

UNITED STATES DEPARTMENT OF THE INTERIOR

National Park Service

Yosemite National Park, California 95389

HUMAN-BEAR MANAGEMENT PLAN

1975

# HUMAN-BEAR MANAGEMENT PLAN FOR YOSEMITE NATIONAL PARK

## MANAGEMENT PROBLEM

Human-bear conflicts resulting in personal injuries and thousands of dollars in property damage each year have reached near intolerable levels. The conflict between bears and people is due to the present and past availability of human-supplied artificial food sources for the bears. Food-reward associations with humans have resulted in the loss of fear of man and have developed a super-sophisticated population of bears. The extensive availability of artificial food sources has increased bear population numbers and distribution, and has altered the bears' natural wild behavior and foraging habits.

## MANAGEMENT OBJECTIVES

Management objectives consonant with the administrative policies of the National Park Service are as follows:

- (1) To restore and maintain the natural integrity, distribution, abundance, and behavior of the endemic black bear population.
- (2) To provide for the safety of Park visitors by planning the development and use of the Park so as to prevent conflicts and unpleasant or dangerous incidents with bears.
- (3) To provide opportunities for visitors to understand, observe, and appreciate the black bear in its natural habitat with a minimum of interference by humans.

To achieve these management objectives, a program consisting of five basic elements designed to prevent the causes of man-bear conflicts will be implemented. The five program elements are: (1) public information and education; (2) removal of artificial food sources; (3) enforcement of regulations regarding feeding of wild animals and proper food storage; (4) control of problem bears; (5) continuation of a research program on the black bear population dynamics and ecology and monitoring of bear-human relationships. To maintain its integrity, the Plan will be reviewed annually and revised as new information from research and monitoring become available.

## RESPONSIBILITIES

The Resources Management Division has the primary responsibility of seeing that the management plan is fully implemented and the overall direction and coordination of the plan. Divisional responsibilities and cooperation in implementing each of the five program elements must overlap to ensure a successful implementation of the plan. However, major responsibilities in implementing and enforcing each program element are assigned to divisions as outlined below:

<u>Program Element</u>	<u>Division(s)</u>
Public Information and Education	Interpretation, Protection
Removal of Artificial Food Sources	Sanitation, Protection
Enforcement of Regulations	Protection, Interpretation
Control of Problem Bears	Protection, Resources Management
Research and Monitoring	Research Biologist, Protection Resources Management, Interpretation

The specific provisions of each program element are as follows:

### I. PUBLIC INFORMATION AND EDUCATION

The objective of this program element is to educate and inform Park visitors about man-bear relationships in Yosemite, the causes of man-bear conflicts, and how the visitors can help alleviate the problems through their personal actions and compliance with Park regulations.

#### Information Dissemination.

a. A printed brochure explaining bear problems, their causes, what visitors can do to alleviate them, Park regulations, and bear management objectives will be given to all visitors at all Park entrance stations. As much informal verbal information as time permits will be disseminated at the time the handout is given.

b. Printed and verbal information about bears will be given to all campers and visitors staying in concession lodging at the time of registration, to all backpackers when Wilderness Permits are obtained, and at all interpretive information stations. All handouts must be jointly approved by the Interpretive, Resources Management, and Protective Divisions.

