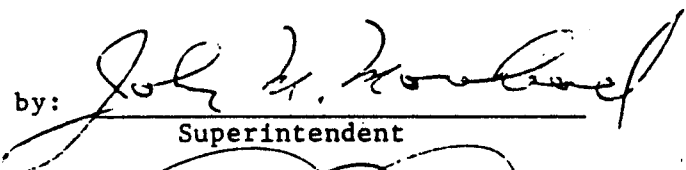


WILDERNESS  
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PARK

1989

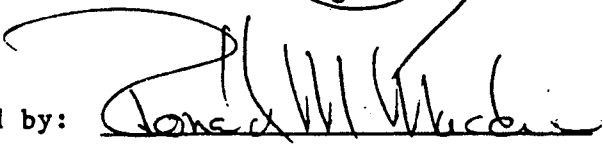
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## Yosemite Wilderness Mana

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## I. Introduction

A. Description of Yosemite Wilderness

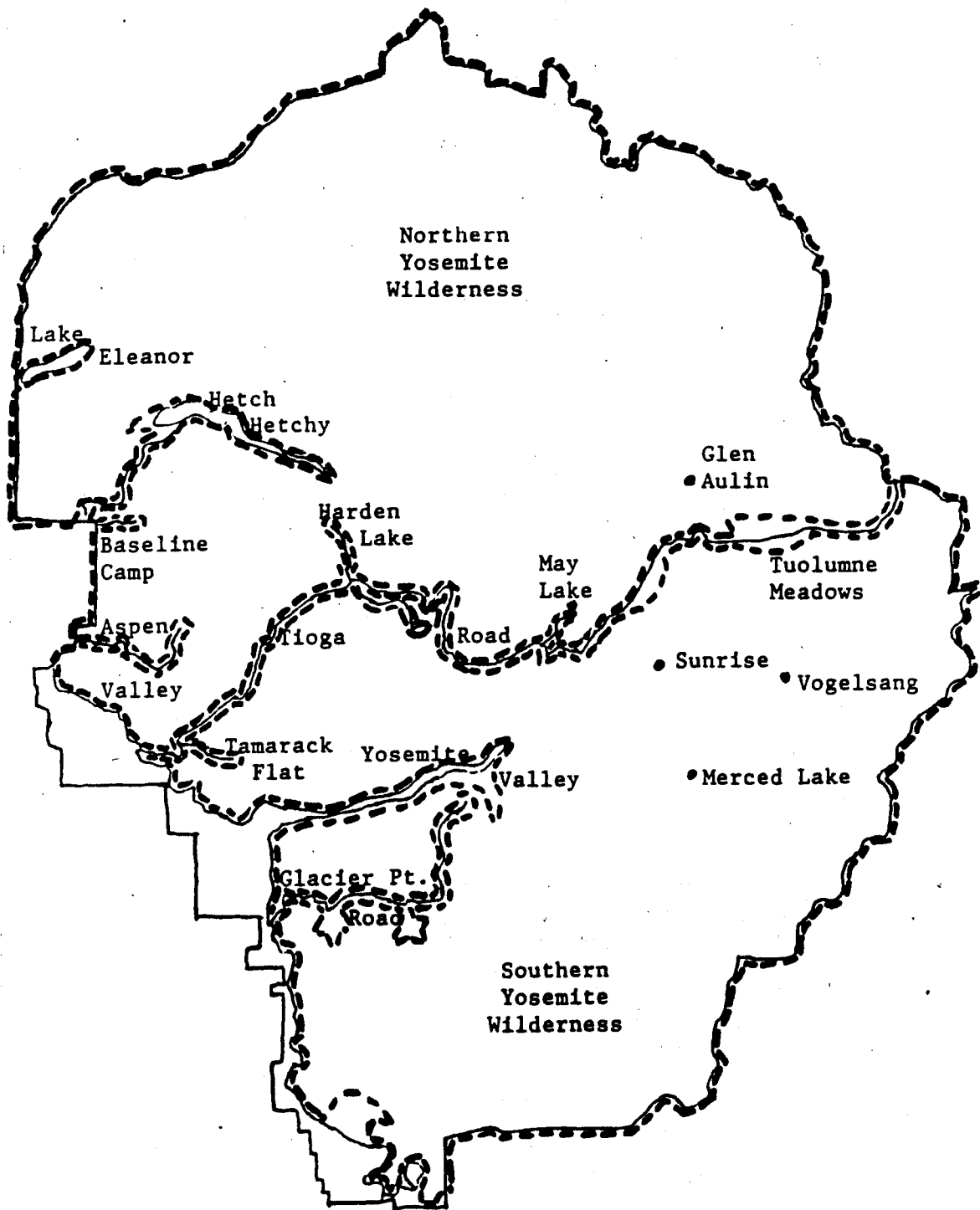
B. Historical Overview

## Acknowledgements

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Figure 1. Boundaries of Designated Wilderness in Yosemite National Park.



## I. Introduction

### A. Description of Yosemite Wilderness

The wilderness established in Yosemite National Park by the California Wilderness Act of 1984 is wide ranging. Its boundaries, shown in Figure 1 and fully described in Appendix A, run from the Lake Eleanor outlet on the north around the east side to Chiquito Pass on the south, defined by the headwaters of the Merced and the Tuolumne Rivers. The western boundary can generally be described as being 200 feet from the centerline of all public access roads and 100 feet from all existing development and development specifically proposed in the General Management Plan. In Yosemite Valley the boundary follows the 4,200 foot contour along the south wall until it comes within 100 feet of the Horse Trail to Nevada Falls, then follows 100 feet from the Mist Trail to the 4,200 foot contour before returning along the contour on the north wall. In the Wawona area the boundary follows the section lines around Section 35, excluding from wilderness the proposed water intake but including a part of the National Park Service lands in the northeast corner of the section. Of the park's 761,677 total acreage, 89% or 677,600 acres have been designated wilderness, and another 3,550 acres are potential wilderness additions.

The lands within wilderness range in elevation from 2,900 feet where the Tuolumne River leaves the park to 13,114 feet on Mount Lyell's summit. The Tuolumne Canyon has a foothill ecology with related plants and wildlife. As one rises from the river through the forest belt, temperatures cool and vegetation changes significantly. Along the Sierran crest and the subalpine Cathedral and Clark Ranges are subalpine environments with their own specific plant and wildlife communities. Along the crest the subalpine community meets the sage and pinon communities of the eastern slope. Remnants of glaciers remind the traveller of a colder past.

Glaciers rearranged the watersheds, reforming and carving many lakes. There are over 350 lakes in Yosemite's wilderness and hundreds of lakelets and ponds. Wilderness includes hundreds of miles of permanent and intermittent streams, many populated by fish, flowing into the great canyons of the Merced and Tuolumne rivers.

Water flowing through wilderness lakes and streams can fluctuate greatly with the weather. Spring snowmelt fills creek banks with torrents, often trickling or dry by the end of August. The snow pack itself can fluctuate widely, from very heavy years with snow remaining on the ground in late summer and fall to drought years with little snow to feed the rivers and lakes. Average rainfall in Yosemite is 36.5 inches per year while the mean annual snowfall in the park is 74 inches.

Yosemite wilderness occurs in two large blocks north and south of the thin line of the Tioga Road. Access now is much like access when Yosemite National Park was formed: there are roads, trails, and cross-country routes. The old roads in wilderness are managed now as trails and are part of the roughly 800 miles of maintained park trails. Cross-country routes add several hundred miles more. The High Sierra Loop connecting the six



High Sierra Camps is a major trail thoroughfare which includes part of the John Muir Trail. The Muir Trail, in turn, incorporates a section of the Pacific Crest Trail which runs the length of the park.

Camping is permitted anywhere beyond one mile from a road or beyond four trail miles of Yosemite Valley, Glacier Point, Wawona, Hetch Hetchy, and Tuolumne Meadows. Wood fires are not permitted above 9,600 feet to protect several species of subalpine trees. Campgrounds are designated in only 10 wilderness and potential wilderness locations: in Little Yosemite Valley, at Lake Eleanor, Miguel Meadow, and at five High Sierra Camps.

Wilderness use is affected by weather and accessibility. In years of heavy snow, early use concentrates longer in lower elevation parts of wilderness such as Little Yosemite Valley and Lake Eleanor or Kibbie Lake. Use of higher elevation wilderness is determined by the opening of the Tioga Road as well as the snow pack's melting rate. The greatest number of people come around the three major holidays of summer. Cooling temperatures and fall storms bracket heavy use later in the year as people, like the deer, move to lower country. Winter wilderness use, a small part of the whole, is concentrated within short distances of the road corridors.

Visitor use in Yosemite wilderness increased dramatically starting in the mid-1960's. Between 1968 and 1975 overnight use increased 250 percent while park use as a whole increased only 15 percent. Annual overnight use in wilderness peaked in 1975 at 219,000 visitor nights; since then it has dropped to nearly half that level. This drop is attributed to a decrease in popularity of backpacking in general and in Yosemite specifically. Although annual fluctuations in use are related to weather and snow conditions, the nine-year downward trend cannot be related to them. Use will probably continue to vary in the range from 100,000 to 150,000 visitor nights per year for the foreseeable future.

#### B. Yosemite Wilderness Through Time

The diversity of environments in Yosemite wilderness has contributed to a long record of human presence there. Current information indicates human occupation of the Yosemite region for around 5,000 years. Significant technological and cultural changes, including population replacements, have occurred during that time.

Situated in the middle of the Sierra Nevada range Yosemite straddles a major geographic and prehistoric cultural boundary between central California and the Great Basin. The differentiation of vegetation communities by elevation combined with seasonal shifts in plant and game availability and climate to draw Indian groups from both sides of the Sierra into higher country during the summer months in search of food and materials. This seasonal movement and variations in resource distribution helped develop complex trading networks with neighboring peoples. Trading of goods led also to trading of technological innovations.

The Central and Southern Sierra Miwok were the major ethnographic groups inhabiting the area now defined by the park, while other groups,

particularly the Paiutes from the Great Basin, were present seasonally. Ordinarily permanent villages occupied year-round were located below about 4,000 feet. Seasonal camps from 12,000 feet on the Sierra Nevada crest down to 2,000 feet in the river canyons were short-term occupation sites used to gather local plant and animal resources.

The gold rush brought abrupt changes to wilderness. Tensions between Indians and miners led to the formation of the Mariposa Battalion in 1851, which sought to remove the indigenous population to reservations. Pursuit of Indian groups led to the "discovery" of Yosemite Valley by the Battalion. Indian occupation of the Yosemite area continued after 1851 although Miwok populations declined sharply because of introduced European disease and disruption of indigenous economies.

Reports of the Valley brought the first tourists and, in turn, tourist facilities and publicity. The federal government reserved Yosemite Valley "for public use, resort, and recreation" in 1864 by granting the Valley and the Mariposa Grove of Big Trees to the State of California. The State organized a commission to manage the Valley and Mariposa Grove of Big Trees but provided little funding. Facilities were developed privately through permits from the state. Hotels and farm plots provided lodging and food. Toll trails built to prominent Valley viewpoints gave access out of the Valley, sometimes connecting with older trans-Sierra Indian trails used by packers to supply miners east of the Sierra.

The 1864 reserve boundary was roughly one mile back from the rims of Yosemite Valley. During the severe drought of the mid-1860's the trans-Sierra trails paralleling the Valley rims became routes for sheep driven into the high country away from the waterless heat of the San Joaquin Valley and from southern California. Thousands of sheep were herded into Yosemite wilderness overgrazing some high country meadows and bringing alien plants especially to lower elevations where they were often able to invade and replace many native grasses.

To John Muir these sheep were "hoofed locusts" destroying the high country. Accordingly, Muir and others used publicity and political ties to press for reserving as a park the high country surrounding Yosemite Valley. The Act of October 1, 1890, reserved lands including most of the modern park but also lands extending east to the Minarets and west past the South Fork of the Merced River. Lacking an organization to run the new park, the Secretary of Interior arranged for a troop of cavalry to patrol the park from their camp in Wawona. The cavalry mapped the park and slowly established a network of trails through the high country in the process of protecting the place from intrusion, especially by sheep and hunters.

