

- b. Provide bear information packages to new concession employees.
- c. Insure all concession buildings are bear-proofed or closed if bear break into them regularly (3 times per season).

10. All Employees

- a. All concession and Park employees are encouraged to be aware of the bear situation, the Parks' bear management objectives, and of the methods being implemented to achieve those objectives.
- b. All Park Divisions and functions will coordinate their respective needs in bear management through the Resources Management Division.
- c. All uniformed personnel are responsible to correct deficiencies as they become aware of them or to call them to the attention of someone who can correct them.