- c. In addition to the Protective Division's roving contact and patrol personnel (see Law Enforcement section of this plan), Interpretive personnel will also be assigned roving contact duty in campgrounds and developed areas with the primary duty of conversing with visitors about bears.
- d. Employees from all Divisions shall take the opportunity to assure that visitors understand and comply with regulations and suggested precautions pertaining to bear management when they see violations occurring.
- e. A short-range radio transmission system will be installed in selected locations of the Park and part of the message to visitors will address the Yosemite bear situation.
- f. A permanent sign will be placed at the entrance to each campground and problem parking area stating food storage regulations and bear warnings.
- g. Permanent signs warning visitors that they are entering bear habitat containing potentially dangerous wildlife will be conspicuously posted at each entrance to the Park and backcountry trail heads.
- h. Comprehensive articles as well as brief notices about bears will be placed in each issue of the "Yosemite Guide" throughout the year.
- i. Bear information will be given at, but not limited to, every evening naturalist program. Evening naturalist programs devoted exclusively to bears will be presented at least weekly in each district.
- j. The Protection Division will be responsible for documenting bear damage and injuries with both black and white prints and 35 millimeter color slides, for the purpose of accumulating a material resource to be used in assembling exhibits in visitor centers.
- k. To effectively answer visitor questions, every National Park Service employee in Yosemite will be responsible for being aware of the bear situation, bear management objectives, and of the methods being implemented to alleviate the problem. Each Division Chief will see that his employees meet this requirement.

1. All handouts, posters, exhibits, and signs regarding bears in Yosemite should be developed especially for Yosemite to enhance their credibility, instead of appearing as routine bureaucratic statements.

## II. REMOVAL OF ARTIFICIAL FOOD SOURCES

The objective of this program element is the total elimination of all artificial food sources for the black bear.

### Bear-proofing of Solid Waste Receptacles.

a. All National Park Service and concessions open bins and garbage cans will be bear-proofed, with March 15, 1975 the target completion date. Areas inaccessible due to snowpack will be bear-proofed as quickly as the snowmelt allows vehicle access with mid-June the target completion date.

b. Should the design of the various types of bear-proof lids prove to be ineffective, modification of the lids will be made to make them bear-proof.

c. All trash containers that are not of the bear resistant design whether located at employee residences, administrative offices, concessioner food services, stores, lodges, cabins, or other concessioner facilities will be located inside the building serviced.

d. All concessions High Sierra Camps will continue to use bear-proof bins to hold garbage until pack trains can pack it out.

### Sanitation Standards.

a. All campgrounds, picnic areas, Park roads, and other areas of visitor concentration will be maintained litter free.

b. Refuse receptacle pickups will be carefully scheduled to prevent overflows of cans and bins. Overflows that result due to manpower and equipment shortages preventing adequate unloading schedules, will be corrected by the addition of extra bins. If extra bins are unavailable, bins from lightly used areas will be removed and placed in the heavily used area. An increase in operating funds will be requested for the renovation, maintenance, and operation of a stand by front-end loader, compaction body truck.

c. Bins will be cleaned and repaired as frequently as present funding and manpower permit to reduce odors, maintain sanitary conditions, and to maintain bear-proof conditions. Additional funding will be requested so that a program of container cleaning, maintenance, and cycle replacement can be implemented in order to maintain adequate operational and sanitary conditions.

d. Backcountry campsites will be frequently monitored and maintained litter free.

3. Regulation S 2.24(a) of the CFR 36 regarding proper garbage disposal will be enforced. Backcountry permittees will be given plastic bags to aid in compliance with the "pack in - pack out" rule and will be enforced by Backcountry Rangers.

#### Regulations for Food Storage and Feeding.

a. Special Regulation S 7.16(e)(3) requiring the "proper storage" of all food and similar organic material will be adopted and enforced.

b. Daily and nightly patrols of campgrounds by Park Rangers will be conducted to ensure that camper-food supplies are properly stored and that all campers fully understand and are in compliance with the provisions of Special Regulations S 7.16(e)(3) of the CFR 36.

c. Feeding Regulation, S 2.32(a)(2) of the CFR 36, will be strictly enforced. Bear feeding cases will be expedited wherever possible.

#### Use of Cables and Lockers.

a. The use of cables will be employed at designated firesites to aid backcountry users in protecting food stuffs in the following areas.

- (1) Little Yosemite Valley
- (2) Merced Lake
- (3) Lyell Canyon at Ireland Creek
- (4) Cathedral Lakes
- (5) Glen Aulin
- (6) Rancheria Falls

One sign at each cable will be employed to instruct the backpackers on the proper technique and use of the cables.