In 1905, the park boundary was redrawn to correspond more with the headwaters of the Merced and the Tuolumne Rivers. Lands were excluded on the south and west because too many inholdings compromised park integrity but also because some economic interests pressed for the right to exploit resources there. In that year the state also ceded Yosemite Valley and the Mariposa Grove back to the federal government. In 1906 the recession was accepted by Congress, and the cavalry moved its base of operations for the

park as a whole to Yosemite Valley.

Until the recession of Yosemite Valley to the federal government, Yosemite had been truly a wilderness park. Addition of Yosemite Valley to the park and movement of park headquarters from Wawona to the Valley changed the focus of park administration. Pressures in the Valley were greater, more immediate and complex. The Yosemite Valley Railroad and then the All Year Highway opened the park year round. The appearance of the automobile brought "improved" and paved roads on which people travelled in increasing numbers. Each time roads improved, visitation made a corresponding leap to increase pressures on existing water, sewer, electrical, and communications facilities as well as on administrative functions.

To promote and protect the park by getting people to know it, the Sierra Club organized outing trips into the high country of Yosemite as well as other parts of the Sierra Nevada. The outings began small but grew in the early decades of the 20th century to large camps with organized activities and programs, long side trips by foot or horseback, and some scientific exploration as well. These large guided parties introduced many people to the mountains who would otherwise probably not have ventured so far or so long by themselves.

The National Park Service was established in 1916 to manage the several national parks and monuments. As a new agency, the National Park Service, like the Sierra Club before it, set out to protect parks by promoting them. The National Park Service extended the trail system developed by the cavalry, rebuilding and re-designing many miles of trail to make them wider, more easily graded, and directed toward the views people wanted to see. These trails were used mostly by horses and mules, the primary means people used to move around the high country. Stock parties reached their peak in the 1930's as did the number of pack stations using the Yosemite region.

While revamping park trails, the National Park Service also promoted access to the high country through a system of High Sierra Camps operated and supplied by park concessioners. Growing from a couple of camps before 1920 to six by 1961, these camps were separated by a day's travel and were connected by a trail that came to be known as the High Sierra Loop. Both trail and camp locations have become important routes and destinations for many more people than those with reservations at the camps. Greater accessibility than other well known trails has meant that the High Sierra Loop has carried a large percentage of high country travel.

The National Park Service promoted wilderness and the park without knowing very much about it. Even before the Valley had been set aside, the Yosemite region had been the subject of both public and private scientific investigation which continued sporadically into the Park Service period. Early study was aimed primarily at identifying and describing natural phenomena.

Service interest in natural history began with nature guiding and naturalist walks in 1920 to educate visitors about their surroundings. The

Service also developed its Wildlife Division, based in Berkeley, which made seasonal reports on park wilderness conditions and facilities. Lowell Sumner's October 9, 1936, "Special Report on a Wildlife Study of the High Sierra in Sequoia and Yosemite National Parks and Adjacent Territories" summarized wildlife observations as well as changes he saw occurring along the Sierran crest. He noted the ominous impacts of large developments, the extensions of roads and trails especially, on wilderness areas. The new Tioga Road, he felt, "illustrates the complex, irrevocable, and perhaps partly unforeseen chain of disturbances" set into play when any such project is authorized. To Sumner the impacts clearly demonstrated the need to preserve remaining wilderness. Sumner introduced the concept of recreational carrying capacity as the maximum use an area can receive consistent with its long-term preservation.

The foundation for what we now call "resources management" was laid by Park Forester Emil Ernst, whose various interests took him deep into the high country gathering information about both history and natural history. Ernst's studies of park meadows during the 1930's and 1940's were the first intensive long-term studies of vegetative changes, relating them to park history and practices. Whereas the focus of information for ranger naturalists tended to be educational services for visitors, Forester Ernst was able to gather information in Yosemite over a long period of time to mold policies for park forestry practices.

Ernst assembled a vegetation map of the park, studying the relationship between fire and meadows in the process. These separate studies led him in the 1940's to his studies of meadow carrying capacity. A blend of disciplines gave Ernst a perspective rare in park research. He concluded in his May 15, 1943, "Preliminary Report on the Study of the Meadows of Yosemite Valley" that "protection worked destruction" on the meadows. Fire had been a critical element in meadow livelihood, but fire suppression along with human impacts such as farming and lowering of water tables had severely affected meadow character and vegetation composition. His study not only of vegetation but of its historical use and change provided the grounds for his recommendations which the National Park Service took nearly three decades to adopt. Some of Ernst's work was later reevaluated, brought up to date and published by Robert P. Gibbens and Harold F. Heady as The Influence of Modern Man on the Vegetation of Yosemite Valley (1964).

Ernst did not confine his studies to the Valley but took what he learned there to the study of wilderness meadows. His "1948 Saddle and Pack Stock Grazing Situation of Yosemite National Park" (March 31, 1949) surveyed high country meadows and use. He focused on bottleneck areas and called for regulated grazing use and control of large party use. Using his vegetation map with information from ranger patrols, Ernst arrived at meadow carrying capacities and a pattern of rotated use in wilderness.

Outside the Park Service, Sierra Club outings and dual roles of some club members like Sumner led to other studies of high country, focusing on meadows because they were most obviously impacted. Sierra Club outings had grown to several hundred people and several hundred head of horses and mules by the 1930's; outings the club had started to protect the wilderness

were instead bringing increasing impact to it. In the 1940's, Lowell Sumner and Richard Leonard studied these impacts on meadows and their relation to trips. In "Protecting Mountain Meadows," in the Sierra Club Bulletin (May, 1947), Sumner outlined the effects he saw of grazing in Sequoia and Kings Canyon, pointing out that overgrazing greatly accelerated normal processes of transition. The degree of meadow damage and rate of meadow disappearance, he felt, were related to a meadow's importance as a stopping place. So the Sierra Club proposed changes in operating procedures for the outing trips to reduce meadow impacts.

Concerns about high country meadows led alpine botanist Carl Sharsmith to write "A Report on the Status, Changes, and Comparative Ecology of Selected Backcountry Meadow Areas in Yosemite National Park" (June 29, 1961). Sharsmith studied seven meadows in 1960, finding some long standing overuse and a clear correlation between ecological change and heavy use. Changes in plant succession and plant type, as well as the presence of introduced plants in lower elevation meadows, led Sharsmith to recommend grazing limits or exclusion for some meadows.

Park Forester George Briggs toured the backcountry in 1964 and 1965 to develop "A Report on Backcountry Conditions and Resources, with Management Recommendations." He anticipated several developments of the 1970's by proposing more thorough visitation measurements through campfire permits and outlining the need for a "Backcountry Coordinator" who would increase emphasis on resource protection.

While these studies focused on grazing, the explosion of interest in backpacking in the 1960's and early 1970's significantly changed levels and kinds of wilderness use in Yosemite. Stock use declined as pack stations failed or consolidated to offer different forms of stock use, such as spot packing backpackers. Numbers of people in the wilderness increased; they appeared most often on foot, and for a while, wilderness travellers were much younger than had been the case before. In addition, by the early 1970's women were using wilderness more frequently than in the past.

With publication of the Sierra Club Outing Committee's Wilderness Impact Study Report (September, 1972), the Sierra Club shifted emphasis from stock to human impacts, expanding their concerns to impacts of Sierra Club trips taken on foot as well as using pack stock and burros. A major difficulty in determining types, sizes, frequency and magnitude of human activity in wilderness, the study concluded, "rests in the decision as to how much alteration, or change, in natural ecosystems is compatible with club, park, and forest goals and objectives."

Those objectives, for parks at least, were defined in part by more recent carrying capacity studies done through university cooperation with the National Park Service. The "Ecological Carrying Capacity Research, Yosemite National Park, Final Report" (September 8, 1976), directed by Daniel O. Holmes of the University of California, Berkeley, resulted from research begun in 1972 on trampling, water pollution, meadow impact, and campsite impact. The study pointed out the need for continual monitoring

of vegetative change in wilderness to determine use limits commensurate with the preservation of both the vegetation and the wilderness experience. Information developed from this study was used with patrol records and wilderness observation to establish use limits in Yosemite in 1973. Later studies by Theodore Foin (Visitor Impacts in National Parks: The Yosemite Ecological Impact Study, April, 1977) and James Absher and R. G. Lee (Analysis of Sociological Carrying Capacity for Yosemite National Park, December 11, 1978) filled out the earlier carrying capacity studies and solidified Park Service policies on limiting use in Yosemite.

Trailhead quotas replaced zone limits in 1977 after sufficient study of carrying capacities established limits for use in park environments. Quotas were developed by the park's Research Scientist with a computer model of park wilderness. In places like Little Yosemite Valley where hundreds had camped each night in 1972, quotas brought numbers of campers down to relieve pressure on vegetation and soils as well as on park cleanup operations. By limiting people in heavily used areas, the quotas and wilderness permit system also helped to distribute people into other areas by using alternative routes and camp locations.

Wilderness use in the 1960's and 1970's prompted a rash of wilderness guide books and rapid change in the technology of backpacking. The search for faster routes to more desirable areas as well as an effort by many to avoid more crowded areas led to an increase of cross-country travel. That, in turn, produced more defined cross-country routes and some often serious off-trail erosion. At first encouraged officially to disperse use, cross-country travel is now discouraged officially and sharply limited as the unforeseen impacts of it have become apparent.

Wilderness maintenance rejuvenated with the increase of wilderness use. Trail crews had dwindled sharply by 1970. Those crews grew in the 1970's, redeveloped the older hand skills with native materials, and began the slow stabilization and reconstruction of the Yosemite trail network. By 1980, crews had covered perhaps a quarter of the trails and in doing so had built a core of experienced, skilled workers providing continuity to the operation. Changes in budget systems and priorities have prevented systematic refurbishing of park trails. Crews have been unable to keep up with the "official" network, much less to work on any of the cross-country route erosion.

The Resources Management Division of the park, however, has undertaken a thorough inventory of wilderness resources and conditions. Bringing Ernst's vegetation map up to date is a step towards measuring change in wilderness over the past 50 years. The inventory of trails and trail conditions also provides a means of monitoring changes and providing information for modifying practices and impacts in wilderness areas. Ideally, coordination of ranger patrols, research information, maintenance activities, trailhead quotas and wilderness permits, and further research will sustain the natural balance remaining in wilderness and allow an informed approach to redressing imbalances discovered there.

The 1984 California Wilderness Act brought the different threads of

wilderness work together. This plan is the last link in the legal process required by the 1984 Act to establish wilderness status for Yosemite.

## II. Wilderness Managment in Yosemite

- A. Legislation
- B. Policies
- C. Goal
- D. Objectives
- E. Procedures



## II. Wilderness Management in Yosemite

Wilderness management in Yosemite is guided by a long tradition of legislative mandates and agency policies which together form a framework for specific goals, objectives and procedures.

As wilderness became scarce, cries for its protection increased, first to set aside areas where it could be preserved, and eventually to control its use and development. Wilderness management, although a contradiction of terms, became necessary. "Wilderness management should not mold nature to suit people," wrote one commentator. "Rather it should manage human use and influences so that natural processes are not altered. Managers should do only what is necessary to meet wilderness objectives, and use only the minimum tools, force, and regulation required to achieve those objectives." These are the principles guiding wilderness management in Yosemite.

### A. Legislative Mandates

While the 1864 act granted Yosemite Valley and the Mariposa Grove to the State of California to be held "inalienable for all time," that act did not mention wilderness preservation as a specific purpose. Similarly, the 1890 act establishing the Park and the 1906 act accepting the recession to the federal government of Yosemite Valley and Mariposa Grove did not go beyond the requirement that timber, mineral deposits, natural curiosities, or wonders be retained in their natural condition. Wilderness preservation was of paramount importance to John Muir as he pressed for passage of the 1890 bill. To many of the bill's supporters in Congress as well, preservation of the region was a central purpose, though it was never spelled out in the final act.