- b. Cables may be installed in other identified problem areas when determined necessary for the safety and protection of the backcountry visitor.
- c. Cables may be removed from any area at anytime if they are determined to be ineffective or unnecessary.
- d. Cables will be installed in front-country campgrounds.
- e. Should funds from Public Projects or other sources become available, a limited number of permanent food storage lockers will be installed in selected front-country campsites to aid nonmotorized campers in proper food storage.

### III. ENFORCEMENT OF REGULATIONS

The objective of this program element is to obtain visitor cooperation in eliminating and preventing human-bear conflicts through comprehensive information about, and enforcement of, Park regulations relating to bears.

a. Appropriate law enforcement actions will be taken to obtain compliance with regulations relating to bears. The action taken in any particular situation will depend upon the level of enforcement required to gain compliance and may vary from verbal information up through arrest and/or impoundment of property. Regulations relating to bears include:

- (1) Title 36, Code of Federal Regulations S 2.32(a)(1) and (2): prohibits feeding and molesting of wildlife.

- (2) Special Regulation S 7.16(e)(3) of CFR 36: prohibits visitors from leaving food accessible to bears.

b. The Ranger Division will be adequately staffed to provide patrols through campgrounds and parking areas for visitor information contacts regarding bears. The patrols will be regular enough to maintain and correct situations where visitors leave unattended food.

c. Ranger patrols will occur regularly through concessions operated areas to ensure compliance in keeping dumpsters closed and locked. Any problems regarding concessions which cannot be solved promptly at the field level will immediately be reported to the Superintendent's Office for administrative correction.

#### IV. CONTROL OF PROBLEM BEARS

The objective of this program element is to provide visitor protection against property loss and/or personal injury by removing problem bears from campgrounds and other developed areas.

##### Designations and Authorizations.

- a. The responsibility of conducting bear control actions shall be delegated by the Chief Ranger to 10 Park Rangers. Bear management shall be integrated with and included as a special assignment in their position duties and responsibilities.
- b. The responsibilities of Ranger personnel assigned to bear management include:
  1. The determination and assessment of bear problems.
  2. The implementation of this section (Control of Problem Bears) of the Bear Management Plan.
  3. The reporting of all bear management activities to the Office of Resources Management prior to the release of any captured bear.
- c. The use of Cap Chur guns and immobilizing drugs will be restricted to those employees assigned to bear management who have received specialized training in animal restraint techniques.
- d. Departures from the management plan will be authorized solely by the Superintendent.

##### Immobilization Procedures.

- a. All non-tagged bears captured will be immobilized using Sernylan (phencyclidine hydrochloride) and ear tagged with a color-coded tag. Previously tagged bears captured need not be immobilized.
- b. Sucostrin (succinylcholine chloride) will be used only when a fast reacting immobilizing drug is an absolute necessity to effect capture of a dangerous free-ranging bear.



c. The Park will annually enter into a contract agreement with a licensed veterinarian to fulfill the Federal requirements of the Food and Drug Administration and the Drug Enforcement Administration in the use and procurement of immobilizing drugs.

d. Should the drug CI-744 (an improved analogue of Sernylan) become available, it will be considered for use in bear management for free-ranging captures.

#### Immobilization with Sernylan.

a. Following culvert capture or immobilization, the bear will be moved to a cool, shaded site away from campgrounds or other public use areas. Only personnel with specific assignments on control actions will be present at the site during capture and handling of bears. No bystander will be permitted.

b. Sedation will be accomplished by using the 3 c.c. syringe and jab stick.

c. Immediately following drug injection, the bear will be consistently monitored for respiratory complications, convulsions, excessive heat, dehydration, and sun or foreign debris damage to eyes. Monitoring will continue at least every one-half hour until the onset of recovery, whether stationary or in transit to a release site.

d. The bear will be tagged (see Tagging and Data Collection) and transported to the predetermined release site (see Relocations) while the bear is under sedation.

e. The animal will remain under observation at the release site until it is up and moves off on its own power.

f. Trap confinement during daylight hours shall not exceed six hours elapsed time.

#### Tagging and Data Collection.

a. After the animal is anesthetized, it will be transferred gently from the trap onto a litter and a tag affixed to the lower portion of the right ear with the tag number facing forward, using the proper color code and ascending number sequence. If the animal can be tagged without removal from the trap, it will be left "in situ."

- b. Tags shall be color coded according to districts in which the animal is trapped as follows:

<u>Location</u>	<u>Color</u>	<u>Series</u>
Tuolumne subdistrict	Red	500 series
Big Oak Flat Subdistrict	Green	300 series
Valley District	Yellow	100 and 200 series
Wawona District	Blue	400 series
Research Tags	Orange	A600 series

- c. The Bear Management Activities Record No. 551-b will be filled out for each bear trapped, whether relocated or not. Justification for the trapping and relocation in terms of the bear's behavior or the extent of the problem occurring in the area of capture must be included.

Live-trapping for Relocation.

- a. Random trap sets will be made only in "selective problem areas" which are defined as areas that sustain motor vehicle damage or damage to tents which contain no food. Incidents involving food left out in the open or stored inside tents do not meet the criteria for random trapping.
- b. Positive non-random trap sets will be made for identified bears that exhibit unusual tameness, frequent roads and other developed areas, beg, stop cars, threaten or wait for handouts, and for those bears that enter occupied campsites and aggressively and forcibly take or search for food.
- c. Traps will not be baited or set in any area unless an offending bear is known to be present except for research trapping purposes.
- d. Bears that may have been inadvertently trapped while moving through the area, e.g., bears that cannot be identified with the behavioral traits as listed in (b) or are suspected not to be car clouters (as in a.), due to size, age, or known behavior, will be released in the immediate area after being tagged, sexed, and aged.
- e. Capture efforts and relocations involving sows with cubs of the year will maintain the integrity of the family unit; otherwise, the capture effort will be terminated. Special situations, such as cubs "treed," sows captured, or vice versa, will require technical personnel and deployment of the aerial platform or the use of nets. Cubs shall be sedated while "treed" only as a last resort, providing the aerial platform or net to "brake" the fall are at the site beforehand.

f. No bears in backcountry areas will be captured for transplanting.

#### Trapping Procedure.

a. A trap will not be "set" before 10 p.m. and will be checked for success no later than 8 a.m. (see e. for exception to time requirements).

b. A trapped bear will be moved out of the campground or developed area no later than 8 a.m. in order to minimize the possibility of human injury or the feeding and/or harassment of captured bears.

c. In an unsuccessful "trap set," the trap door will be lowered no later than 8 a.m. and locked in the down position.

d. If a trapping effort is not intended for the following evening, the trap will be removed to the "trap storage area."

e. When continuously attended and monitored, a trap may be set at any hour. This will facilitate capturing bears with those behavioral traits listed in subsection b, Live-trapping for Relocation.

f. Traps will be cleaned after every successful trapping.

#### Free-ranging Captures.

a. When considered to be the most expedient and feasible method, bears that exhibit the behavioral traits listed in subsections a and b, Live-trapping, may be captured using Palmer Cap Chur equipment.

b. The culvert trap will be the primary capture method and will receive first consideration in all capture attempts. When a free-ranging capture is attempted, Sernylan will be used at a dosage rate not to exceed 1.0 mg. for each pound of bear.

#### Relocations by Vehicle.

a. Bears will be relocated at the below designated sites. It is the intent of the live-trapping/relocation program that maximum effort be expended to ensure success. Significant experience indicates that a bear must be transported the maximum airline distance possible, in order to disrupt his orientation and "homing" abilities.