The 1916 act establishing the National Park Service did little to solve the dilemma of balancing preservation and use. Although scenery, wildlife, and natural and historic objects were to be protected in their natural condition, the act also considered the enjoyment of present and future generations. Not until 1964 did an act of Congress specifically designate the preservation of wilderness as a national policy. This statutory protection was unprecedented and prevails today as the broad legislative mandate governing wilderness management in Yosemite. The Wilderness Act prohibits commercial enterprise and permanent roads and states that, except to meet the minimum requirements necessary to administer the area as wilderness, there shall be no temporary roads, no use of motor vehicles, no motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation.

The Wild and Scenic Rivers Act of 1968 was amended by the California Wilderness Act of 1984 to add the Tuolumne River to the national system and by the Merced River Wild and Scenic River Act of 1987 to add the Merced River and the South Fork of the Merced to the national system. The 1968 act provides that designated rivers shall remain in a free-flowing condition and protects the rivers and their immediate environments from degradation. Where designation coincides with wilderness, the more

restrictive provisions apply.

Fifty-one miles of the Tuolumne River, 34 miles of the Merced River, and 19 miles of the South Fork are designated as both wild and scenic and as wilderness. The wild and scenic river planning requirements for these segments are satisfied by the provisions of this wilderness plan which establishes the following wild and scenic river planning guidelines: 1) All river segments within designated wilderness are classified as "wild". This includes the segment from the U.S. Geological Survey gauging station to the park boundary that was proposed for "scenic" classification in the Tuolumne River Wild and Scenic River Study. 2) The boundaries for these "wild" segments coincide with the wilderness boundaries as delineated in this plan. 3) Within wilderness a specified wild river corridor is unnecessary and will not be specified. The wilderness management plan applies to all adjacent park wilderness as well as the river vicinity, insuring that the values for which the river was designated will be protected. 4) The City and County of San Francisco owns an 80 acre parcel of land in Poopenaut Valley that extends across the Tuolumne River inside a river segment classified as wild. This parcel is designated as a potential wilderness addition by the California Wilderness Act and is a high priority for acquisition according to the Yosemite Land Protection Plan.

The California Wilderness Act of 1984 designated 677,600 acres as wilderness and 3,550 acres as potential wilderness additions. This act requires that potential wilderness additions, including the five High Sierra Camps, private inholdings and utility corridors, be managed as far as practicable as wilderness. It further provides that, when uses prohibited by the 1964 Wilderness Act cease, the Secretary of Interior may designate these potential additions as wilderness. All designated wilderness in Yosemite is to be managed in accordance with the provisions of the 1964 Wilderness Act.

The Committee Report accompanying the House version of the 1984 act, while not a legislative mandate, makes recommendations for managing the Yosemite Wilderness. The report states that the Secretary of the Interior should document baseline operational and environmental impact conditions of the High Sierra Camps and that, "if and when it occurs that the continued operation of these facilities in these parks at the then acceptable operational standards results in an increased adverse impact on the adjacent wilderness environment (including increased adverse impact on the natural environment within the enclaves themselves), the operation of these facilities will be promptly terminated, the facilities removed, the sites naturalized, and ... the areas promptly designated as wilderness." The report further states that helicopter use for routine nonemergency purposes associated with visitor use is a questionable activity and should be eliminated.

The 1987 Act on Minimum Altitude For Aircraft Flying Over National Park Units states:

It shall be unlawful for any fixed wing aircraft or helicopter flying under visual flight rules to fly at an altitude of less than 2,000

feet over the surface of Yosemite National Park. For purposes of this subsection, the term "surface" refers to the highest terrain within the park which is within 2,000 feet laterally of the route of flight and with respect to Yosemite Valley such term refers to the upper-most rim of the valley.

The administrator of the Federal Aviation Administration will provide notice of restrictions in FAA publications. Department of Defense regulations require that all nonemergency military flights maintain a distance of no less than 3,000 feet from any surface feature in national parks and monuments. Aircraft in violation of legislation or standards should be promptly reported to the FAA through the Park Air Manager at Fire Dispatch. Date, Time, nature of the incident, fuselage number, and reporting person must be provided by written memorandum to the FAA for disciplinary action.

#### B. Agency Policies

Department of the Interior. Department guidelines for wilderness contain procedures and criteria used for proposing new areas for designation and for managing them once designated. These guidelines, written by Assistant Secretary Nathaniel P. Reed as Secretarial Order No. 2920, introduced the concept of the "minimum tool" for uses necessary for the health and safety of wilderness travelers or the protection of the wilderness area. The manager must use the minimum tool, equipment, or structure necessary to successfully, safely, and economically accomplish the objective, with economics considered the least important of the three criteria. Minimum tools include, but are not limited to, patrol cabins, pit toilets, fences, and hydrological devices. In special or emergency cases involving the health and safety of wilderness users or the protection of wilderness values, aircraft, motorboats, and motorized vehicles may be used.

National Park Service. The Management Policies of the National Park Service include a chapter on wilderness preservation and management, introduced with the statement that

The National Park Service will preserve an enduring resource of wilderness in the National Park System, to be managed for the use and enjoyment of wilderness values without impairment of the wilderness resource.

"Public purposes for which park wilderness shall be managed," state the Policies, "relate to recreational, scenic, scientific, educational, conservation, and historical use." The Policies state further that "the preservation of wilderness character is the prime administrative responsibility of the Service." The Policies encompass the minimum tool guidelines of the Department and further require that specific approval be obtained for the nonemergency use of motorized or mechanized equipment, the installation of new facilities or the modification of existing facilities in wilderness. National Park Service Policies specifically prohibit permanent roads, heliports, helipads, airstrips, chalets, concessioner camps, and picnic tables.

The policies on wilderness use specify that the Service will limit or disperse use if necessary to preserve wilderness character. That point has been reached for Yosemite wilderness, and a trailhead quota system is used to limit use.

With regard to visitor use and facilities, the Policies state:

The visitor must accept wilderness largely on its own terms. Modern conveniences are not provided for the comfort of the visitor; and the risks of wilderness travel, of possible dangers from accidents, wildlife, and natural phenomena must be accepted as part of the wilderness experience.

Beyond notifying and warning of obvious or hidden hazards, the National Park Service leaves wilderness users to assume most of the responsibility for their own safety.

Western Region. The Western Region has proposed a policy on use of aircraft in national parks that addresses administrative flights in wilderness. This policy states that within designated wilderness, flights are prohibited except for emergency purposes and management of wilderness in accord with the "minimum tool" test or in cases when the reduction of impact to park resources by the use of aircraft clearly outweighs the potential aesthetic impacts of the aircraft.

Yosemite National Park. The 1980 General Management Plan for Yosemite gives only broad guidance for managing wilderness. General statements limit the types and levels of use or development to those that do not significantly impair natural, scenic and cultural resources or that are necessary for visitor use and enjoyment. For wilderness the Service is directed to provide for a quality wilderness experience, allow natural systems and processes to follow their courses with minimal human intrusion, and limit the number of visitors to levels which do not significantly affect natural environments. The plan further directs that abandoned roads in wilderness will be restored to a natural condition and that no new development of facilities will be allowed. Should existing developments be removed, there will be no reconstruction of facilities.

### C. Goal

In Yosemite wilderness the Service seeks to preserve an environment in which the natural world along with the processes and events that shape it are largely untouched by human interference. Visitor use and enjoyment of wilderness are encouraged as long as such use does not result in levels of human impact that seriously compromise the wilderness values the National Park Service is mandated to protect. Specifically, ecosystems - including plant and animal species and populations along with unpolluted air and water - are protected in a natural state free from human structures, disturbances, and technology. Wilderness visitors encounter outstanding opportunities for solitude, for physical and mental challenge, for inquiries into various fields of biological and physical science in an

environment largely free from modification, and for interacting with fellow human beings in a spirit of equality and friendship. The wilderness provides a sense of freedom, inspiration, contemplation and tranquility.

#### D. Objectives

Human-induced change. The Service will impose limits on human-induced change and will manage impacts to insure that intrusions from civilized and technological society will not be allowed to slowly but steadily erode wilderness values. The Service will establish maximum use levels and quotas and may close or restrict certain areas to entry or camping to accomplish this objective. Trails, campsites, and other impacts will be systematically monitored to determine when changes approach unacceptable levels and to aid in planning.

Wilderness experience. Visitors can find a variety of wilderness experiences in keeping with traditional use patterns and can select the degree of crowding, solitude, or human impact they wish to experience. Visitors have differing desires and expectations and should have the opportunity to have them met. Regulatory restrictions will be minimized to allow as much freedom as possible consistent with wilderness resource objectives. Opportunities are available for both foot and stock travel.

Wilderness values. The Service will provide educational and interpretive media and programs to facilitate greater understanding and appreciation of wilderness values and to help visitors minimize resource impacts. These services will address the concept of wilderness, human uses of wilderness, and the history of the wilderness idea. These services will promote minimum impact techniques, proper food storage, and wilderness safety. Both formal frontcountry and informal wilderness interpretation will be provided by the service.

Minimum tool. The Service will use the minimum tool necessary to carry out management and research functions. These tools will be primitive and non-mechanized whenever possible. The tools in Appendix B are the only ones that are approved for use in Yosemite wilderness. Exceptions must be approved in advance in writing by the Superintendent.

Aircraft use. Aircraft will not be used in Yosemite wilderness other than flights in response to emergencies dealing with fire suppression, search and rescue, medical assistance, or law enforcement. The Superintendent must approve each nonemergency administrative flight in wilderness. Nonemergency administrative uses of aircraft subject to approval are listed in Appendix C.

Resource impacts. Problems with natural and cultural resource impacts will receive management priority based on their severity and will be corrected wherever they occur in wilderness either on or off trail, in frequently or seldom visited areas. The erosion and destruction of a seldom visited meadow in a remote area is as inimical to wilderness principles as a similar event in a frequently visited area near a trailhead.

Wilderness facilities. Facilities in Yosemite wilderness will be limited to those currently present or specifically proposed in this plan. They include safety railings; food storage devices; designated camping sites with food lockers, toilets, and agency constructed fire rings; drift fences; hitching racks; trails; patrol cabins; trail bridges; hydrometeorological devices; and radio antenna. Except for trail junction signs, existing place name signs, temporary emergency and resource signs, all signs for wilderness will be concentrated at trailheads and boundaries. The locations of administrative facilities are listed in Appendix D and food storage devices in Appendix J. There will be no additions to these facilities except the proposed hydrometeorological devices. Further facilities would compromise the National Park Service's responsibilities in wilderness management.

Visitor facilities. The Ostrander Lake Ski Hut and the five High Sierra Camps at Merced Lake, May Lake, Sunrise, Glen Aulin and Vogelsang, are overnight visitor facilities in potential wilderness additions. No additional facilities will be built and, should increased adverse impact on adjacent wilderness environments result from the operation of existing facilities, they will be removed.

Management activities. The Service will provide information and enforce regulations by means of ranger patrols and informal wilderness interpretation. It will enhance public safety through the use of safety warnings and provide appropriate and effective search and rescue response. It will not remove hazard trees except at designated campsites; trees can be expected to fall occasionally. There will be no environmental modification in the wilderness to minimize rockslides, avalanches or other natural phenomena except as approved along the Tioga Road at Olmsted Point and Spring Hill. Naturally ignited fires will not be suppressed or contained unless they pose a danger to life or property or threaten to leave the natural fire zone.

Research and monitoring. The Service will encourage and conduct research on wilderness resources and use to ensure that natural processes continue unimpaired. Wilderness resources will also be monitored to provide an information base for determining trends and to ensure that impacts are managed appropriately.