#### Vehicle Release Sites:

Lake Eleanor  
Base Line Camp  
Trumbull Peak Road  
Eleven Mile Meadow  
Deer Camp

No bears will be released outside Park boundaries.

b. In each relocation action, the Resources Management Office will direct the use, frequency, and disposition of the bear. In order to regulate bear density, the release frequency at a given site will not exceed one bear per week.

c. Major and alternate release sites (see attached table) for bears trapped and/or immobilized in a particular location will be employed. Alternate release sites will be used when (1) a repeat capture at the original trap site occurs, or (2) the minimum seven-day release interval for a major site has not been met.

d. At no time will bears trapped and/or captured beyond the Park boundary by State or private agencies be considered for release within the Park.

#### Relocations by Helicopter.

a. Helicopter transport of bears may be employed as an option to vehicle releases when: (1) all vehicle release sites have not met the minimum seven-day release interval; (2) parkwide thrice captured bears and/or aggressive or overly tame bears are relocated; or (3) under the prevailing circumstances, it is considered the most expedient and feasible method.

b. In all cases, the final decision to employ the helicopter for a bear transport will be made by the Chief, Resources Management.

c. Helicopter release sites are: Mount Gibson, Buck Camp, and Kibbie Lake.

d. Sows accompanied with cubs will not be relocated by helicopter means.

#### Permanent Removal of Bears.

a. Bears exhibiting the following behavioral characteristics will be considered for disposition:

- (1) Bears identified due to accumulated evidence as responsible for personal injury(ies).

- (2) Bears twice relocated and captured the third time in one season which (a) are probable car clouters due to accumulated evidence, or (b) exhibit unusual tameness, frequent roads and developed areas, beg, stop cars, threaten or wait for handouts, or enter occupied campsites and aggressively and forcibly take or search for food.
- (3) Bears positively identified as responsible for breaking into closed cars in which the food was properly stored.
- (4) Bears in backcountry areas that cause injury or due to extreme aggressiveness represent a serious threat to the safety of backcountry visitors. Behavioral characteristics of bears that constitute a serious threat to backcountry users include the following:
  - (a) Chasing people to get food carried by them.
  - (b) Advances while snarling, growling, huffing, laying back ears, or baring of teeth that cannot be turned back by shouting throwing objects, beating pans, etc.
  - (c) Mauling occupied sleeping bags.

Backcountry Rangers shall document behavioral traits for the review process (see b) required for the permanent removal of a bear.

- (5) Bears that exhibit injury trauma, or diseases possibly transmissible to humans.

b. Except in emergency situations involving a critical and immediate hazard to human safety, the decision to kill a bear will be jointly made by the Assistant Superintendent, Visitor Services and Resources Management and Chief, Resources Management, based on a thorough review of the situation, including the individual bear's known history and the particular circumstances.

c. Bears to be permanently removed from the population will be trapped or immobilized first with Sernylan and then euthanized using the drug Euthanol at a prescribed dosage.

d. Bears that must be removed from the population may be given to public zoos or universities for processing as a scientific specimen.

## V. RESEARCH AND MONITORING

The objective of this program element is to provide management with comprehensive factual knowledge of bear distribution, population dynamics, behavior, ecology of human-bear interrelationships, and to evaluate the effectiveness of management programs affecting the black bear population.