Abandoned roads. Numerous abandoned roads exist in Yosemite wilderness. In most cases trails will be maintained on the old roadbeds and drainage controlled to prevent erosion. Some roads have been nominated to or are on the National Register of Historic Structures. These roads will be preserved and protected from further deterioration by using those maintenance techniques which minimize long term environmental impacts from the roads' establishment while stabilizing the road structures for trail use and historic preservation. The remaining roads will be allowed to return to a natural state once detrimental drainage problems are corrected. The disposition of each road is listed in Appendix E.

Utility lines. Underground utility lines are located in the roadbed of the Old Glacier Point Road between Chinquapin and Glacier Point, the Old Wawona

Road between Wawona and Yosemite Valley, and the Old Tioga Road between Yosemite Creek Campground and Tuolumne Meadows. In addition a telephone cable is located in Indian Canyon between Yosemite Valley and Porcupine Flat. Portions of these lines are in wilderness and will not be maintained using mechanical means. No new utility lines will be installed in wilderness, and existing lines will not be extended or enlarged. The overhead power lines between Yosemite Valley and Glacier Point and between South Entrance and the Mariposa Grove are in potential wilderness additions. When these lines are replaced they will be put underground along non-wilderness road corridors or replaced by radio or similar technology. Once the old equipment has been removed, those potential wilderness areas will be added to Yosemite wilderness.

#### E. Wilderness Management Procedures

The management of Yosemite wilderness necessitates use limits, zoning, and resources impact monitoring. Within wilderness there is a variety of settings, ranging from heavily used campsites close to trailheads to remote trailless canyons. All these areas will be managed to maintain or enhance the current state of natural conditions and balance there, to prevent any further degradation of those conditions, and to restore areas already degraded. Since an area can only sustain so much use before unacceptable degradation occurs, the concept of use limits has been applied. To implement zoning and use limits, the minimum regulation necessary has been applied.

Use zones. Zoning in Yosemite wilderness has evolved over the years as facilities were developed and use increased. The development of trails created concentrated use zones as well as trailless zones. As more visitors used wilderness, de-facto high use zones developed, and campsites were designated. The first formal zoning occurred in 1972 when travel zones were established to record and distribute use in conjunction with wilderness permits. Since then zones have been established where no camping is allowed, no wood fires are allowed, and where special visitor use management actions are required.

The no camping zones include all areas within one mile of public access roads and within four trail miles of Yosemite Valley, Glacier Point, Hetch Hetchy, Tuolumne Meadows, and Wawona. These zones were established to eliminate the impact of camping on wilderness resources and experience in heavily used areas closer to roads. The watersheds of Parker Pass Creek, Dana Fork of the Tuolumne, and Gaylor Creek are also in no camping zones to protect the Tuolumne Meadows drinking water supply.

The no wood fire zone includes all areas of the wilderness above 9,600 feet in elevation and Lost Valley on the Merced River. Whitebark pines are unable to produce enough dead wood each year to sustain any fuel wood collection. Since the species ranges down to 9,400 feet in the north of the park and to 9,800 feet in the south, an average elevation of 9,600 feet was selected for ease of management. A small no wood fire zone is located on the top of Half Dome because of the heavy use and lack of fuel wood there. Figure 2 delineates the no wood fire zones.

Use limits. Service managers became concerned in 1972 that no information was available about the amount of use occurring in wilderness or describing resource and social impacts associated with that use. Field surveys that summer found trampled vegetation in the most popular areas, eroded and multiple trails throughout wilderness, and up to 200 people camped at alpine lakes on weekends. These unacceptable impacts led to the decision to limit use by requiring wilderness permits. Public use limits have been established for Yosemite wilderness to protect environmental and scenic values, protect natural and cultural resources, and allocate use equitably.

Public use limits are administered through a system of trailhead quotas. The first step in the process of establishing quotas was to set capacities for the 52 travel zones in wilderness. These were based on numbers of acres in a zone, the number of miles of trails per zone, and ecological fragility. The acres and miles were multiplied by desired campsite and trail densities to determine the maximum number of people to be permitted in each zone each night. These values were then adjusted downward by an evaluation of the capability of the zone to withstand use. Trailhead quotas were designed so that average use in a zone would not exceed the capacity set for that zone. Adjustments are made for differences between anticipated trips as recorded on the permits and actual trips. Trailheads which contribute significantly to a zone are adjusted upward or downward depending on impacts in that particular zone. The resulting quotas are reviewed annually by wilderness rangers and resource managers and altered based on their knowledge and experience. Current quotas are listed in Appendix F.

Impact monitoring. The final step in establishing quotas is the monitoring of resource impacts along trails and at campsites to provide data for defining acceptable levels of change to wilderness resources. Monitoring data also provide baselines for evaluating future changes and trends. Site, trail, and travel zone impact assessments are then used to adjust trailhead quotas and travel zone capacities as well as to make recommendations for wilderness maintenance priorities.



### III. Wilderness Use Management

A. Wilderness Permits and Reservations

B. Minimum Impact Wilderness Use

C. Wilderness Stock Use

### III. Wilderness Use Management

#### A. Wilderness Permits and Reservation

Wilderness permits are a key management tool for protecting wilderness resources and ensuring the wilderness traveler's enjoyment and safety. The permit system enables dispersing or limiting visitation in heavily used areas, allows for education in minimum impact wilderness use and wilderness regulations, and assists in collection of data on which to base management decisions.

Day use will be limited on a policy rather than permit basis, recognizing that eventually impact and use monitoring may make day use permits necessary. Day use travel on maintained trails is limited to groups of 35 or fewer people with the exceptions noted in Appendix G. It is Service policy to deemphasize cross-country travel by limiting such travel in Yosemite wilderness to groups of eight people or fewer. This plan recognizes actual and potential environmental deterioration from off-trail use. Service offices and employees will not advertise cross-country routes and will offer alternatives to off-trail use when possible. The Service will implement area limits or closures as necessary based on existing or potential impacts.

Wilderness permits are required for all overnight use in Yosemite wilderness. They are free of charge and can be obtained at the following stations in the park: Yosemite Valley Visitor Center, Tuolumne Meadows Permit Kiosk, Wawona Ranger Station, and the Big Oak Flat Information or Entrance Stations. Permits may also be obtained from Forest Service Ranger Stations for trips entering Yosemite from the Ansel Adams, Hoover, or Emigrant Wilderness Areas. For long distance hikes such as the John Muir or Pacific Crest Trails permits may be obtained from the issuing station nearest the start of the trip. Wilderness permits are not required for day hiking or for persons staying in the High Sierra Camp facilities. Visitors are not required to check back in after completion of their trips. The wilderness permit is not a rescue permit.

Reservations for wilderness permits are accepted between February 1 and May 31 by mail only. A brief itinerary must be mailed to the Wilderness Office with the reservation request. Up to 50 per cent of the quota for each trailhead is available by advance reservation. The remainder are filled on a first-come, first-served basis with permits issued no more than 24 hours prior to trailhead departure. Because reservation quotas for weekend starting dates at popular trailheads such as Tuolumne Meadows or Yosemite Valley are filled early, alternate trailheads and routes should be specified when applying for a permit by mail.

Group size is a controversial subject. Limits for Yosemite will be adjusted in conjunction with joint decisions on group size limits by national parks and national forests of the southern and central Sierra. The Park Service also relies on the sharing of information and communication with commercial users to reduce impacts on trails, camp areas, and cross-country routes.

The maximum size for administrative or private groups traveling overnight on established trails in Yosemite is 25 people. Groups of 15 or more are requested to write for a reservation between February 1 and May 31. To reduce impacts on off-trail areas, the maximum size for any group traveling more than one quarter mile off established trails is eight persons, whether overnight or day use. Large groups may be best accommodated by applying early, indicating alternate routes on permit requests, starting mid-week, splitting into two smaller groups, or traveling on two different trails. When necessary the Wilderness Office will utilize the reservation quota for two days to accommodate a large group applying for a small quota trailhead. Although many organized groups publish their trip schedules before reservation requests are accepted, the Park Service cannot guarantee the availability of any trailhead or date. Trip participants should be informed that slight adjustments may have to be made due to quota limitations.

The 1984 California Wilderness Act established a wilderness boundary at 4,200 feet elevation in Yosemite Valley and 200 feet from most road corridors through the park. Accordingly, many rock climbing routes were automatically included in wilderness. At this time no new regulations are planned. The Search and Rescue Office will monitor this use and make recommendations as necessary. Climbers using wilderness must protect food correctly and dispose of trash and human waste properly. Climbers, like backpackers, must carry their trash with them rather than throwing it off their climbs. It is recognized that the use of pitons and expansion bolts damages the rock, but at this time no regulation of their use is in effect. Presently there are no quotas established for climbing routes. Climbers may continue to bivouac on grade V and VI routes in Yosemite Valley without obtaining a wilderness permit. In addition, the voluntary registration system will continue to be available to climbers who wish to register.

Requests for information and reservations should be directed to:

Wilderness Office  
National Park Service  
P. O. Box 577  
Yosemite National Park, CA 95389

Telephone: 209/372-0285 or 0310  
or, May through October, 209/372-0307 or 0309 Yosemite Valley  
or, June through September, 209/372-0309 Tuolumne Meadows

Appendix H provides more wilderness permit information.

#### B. Minimum Impact Wilderness Use

Wilderness permits, trailhead quotas, group size limits, and maintenance are important management tools to minimize wilderness user impacts. In addition, through personal contacts and brochures, rangers and wilderness information specialists make the park's wilderness users aware of park regulations and minimum impact procedures.

Recommended minimum impact procedures for camping include:

Campsites. Camping is permitted anywhere in wilderness except within four trail miles from Tuolumne Meadows, Glacier Point, Wawona, Hetch Hetchy, and Yosemite Valley, or within one trail mile of any road. Camping is not permitted within 100 feet of a flowing stream, river, or any body of water and is discouraged in meadows and other fragile vegetative sites [36 CFR 2.10 (b) (3); 2.10 (b) (1); 2.10 (b) (5); 2.1 (a) (1) (ii)]. The use of well established campsites is encouraged. No permanent camp structures such as rock walls, fireplaces, bough beds, tables, or lean-tos are to be built. The cutting of branches from standing trees, dead or alive, is prohibited.

Fires and wood utilization. Collection of firewood above 9,600 feet elevation has an adverse effect on park resources. Therefore, wood fires are not permitted above 9,600 feet [36 CFR 2.1 (a) (1)]. Areas closed to wood fires are posted in high use areas. Each party obtaining a wilderness permit is informed of the no-wood-fire areas shown in Figure 2. Parties using stoves may camp anywhere in wilderness except that, in areas with designated campgrounds, those campgrounds must be used. The construction of new fire rings is prohibited. Only dead wood on the ground may be used as fuel [36 CFR 2.13 (a) (1)].

Solid waste. Everything packed in must be packed out. All trash, including paper, cans, bottles, metal foil, garbage, and unused foodstuffs, must be packed out [36 CFR 2.13 (a) (1); 2.10 (b) (2)].

Drinking water. Drinking water taken from lakes and streams should be disinfected by either boiling, filtering, or chemical treatment. Vigorous boiling of water for three minutes will kill any disease-causing bacteria present in the water. Chemical treatment or filtration may purify water but is considered less effective than boiling.

Sanitation. Improper waste disposal can adversely affect the environment and the health and safety of wilderness users. Soaps, biodegradable or otherwise, are prohibited in lakes and streams, as are dishwashing, clothes washing, and the cleaning of fish [36 CFR 2.14 (a) (5), (7)]. Washing should be done out of a container. Waste water must be dumped at least 100 feet from the stream. Human waste should be disposed of in a small hole at least 100 feet from water, trails, and campsites [36 CFR 2.14 (a) (9)]. Waste should be buried with four to six inches of soil over it, and the covered hole should be made indistinguishable from the surrounding area. Toilet paper should be burned.

Food storage. Bears may be encountered throughout Yosemite. So that bears remain wild with minimum human influence on their behavior, it is important that wilderness visitors' food be secure from them. To protect bears, ensure high quality wilderness experiences for visitors, and prevent personal injury and property damage, wilderness users are required to store their food properly by using bear cables, bear poles, and food lockers provided at designated campgrounds or by using the counterbalance method of

hanging food from a tree branch (ten feet above the ground and four feet from the tree trunk) when other facilities are not available [36 CFR 2.10 (d)].

Minimum impact procedures for trail use include:

Shortcutting. Shortcutting of trails and switchbacks is prohibited [36 CFR 2.1 (b)]. Cutting across switchbacks causes erosion and degradation of trails and may roll rocks down on people below. Shortcutting through meadows can cause irreparable damage to fragile vegetation.

Group size limits. Maximum group sizes in wilderness have been established for Yosemite National Park as follows:

	<u>on established</u>	<u>Day use</u> <u>trails</u>	<u>cross-country</u>
hikers	35		8
stock	35 per trail segment		0

	<u>on established</u>	<u>Overnight use</u> <u>trails</u>	<u>cross-country</u>
hikers	25		8
stock	25 people and 25 head		0

The natural human tendency of groups to hike in single file has started many cross-country trails in wilderness, creating erosion in meadow and forest alike. To prevent further resource damage while preserving the essence of the cross-country experience, maximum group size for all wilderness travel one quarter mile from any designated trail is limited to eight people whether for day or overnight use. Exceptions are listed in Appendix G.

Other restrictions to limit impact include:

Pets. Pets are not allowed on trails or in wilderness except for seeing-eye and hearing dogs [36 CFR 2.15 (a) (1)].

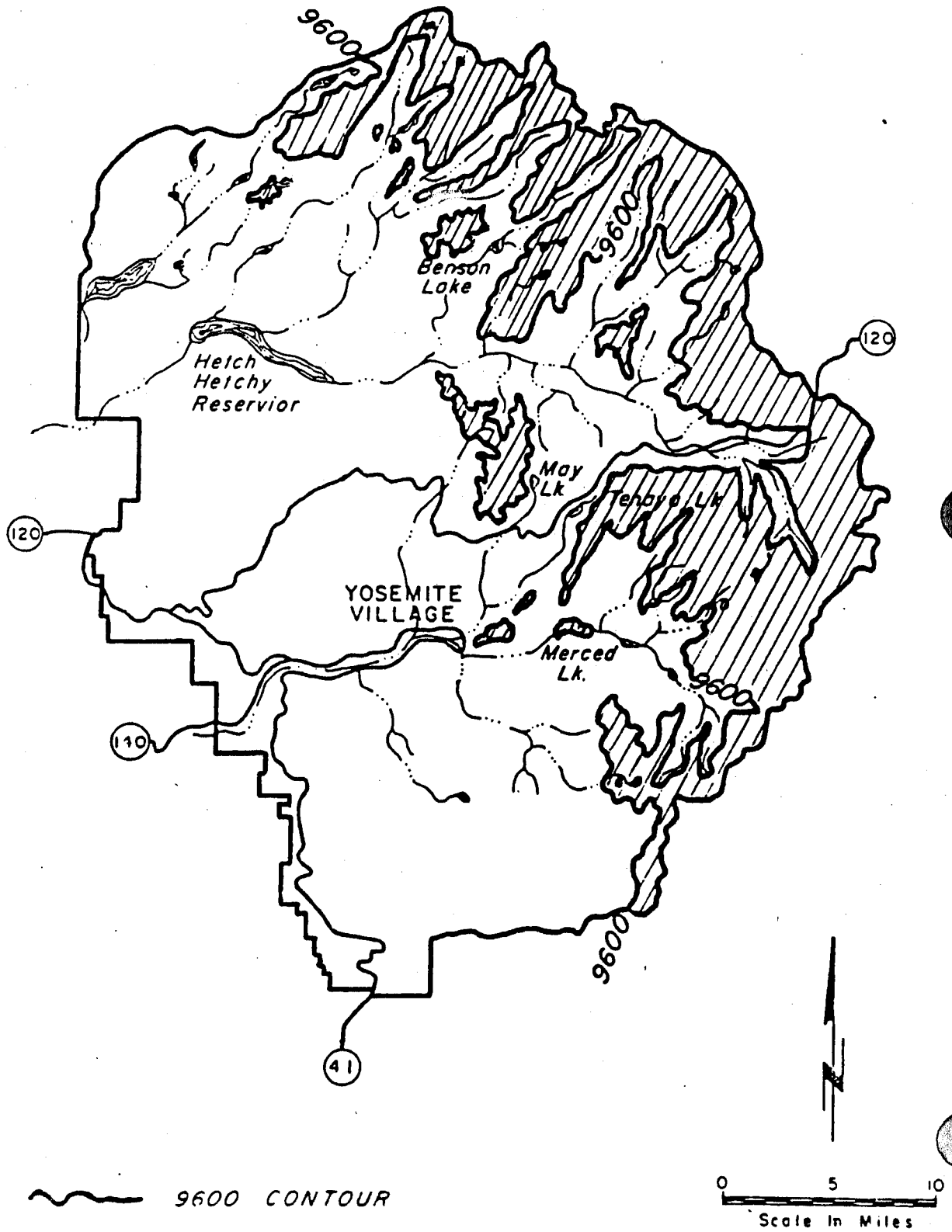
Firearms, traps, and other weapons. The possession of trap, seine, spear, firearm, bow and arrow, sling shot, or any other implement designed to discharge missiles is prohibited [36 CFR 2.4 (a)].

Fishing. A valid California fishing license is required of all fishermen 16 years and older [36 CFR 2.3 (a)]. Digging for bait is prohibited [36 CFR 2.3 (d), (6)].

Bicycles. Bicycles, defined as every device which is powered by human power upon which a person or persons may ride on land, having one, two or more wheels, are prohibited on trails and in Yosemite wilderness [36 CFR 4.3 (c)]. The Wilderness Act of 1964 prohibits the use of motorized or mechanized vehicles or equipment in wilderness.

Watercraft. Motorboats are prohibited on all the natural lakes and streams of Yosemite National Park [36 CFR 7.16 (i)]. The Wilderness Act of 1964

Figure 2. FIRES AND WOOD UTILIZATION



prohibits the use of motorized or mechanized equipment in wilderness.

Caches. Federal regulations prohibit abandoning property or "leaving property unattended for longer than 24 hours, except in locations where longer time periods have been designated or in accordance with conditions established by the Superintendent" [36 CFR 2.22 (a) (1 & 2)].

Wilderness access to disabled persons. The 1964 Wilderness Act and the 1984 California Wilderness Act both define wilderness uses partly in terms of restricted use of mechanized or motorized equipment. A change in Title 36, Code of Federal Regulations, chap. 4.3, provides an implicit exception to the laws' restriction to allow wheelchair access by disabled people. As a result disabled wilderness users may enter wilderness with the assistance of wheelchairs or similar equipment, but they will be considered no different from any other pedestrian or equestrian user. National Park Service personnel will provide information about trail conditions and about known and possible hazards. Disabled wilderness users will be expected to act in accordance with their physical limitations. There will be no modification of wilderness environments or trails to facilitate wheelchair access.

Commercial packing. In accordance with Title 36, Code of Federal Regulations, chap. 1, section 5.3, permission may be granted for commercial packing contingent upon three conditions: 1) a commercial use permit must be obtained; 2) packing must originate and terminate outside the park; and 3) packing as part of a class receiving full college credit from an accredited school may also be granted a permit. Permittees may be restricted to designated park areas.

Special events. The National Park Service Management Policies (VII-17) state "The use of park lands or facilities for organized athletic events or competitive recreational events characterized as public spectator attractions is not permitted . . . ." Special events such as walk-a-thons, races, or endurance or other competitive rides in wilderness are not permitted in Yosemite because such events are not compatible with the direction to preserve natural conditions and the land's wilderness character. The Nordic Holiday race from Badger Pass, however, will continue because it crosses only a small portion of wilderness and is an existing traditional use without undue impact on the area's resources.

Military use. Off duty groups from military installations may use wilderness following the same rules and procedures applicable to civilian users. Official military activities in wilderness are covered by the Director's Special Directive 83-84 which says military activities "should not be allowable in park areas with the exception of those that relate to usual and normal park activities such as search and rescue, outdoor survival, and events not simulating conditions encountered in combat situations." Specific military activities may occasionally be permitted, but these must follow all park rules and regulations, will have wilderness permits, will not interfere with normal visitor use, will not have resource impact greater than a comparable public use, will not exceed visitor use levels, will not carry, display or use weapons, and will be conducted out

of public view. There will be a military liaison officer available to the Superintendent throughout any permitted exercise.

### C. Wilderness Stock Use

Stock - horses, mules, and burros - has been an historically important factor in the use and enjoyment of Yosemite wilderness and remains a significant recreational activity. Wilderness designation increases the importance of stock for National Park Service administrative and maintenance purposes by restricting aircraft alternatives.

Types of stock use. Commercial stock use includes guided trail rides, guided overnight pack trips, supply of concessioner facilities, spot packing, and rental pack burros. In addition to a commercial license, all overnight commercial stock use requires a wilderness use permit issued by the Wilderness Office. Commercial operators are required to report annual numbers of grazing days within the park to the National Park Service, Resources Management Division. Trail routes used on a recurring basis must be approved in writing by the Superintendent. The annual opening dates of concessioner stables and trails used for commercial rides shall be approved by the Superintendent each year.

Administrative stock use includes law enforcement patrol and public contact, search and rescue, management inspections, backcountry sanitation operations, trail reconstruction and maintenance, and resources management.

Private stock use includes day rides and overnight pack trips by private parties.

Trail use. Except for published and posted closures, all designated trails in the park are open to stock. The maximum string size for day use parties is 35 head of stock per trail segment except where otherwise designated by the Superintendent and the Yosemite Stock Use Plan. Stock must travel on designated trails or authorized stock routes and remain within one quarter mile of trails for watering, rest stops, and camping. For safety stock have the right-of-way on trails. Stock parties must travel in single file. Loose herding of stock is prohibited except where reasonable and prudent to prevent injury to stock and people.

Group size. Overnight stock parties on designated trails are limited to 25 head of stock and 25 people. Neither limit may be exceeded by a single party, so that a group of maximum size under this rule would likely consist of 13 riders and two packers leading two strings of five mules each. Any combination of the figures is possible as long as neither figure is exceeded by a single group. Parties using additional authorized cross-country stock routes listed in Appendix G are limited to 12 horses or mules and 12 people. Again neither limit may be exceeded by a single group on approved cross-country routes, so that a group of maximum size would likely consist of six people horseback plus a packer with five mules, or any combination of the figures as long as they are not exceeded. A wilderness permit is required for any overnight trip, and stock parties are subject to all regulations pertaining to sanitation, trash, and fires. Organized



groups must make a reservation at least two weeks in advance.

Grazing. Grazing is permitted within one quarter mile of the trail or authorized stock route. Grazing is prohibited within four miles of trailheads and paved roads or immediately surrounding any of the Yosemite Park & Curry Company High Sierra Camps. Drift fences are located in appropriate locations and are the responsibility of the Wilderness Maintenance Office. Grazing impact will be monitored by the Resources Management Division.

Improper picketing of stock in meadows and tying to trees overnight or for extended periods of time is prohibited. Hobbles, loose grazing, or a line stretched between two padded trees is recommended. Early season use at higher elevations is managed by the Protection Division to mitigate off-trail use and trampling damage.

Public information. Written information about stock use is available to the public and provided with wilderness use permits for stock parties. This information specifies the amount, time, kind, and place of stock use. More detailed information is in the Yosemite Stock Use Plan.

Public information and education are the primary means of mitigating conflicts between stock and other users. Maps showing probable encounters with stock on wilderness trails are displayed at all wilderness permit stations.