### Research.

a. A research program will be continued which will include, but not to be limited to, the following elements:

- (1) The development of a census technique that will provide realistic population estimates of the total Park bear population and subpopulations.
- (2) The determination of seasonal and annual distribution patterns, movements, and annual population changes.
- (3) The determination of the population dynamics including productivity, survival, and mortality rates.
- (4) The determination of habitat requirements including natural food preferences and ratings of importance of habitat types by forage quality and quantity.
- (5) The determination of ecological relationships to various habitat types.
- (6) The determination of ecological relationships with other wildlife species.
- (7) The relationships to man including the effects of man upon bear numbers, distribution, movements, and feeding habits.

b. A research project will be programmed to include:

- (1) The information outlined in (a) above that may not be obtained by present research.
- (2) The monitoring of bear-human incidents, control activities, and man-supplied food sources to relate them to changes in bear behavior, distribution, and population levels.

c. Additional research may be undertaken at anytime by National Park Service scientists or outside scientists, when the Park's resident Research Biologist determines it is necessary in order to maintain or manage the bear population as outlined in the objectives of this management plan.

d. Researchers and Park personnel assigned to bear management shall cooperate in the scheduling of traps and other equipment so that objectives of both research and management can best be met. Researchers shall not have operational management responsibilities.

Bear Monitoring Program.

a. All human-bear incidents involving property damage and/or personal injury will be investigated and a factual detailed Bear Incident Report (Form No. 551-a) forwarded to the Resources Management Office within 24 hours of the investigation. Backcountry Rangers will forward a revised for, of these "reports" to the Resources Management Office using the most expedient method possible.

b. All bear management control actions will be logged in detail in the Bear Management Activities Record (Form No. 551-b) and submitted to the Resources Management Office within 24 hours of the control action.

c. Backcountry Rangers will record all bear observations on the "Bear Observation Data Sheets" and submit them to the Resources Management Office using the most expedient method possible. Information shall include observer, date, location, time, tag number (if possible), color and shape of tag, ear tagged, estimated weight, activity, and if possible the sex, age class, and individual description.

d. All statistics regarding the Bear Management Program will be kept current and carefully tabulated and analyzed by the Resources Management Division; (1) to evaluate the effectiveness of management programs; (2) to identify problems; and (3) to provide a factual base to support corrective actions.

# RELEASE SITES FOR INDIVIDUAL TRAP LOCATIONS

<u>Trap Location</u>	<u>Major Release Site</u>	<u>Distance (Airline Miles)</u>	<u>Alternate Release Site</u>	<u>Distance (Airline Miles)</u>
Tuolumne Mdws.	Trumbull Pk. Rd.	28.25	Eleven Mile Mdw.	24.5
	Base Line Camp	24.5	Mt. Gibson	20.5
	Lake Eleanor	29.5		
	Kibbie Lake	29.5		
Tenaya Lake	Trumbull Pk. Rd.	21.5	Eleven Mile Mdw.	18
	Base Line Camp	19.0	Mt. Gibson	17.25
	Lake Eleanor	24.75		
	Kibbie Lake	26.0		
Porcupine Flat.	Lake Eleanor	21.0	Trumbull Pk. Rd.	16.0
	Deer Camp	14.0	Kibbie Lake	22.75
	Elevenmile Mdw.	14.0		
	Buck Camp	17.5		
White Wolf	Lake Eleanor	14.5	Trumbull Pk. Rd.	14.0
	Deer Camp	18.0	Kibbie Lake	16.5
	Elevenmile Mdw.	16.5		
	Buck Camp	23.25		
Crane Flat	Lake Eleanor	15.5	Elevenmile Mdw.	10.75
	Deer Camp	14.0	Buck Camp	22.0
	Mt. Gibson	17.75		
Yosemite Valley	Base Line Camp	16.75	Deer Camp	9.5
	Lake Eleanor	25.75	Mt. Gibson	19.5
	Trumbull Pk. Rd.	15.25		
	Kibbie Lake	26.25		
	Buck Camp	13.25		
Bridalveil Camp	Lake Eleanor	26.0	Trumbull Pk. Rd.	13.5
	Base Line Camp	19.0	Buck Camp	10.0
	Mt. Gibson	24.0		
Wawona	Trumbull Pk. Rd.	17.5	Deer Camp	5.5
	Base Line Camp	26.25	Kibbie Lake	37.0
	Mt. Gibson	32.25		