Llamas. Llamas are permitted on all trails except the High Sierra Loop where higher levels of stock use on often narrow trails make conflicts between horses and llamas a public safety problem. Policies and regulations governing llamas are covered in the Yosemite Stock Use Plan.

#### IV. Park Operations

- A. Visitor Protection
- B. Maintenance
- C. Natural Resources Management
- D. Cultural Resources Management
- E. Interpretation
- F. Concessions Management
- G. Research

#### IV. Park Operations

National Park Service Management Policies (VI-6 & 7) state,

In the management of wilderness resources and of wilderness use, the Service will use the minimum tool necessary to successfully, safely and economically accomplish its management objectives. When establishing the minimum tool, economic factors should be considered the least important of the three criteria. The chosen tool or equipment should be the one that least degrades wilderness values temporarily or permanently.

The Policies further state that "the specifics of wilderness management for a given park will be included in the park's backcountry management plan" and that "specific approval is required for the nonemergency use of motorized or mechanical equipment." Administrative use of motorized or mechanized tools or equipment for emergency purposes is permitted under the wilderness acts.

The Service recognizes that some impacts will occur in the course of managing wilderness. It is incumbent upon the Service and its offices, however, to consider and review carefully each use of tools and equipment excepted for nonemergency administrative purposes to minimize long term environmental impacts on wilderness. Requests and justifications for exceptions for motorized or mechanized tools or equipment to be used in wilderness but not included in this plan must be submitted to the park Wilderness Committee. That committee makes recommendations on all proposals to the Superintendent and Regional Director. One time uses of mechanical or motorized equipment for nonemergency administrative purposes may be approved by the Superintendent provided such use meets the minimum tool criteria for the job to be done. Any new proposal for a motorized or mechanized tool or piece of equipment not on the approved list in this Wilderness Management Plan (Appendix B) must go through the approval process using minimum tool criteria before that tool can be used in designated wilderness.

The Yosemite Wilderness Committee is composed of the Research Scientist, Park Archaeologist, Park Curator, Wilderness Unit Manager, and the Chiefs of the Interpretation, Maintenance and Engineering, Resources Management, and Visitor Protection Divisions and/or their designates. The committee meets spring and fall each year and has an annually rotating chair beginning with the Wilderness Unit Manager in 1988. Committee functions are 1) to review and make recommendations on requests for tool exceptions in wilderness; 2) to review planned nonemergency administrative flights in wilderness; 3) to review each spring the plans of all divisional wilderness operations such as research and resource proposals, trail work plans, and ranger patrol schedules; 4) to review wilderness operations and issues each fall for conformity to this plan; and 5) to act as a wilderness clearinghouse to ensure a cooperative and coordinated agency effort in Service wilderness operations. The Wilderness Committee reports to the Park Superintendent.

Appendix I is a chart showing the location of wilderness related offices and functions within the Yosemite National Park organization.

#### A. Visitor Protection

The primary goals of the Division of Visitor Protection are 1) to protect human life and property and 2) to protect and preserve park resources by applying sound resource management principles, by providing accurate information, and by enforcing all applicable laws, regulation, and policies using the minimum effective level approach.

The Division of Visitor Protection is organized by districts. Three districts are organized around park roads, entries, and communities. The fourth, the Wilderness Unit, includes the rest of the park. The districts and the Wilderness Unit share responsibilities and patrols within a day's travel of the roads. Figure 3 shows district boundaries and search and rescue (SAR) responsibilities in Yosemite National Park. Search and rescue along with wildland fire suppression are also shared functions since they are specialized enough to have developed their own offices within the division.

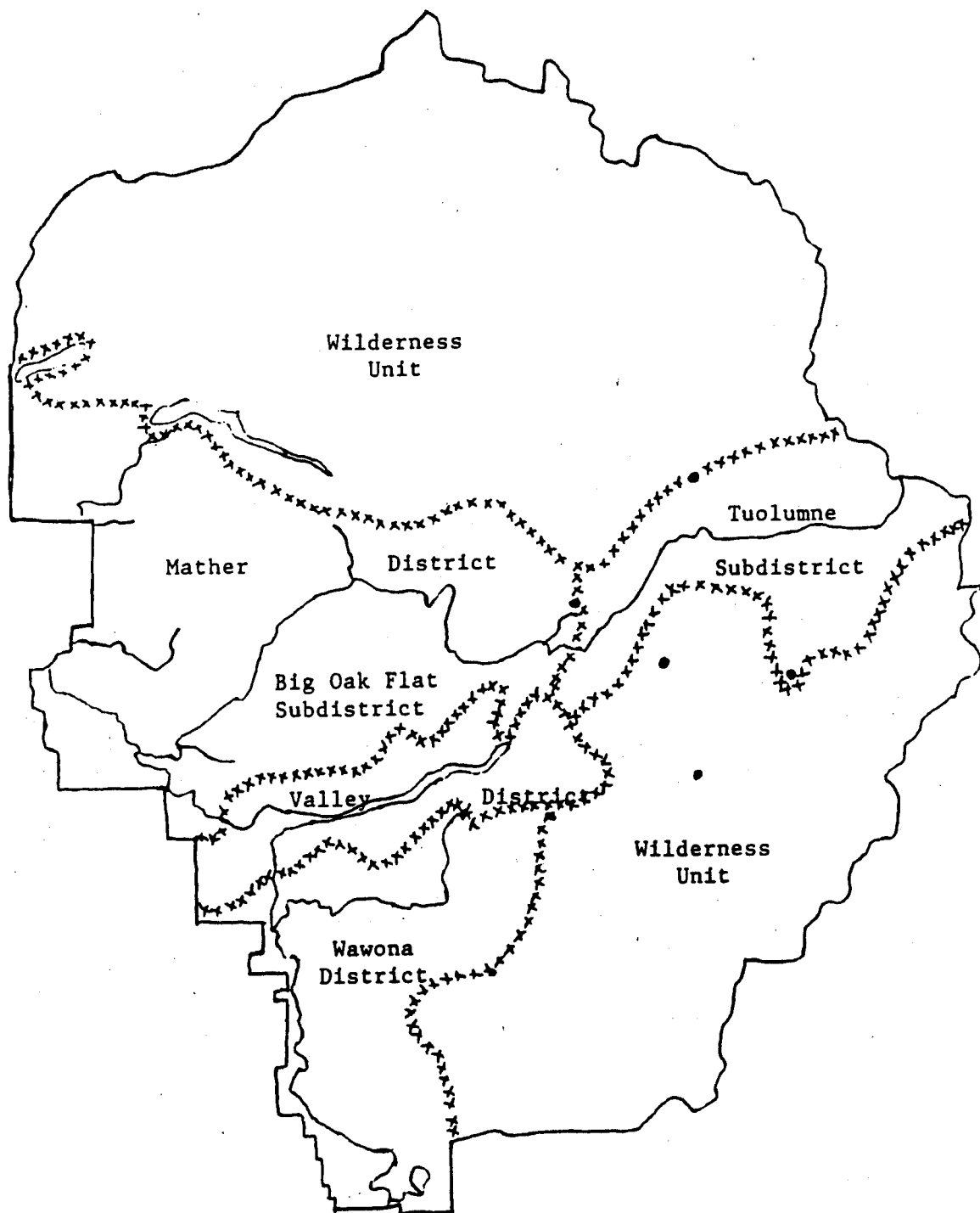
##### 1. Wilderness Unit

The Wilderness Unit, headed by the Wilderness Unit Manager, has the primary responsibility for the day-to-day management of public use of wilderness in Yosemite and also for ensuring administrative adherence to the Park Wilderness Management Plan. The Wilderness Unit Manager serves on the Wilderness Committee and is charged with the responsibility for keeping the plan current.

Specific objectives of the Wilderness Unit are: 1) to encourage visitor health and safety by providing information on known health and safety hazards, reporting or correcting wilderness safety hazards, checking and repairing trail information signs, and participating in search and rescue operations in wilderness; 2) to provide information on trail and environmental conditions; 3) to control the impacts of wilderness use and to ensure the quality of wilderness visitors' experience through administration of trailhead quotas and the wilderness permit system; 4) to minimize the impacts of wilderness use by providing information on minimum impact camping; 5) to provide law enforcement in wilderness; and 6) to patrol wilderness to survey trail conditions, monitor use, collect fisheries information and wildlife sightings, monitor resource impacts, contact and assist users, and enforce wilderness regulations.

The Wilderness Unit has a three branched approach to meeting its objectives. Three groups of employees - rangers, interpreters, and technicians - work out of the Unit office, each with different roles and responsibilities in wilderness. Each part of the operation is scheduled with the emphasis on a maximum of patrol time in wilderness areas of the park. Employees must have skills of wilderness travel as well as minimum impact camping techniques. Service to wilderness visitors and protection of park resources are the primary functions of Wilderness Unit employees.

Figure 3. District Boundaries and SAR Responsibilities in Yosemite National Park



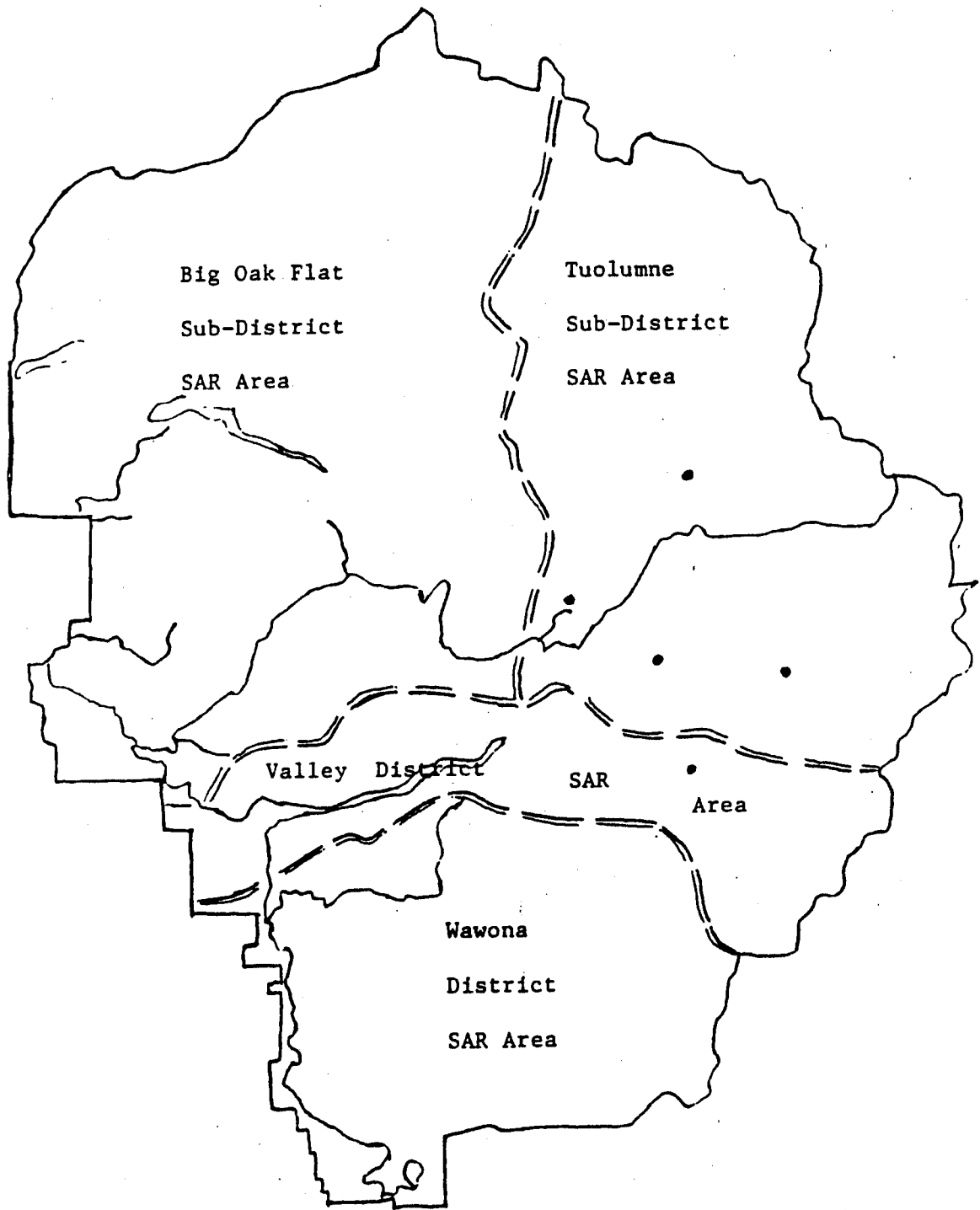


Figure 4. Search and Rescue Responsibilities in Yosemite National Park.

Wilderness rangers patrol the wilderness with horses and mules, on foot, and on skis or snowshoes in winter. Rangers use patrols to range the resource to provide public information and to ensure compliance with federal regulations. Wilderness rangers have an environmental, ethical, and educational approach to law enforcement, emphasizing voluntary compliance with park regulations. By communication of environmental ethics to park visitors, rangers interpret the park to people in an informal manner, while providing for visitor health and safety and for resource protection. In addition to law enforcement and interpretive functions, rangers have a maintenance function in the upkeep of wilderness cabins, maintenance of trail signs and campsites, and work and reporting on trail hazards.

Ranger patrol patterns have been modelled on the cavalry patrols of the 1890's. Patrols vary from one to ten days in length. The type of patrol and the amount of patrol an area receives are determined principally by numbers of visitors, seasons of the year, cross-country routes, and impact problems. Hunting seasons necessitate poaching and boundary patrols. Some rangers are stationed in the field in areas of high use, patrolling the areas surrounding their stations at Miguel Meadows, Merced Lake, and Buck Camp. Other patrols originate from Tuolumne Meadows to cover trails in the park's northern half as well as on the High Sierra Loop. Wilderness rangers are occasionally stationed at White Wolf to patrol trails from that base. Patrol of the Kibbie Lake area is augmented by the Lake Eleanor ranger. Rangers coordinate patrols and gather information on wilderness resources and use. Information on sign and trail conditions, wilderness hazards, fisheries and wildlife, and resource conditions is shared with Resources Management, Wilderness Maintenance, Fire Management, Interpretation, Park Information Office, the Park Archaeologist, and Research Scientist. Field information from ranger and other wilderness patrols is used to check or modify trailhead quotas.

Wilderness interpreters are based at Wawona, Hetch Hetchy, and Tuolumne Meadows. These interpreters provide both structured and informal programs involving all park management efforts in wilderness as they make patrols from their respective bases. Programs focus principally on bear management, minimum impact techniques, wilderness safety, and Service policies. These interpreters range the wilderness with interpretive, reporting, and light maintenance functions. Working on foot, with their first purpose being public contact, wilderness interpreters have more opportunity to develop that contact in higher use areas to help wilderness visitors enjoy wilderness safely without undue impacts on their surrounding environments.

The third group in the Wilderness Unit comprises wilderness technicians whose primary responsibility is to maintain the park trailhead quota system by issuing wilderness permits and providing public information on wilderness. By providing current, accurate information on trail conditions, distances and terrain, weather, safety hazards, and park rules and regulations, these technicians have an effect on users and park resources. Dispersing users from trailheads already at capacity as well as

providing minimum impact and proper food storage information, wilderness technicians have the greatest opportunity for effective public contact before visitors enter wilderness.

Wilderness technicians are stationed at permit issuing stations at Wawona Tuolumne Meadows, Hodgdon Meadow, and Yosemite Valley. To be effective in their function, technicians are assigned one to three day foot patrols in wilderness to learn more about park wilderness and its resources. In addition to their information and permit issuing functions, these technicians also have interpretive and light maintenance functions on their patrols.

It is not the goal of the Wilderness Unit to contact and "educate" every wilderness user. A spirit of solitude in wilderness will be respected in public contact by park employees. Radios will be kept at low volume. Law enforcement equipment will be kept in low profile, as defined for wilderness patrol in NPS Guideline 9, unless in the judgement of the ranger the situation dictates otherwise.

The Wilderness Unit cooperates with other offices on many activities. Some responsibilities are shared to take advantage of the strengths of specialized offices such as Search and Rescue or Fire Management. Offices outside Visitor Protection with which the Wilderness Unit works closely include:

Wilderness Maintenance. Ranger patrols are often coordinated with Wilderness Maintenance activities. Wilderness rangers assist in reporting trail conditions, safety hazards, and visitor use data important in setting trail maintenance priorities. The Wilderness Unit Manager reviews trail maintenance plans and specific trail crew camp locations from an ecological standpoint to make sure wilderness impacts from administrative practices are minimized and in keeping with the Wilderness Management Plan. Though signing of trails is the responsibility of Wilderness Maintenance, wilderness rangers assist in reporting lost signs, straightening or replacing signs, and doing sign maintenance as time allows. Wilderness rangers assist with wilderness sanitation activities when time permits.

The Wilderness Unit use of horses and mules, including requests for animals and logistical support, is coordinated through the Animal Packer Foreman. The Wilderness Unit Manager also consults with the Animal Packer Foreman on assignments of horses to rangers, full utilization of animals, and on operational policies concerning all aspects of stock use in the Wilderness Management Unit.

Resources Management. The Wilderness Management Unit coordinates its activities with the Division of Resources Management to ensure full cooperation in bear and other wildlife programs and in natural and prescribed burning programs. The Wilderness Unit works cooperatively with Resources Management in wilderness management planning and in developing site-specific regulations to reduce unacceptable resource impacts.

Interpretation. The Division of Interpretation cooperates with th



Wilderness Unit in issuing wilderness permits during the off-season. Interpreters regularly provide information to the public on wilderness condition, rules, and minimum impact techniques. The Division develops brochures and other information related to wilderness. The Division cooperates with the Wilderness Unit in recruiting and planning for the wilderness interpretation program.

Research Scientist. Assistance in gathering data for ongoing research programs is an important service which the Wilderness Management Unit will continue to provide to the Research Scientist's office. Research information and analysis help the Wilderness Management Unit implement its programs more efficiently.

## 2. Search and Rescue

The District Rangers have responsibility for SAR missions arising within their SAR areas, as shown in Figure A. When a SAR arises within wilderness, the District Ranger whose SAR area encompasses that segment of wilderness will take responsibility for the SAR. The Wilderness Unit Manager will be notified in the initial stage of all major SAR activities occurring in wilderness. The Wilderness Unit Manager or designate shall participate in these SAR's in command, advisory, or other positions. The SAR Officer is responsible for single missions which involve two or more SAR areas, for outside agency requests involving park SAR resources, and for SARs which involve multiple missions arising in two or more districts' SAR areas simultaneously requiring the same resources. The SAR officer is responsible for the safety of all SAR missions and has the authority to relieve any SAR incident commander using dangerous procedures.

## 3. Fire Management Office

When a determination by the Superintendent or his designate has been made to suppress or manage a wildland fire by direct or indirect action in wilderness, the use of engine driven tools such as chainsaws and pumps will be authorized. Every effort will be made to confine human-made ecological disturbances to the immediate vicinity of the fire. Rehabilitation of the area will be planned and executed after suppression activities terminate. Wildfires, natural or human-caused, that do not pose threats to human life, property, or park resources will be controlled without motorized equipment, while transport and supply should occur by trail for such fires.

Guidelines established by the Superintendent for the 1987 Jarrell Fire provide the ground rules for fire suppression in wilderness:

- a. No wheeled vehicles will be permitted on other than established roads.
- b. No wheeled or tracked earth moving vehicles will be permitted on park lands.
- c. Natural barriers will be used where possible.
- d. Fire suppression methods used should be those causing the least resource damage commensurate with effective control.
- e. The stumps of felled timber will be flushed.
- f. Any established hand line will receive waterbreaks and

- rehabilitation after control of the fire.
- g. Fugitive retardant will be used if possible.
  - h. Helispots are not permitted in wilderness.

#### 4. Mather District

Mather District frontcountry includes the road corridors and developed areas from Hetch Hetchy to Tioga Pass and from Crane Flat to Foresta Road junction. The Lake Eleanor and Hetch Hetchy areas are also included in Mather District frontcountry. Mather rangers work closely with the Wilderness Unit. The District monitors threshold use and conditions by making scheduled day patrols from trailheads, observing wilderness use and contacting returning wilderness users. Information is shared with the Wilderness Unit through the District Ranger.

Patrols will include travel by foot and horseback. Motorized and handpowered watercraft or helicopter may be used when necessary to expedite emergency situations such as search and rescue and certain law enforcement occurrences. The District Ranger will take responsibility for SARs arising within the Mather SAR area in wilderness and notify the Wilderness Unit Manager in the initial stage of all major SAR activities occurring in wilderness. The Wilderness Unit Manager or designate shall participate in these SARs in command, advisory, or other positions.

Visitors are routinely checked for off-road travel, sanitation, camping, fish and game, or other violations. Seasonal hunting patrols occur for additional resource protection. Wilderness permits and special use permits issued by the Wilderness Unit and other divisions are monitored.

The traditional campground on Lake Eleanor's northwest shore is a designated campground in wilderness. Pit toilets are maintained by the Lake Eleanor rangers with the intent of eventual replacement of these privies with more suitable facilities compatible with wilderness. Food storage devices will be installed and maintained in the campground. Forestry crews monitor and eliminate hazard trees in the campground with clearance from the U. S. Fish and Wildlife Service in keeping with the Bald Eagle Act. The campground also has a hitchrack and bulletin board maintained by Lake Eleanor rangers.

Mather District personnel conduct the snow survey program annually to collect snow and water statistics from snow survey stations located at strategic points in the park in coordination with the California Department of Water Resources which takes snow measurements throughout the state for flood control, irrigation, power generation, recreation, road maintenance, and avalanche forecasting.

#### 5. Wawona District

The Wawona District includes road corridors and developed areas south of Yosemite Valley from Grouse Creek on Highway 41. The District works closely on a day-to-day basis with the Wilderness Unit Manager and relies on this office for expertise and park-wide wilderness coordination. The

trails include approximately 50 miles of trails in the Badger Pass area, 15 miles at Crane Flat, and 11 miles in the Mariposa Grove. Information and trail maps are available for these areas. In addition the ski route from the top of the Snow Creek switchbacks to Snow Flat is marked, and the Glacier Point Road has 10.5 miles of machine-set track. Trails are patrolled by nordic rangers on a regular basis for public contact, safety inspection, and accurate assessments of ski and avalanche conditions.

Minimal brushing and logging of nordic ski trails may be accomplished with hand tools only in winter after the initial snowpack has built up. Chainsaws may be used only to cut those logs posing a safety hazard to skiers on a case by case basis with approval of the Chief Ranger.

Signs are provided to mark trails, minimize impacts, provide safety information, orient visitors, and disperse use. Signing is kept to a minimum to avoid interfering with natural wilderness values. Trail markers are placed to be visible even in moderately inclement weather but not overly conspicuous in summer.

Cabins and Other Facilities. Nordic rangers are stationed at the winter Tuolumne Ranger Station quarters. All other patrol cabins (listed in Appendix D) are used on an occasional basis by nordic rangers and Service personnel. These cabins are not open to public use.

The Ostrander Lake Ski Hut, operated and staffed by the Yosemite Association, and the Tuolumne Meadows fee collection station are presently available for overnight use by the public. The Yosemite Park and Curry Company uses the Glacier Point Gift Shop and the Tuolumne Meadows Mountain Shop for overnight guest use in winter; neither facility is in designated wilderness.

Public restrooms (chemical toilets) will be put in place by Maintenance for winter use at Summit Meadow, Bridalveil Creek Campground, Glacier Point, Crane Flat, and Tuolumne Meadows. The Yosemite Park and Curry Company maintains restrooms and garbage cans along the Glacier Point Road.

Snow Machines. Off-road snow machine use in wilderness is restricted to emergency and administrative purposes. Although they are not designated wilderness, unplowed roads, with the exception of the Glacier Point Road, are managed as de-facto wilderness in winter and are used by visitors seeking wilderness values. Therefore, the use of snow machines on roads in winter is restricted to emergency use only. On Glacier Point Road snow machines are currently permitted to set tracks to Glacier Point, maintain non-wilderness facilities, and occasionally service telephone and television repeaters.

## B. Wilderness Maintenance

The primary goal of the Maintenance Division in wilderness maintenance is to ensure a relationship between facilities and environment compatible with requirements of wilderness legislation and the Yosemite Wilderness Management Plan. It is also a goal of the Maintenance Division to provide maintenance of a quality and frequency to existing essential facilities sufficient to minimize adverse impacts by those facilities on surrounding environments. All work and planning by the Maintenance Division will be accomplished within legislative and administrative guidelines. Wilderness legislation and environmental concerns will take precedence over economic priorities. Work projects will comply with archaeological, cultural, natural resource and public requirements. Maintenance crews in wilderness will adhere to established guidelines of group size, campsite selection and maintenance and restoration, and public information and interpretive requirements. All work will be accomplished with the minimum tool necessary as outlined in the appendices of this plan. Exceptions must be approved by the Superintendent. It is also a goal of the Division to limit any new facilities in wilderness, and to contain facility impacts by repair and maintenance of facilities in existing impacted locations rather than by relocation.

To support these goals the Wilderness Maintenance Office will follow a number of guidelines to achieve short term objectives:

1. Wilderness Maintenance plans for the season will be submitted to all park units for review and comment and for coordination with the wilderness activities of other divisions.
2. Wilderness trail and other maintenance standards will be developed for clarity and continuity in the work of maintenance crews.
3. Unless emergency work is required, trail work will be scheduled with the seasons with crews working accessible lower trails early and late while concentrating on higher trails in summer and early fall.
4. To carry out Wilderness Maintenance operations in keeping with the guideline to use the minimum tool, Wilderness Maintenance uses approved mechanized or motorized tools as the minimum tools for particular kinds of operations. The Wilderness Maintenance Office will seek to minimize or reduce the motorized or mechanized tools used in wilderness by searching for workable hand tools and techniques compatible with wilderness environments when possible. Excepted minimum tools used by Wilderness Maintenance are listed in Appendix B.
5. Wilderness Maintenance will accomplish its goals by the use of ground-based transport. Helicopter supply will not be used without specific written approval of the Superintendent. Ground-based alternatives will be thoroughly considered before the use of aircraft.
6. Wilderness Maintenance will strive to log and to perform maintenance on each and every maintained trail segment in Yosemite at least once each

year. It is a Wilderness Maintenance goal to provide major rehabilitation on each maintained trail segment at least once every ten years and more often as impact, erosion, and use require. Trail maintenance priorities are a) correction of serious safety hazards, b) logging, c) maintenance of rehabilitated trails, and d) rehabilitation of trails, and (e) protection of threatened cultural or natural resources. Trail crews will do the minimum amount of trail construction or elaboration required to keep impact on the terrain within desired guidelines, avoiding excessive rock work and trail widening beyond what is absolutely necessary. Cross-country routes will be monitored and decisions for appropriate environmental maintenance made on a case by case basis.

7. Wilderness Maintenance camps will be established and work accomplished as unobtrusively as possible in keeping with wilderness and environmental concerns. Camp locations will be approved and monitored by the Wilderness Unit Manager.

8. Barring unusual weather or snowpack, the Half Dome cables will be in operation prior to the Friday of Memorial Day weekend each season and will not be taken down before the second week in October.

9. It will be the responsibility of the Visitor Protection Division to implement opening and closing of park trails and other wilderness facilities. It will be the responsibility of Wilderness Maintenance to assess, repair, and sign these closures.

10. All maintained park trails will be logged at least once a year, funding and weather conditions permitting. Logging standards for trails will be strictly followed. Every effort will be made to operate chainsaws only between 8 a.m. and 5 p.m. except in unusual or emergency situations. Saws will be used with the comfort and esthetic concern for visitors and the environment in mind.

11. Bridges will be inspected biannually for condition. Bridge replacement will occur only where long tradition and high hazard to wilderness visitor safety requires them. Bridges will be of wood design and packed in. Other bridges will not be replaced after damage or washout. Structures and beams of damaged or obsolete bridges will be removed or obliterated or camouflaged. Wilderness trail bridges are listed in Appendix D.

12. It is the objective of the Maintenance Division to remove all chemical toilets from wilderness and from potential wilderness additions. These toilets may be replaced by facilities appropriate in wilderness settings.

13. Utility systems in proposed wilderness additions will be compatible with environmental and wilderness concerns.

14. The Corral operation will be managed within the guidelines of both the Wilderness Management Plan and the Park Horse and Mule Operations Plan. Exceptions may be made administratively with the Superintendent's written authorization.

Wilderness maintenance activities vary widely from trail work to sign and cabin maintenance to sewage disposal. All maintenance work on Park Service facilities in wilderness or potential wilderness is carried out through the Wilderness Maintenance Office as funds become available from benefitting accounts. Wilderness Maintenance, directed by Assistant Facilities Manager, Roads and Trails, includes the Trails Office under the Trail Supervisor, the Corrals under the Animal Packer Foreman, and Sanitation under a Utility Systems Foreman.

Logging crews, usually a packer and a sawyer, open and clear the trail system each year as permitted by weather, snowline, and funding. Opening the trails concentrates use on the maintained tread, confining impact to relatively narrow corridors through the mountains. Without logging, multiple trails and greater trail erosion would quickly develop.

Trail crews are larger and less mobile than logging crews. The goal for trail crews is to work frontcountry trails in the spring, follow the receding snowline from lower elevations in the spring to higher elevations in the fall, then return to lower country to prepare frontcountry trails for the ensuing winter. Though this goal of trail work would provide fairly regular maintenance over the whole park trail system, the facts of limited funding, long distances, short seasons at high elevations, and lack of trained employees have all prevented regular attainment of that goal. Because trails disrupt drainage patterns to cause erosion, the main goal of wilderness trail work now is restorative - to stabilize erosion problems while slowly reworking the entire trail network to make minimum impact trail maintenance possible. Considerations of safety for the public and safety of the environment have shaped this goal. To accomplish both the restoration and ongoing maintenance of the trail system, crews vary from five to twenty-five people each, the latter being the maximum size for all overnight groups on established trails in Yosemite.

Camps are located in accordance with Service wilderness policies for group size, sanitation, water quality, and wood fires. Locations are chosen to balance the impact of large or long term camps with the production they are able to achieve toward the ultimate goal. Chosen to provide water, wood, and pasture, camp locations are best where the impact of the work camp is eliminated in a winter's time. Primitive facilities and lack of permanent or fixed structures help accomplish this goal.

Transport for trail maintenance operations is by horse and mule. These animals carry the camp supply; they also move material for trail, sanitation, and wilderness maintenance work. The use of horses and mules constitutes one of those traditional skills and "minimum tools" on which Yosemite's wilderness maintenance operation is based. Innovation in the packing of materials has adapted the traditional skills to modern uses without compromising wilderness values. The use of horses and mules in park wilderness occurs within the guidelines of the Park Horse and Mule Plan as well as within the guidelines of this plan.

Wilderness sanitation, including sewage facilities, latrines, and water monitoring, has been consolidated into the Wilderness Maintenance Office

enabling these functions to be carried out as much as possible to preserve wilderness character. It is the Office's purpose and intent to develop workable sewage and water monitoring systems consistent with wilderness guidelines and U.S. Public Health Service and State of California regulations. Potential wilderness additions will be managed as much as possible as wilderness. The sewer mounding systems at High Sierra Camps are intended to restore water quality and the quality of the land around the systems. Having been designed to be compatible with elevation and heavy use in areas far from roads, these systems minimize mechanical devices and maintenance problems while supplying a long term solution to sewage disposal at these sites. Water quality is regularly monitored at the High Sierra Camps and at Vernal Falls, which have treated public water supplies.

The Wilderness Maintenance operation could not succeed without cooperating with other organizations also involved in wilderness management:

1. The Wilderness Unit is the office with which Maintenance has the most regular contact in wilderness management. Ranger patrols are regularly coordinated with maintenance activities and camp locations. Field communication between rangers and maintenance crews has been essential for effective wilderness management. The Wilderness Unit Manager approves and monitors Wilderness Maintenance camp locations.
2. Search and Rescue works with Wilderness Maintenance crews whose personnel are on call for assistance in emergency situations. SAR has provided field training in special techniques to some maintenance personnel. Others on the field crews have first aid or other training helpful in wilderness emergencies. Maintenance crews are always a ready source of organized people for emergency wilderness operations.
3. The Fire Management Office also works with Wilderness Maintenance, using backcountry personnel to locate and monitor wildfires or to help with emergency rescue operations. The Firehouse also uses Wilderness Maintenance personnel to help with Incident Command Center operations in frontcountry and wilderness.
4. Resources Management works with Wilderness Maintenance on occasion for assistance in monitoring use, soil, and vegetation. Resources Management has provided technical knowledge for wilderness maintenance activities such as meadow restoration and revegetation.
5. Interpretation gives programs on wilderness management, including the importance of maintenance functions and activities. The Division provides information to visitors on wilderness conditions and rules. Interpreters leading wilderness hikes communicate with Wilderness Maintenance on trail conditions and maintenance needs, rectifying problems observed as practicable.
6. The Park Archaeologist informs Wilderness Maintenance crews on wilderness archaeological resources and checks those resources to monitor and minimize impact from maintenance operations. Wilderness Maintenance

crews also try to provide the Archaeologist with information on wilderness archaeological resources.

7. The Research Scientist supplies information to maintenance crews on erosion, soils, and other environmental factors and problems. Maintenance crews also supply the Research Scientist with information and provide assistance when possible in information gathering to monitor wilderness impacts.

8. The Yosemite Park and Curry Company contracts with the National Park Service through the Wilderness Maintenance Office to maintain sewage systems and collect water quality samples at the High Sierra Camps. Cooperation between Wilderness Maintenance and the Curry Company in their High Sierra Camp operations has become smoother by consolidating Park Service wilderness maintenance functions into one organization.

9. The Yosemite Association's management of the Ostrander Lake Ski Hut, publication of trail information, and fundraising involve the Association in Wilderness Maintenance activities. While The Yosemite Association has operational responsibility for the hut, the Service has responsibility for maintenance and repair. Wilderness Maintenance also works with YA to support the organization's annual wilderness trip and to supply wilderness information for publication and fundraising efforts.



## C. Natural Resources Management

The primary objective of the natural resources management program is the perpetuation of the natural processes which have had a dynamic influence on the development and maintenance of park ecosystems. All natural resources management activities are directed toward achieving this goal.

The Resources Management Division assesses and monitors the natural conditions of wildlife, vegetation, air, water, and soil in wilderness. The Division monitors impacts with an eye to restoring natural conditions. Division offices study and protect endangered species and work to reintroduce those now extinct in Yosemite but once important to the ecosystems. Natural fires are assessed and often duplicated by prescribed burns. Native insect populations, such as the lodgepole needleminer, are watched and assessed to understand their roles in wilderness and to support Service protection of natural processes in wilderness. The Division reviews environmental assessments for wilderness work to ensure compatibility with natural processes and the natural resources management program. Programs implemented by the Division in wilderness are described below.

Exceptions for motorized or mechanized tools or equipment used in wilderness by the Resources Management Division are shown in the appendices to this plan.

### 1. Wilderness Impact Monitoring

Wilderness impact monitoring programs collect information on human-caused impacts by identifying impact severity, causes, locations, and trends. Monitoring contributes to understanding of the condition of wilderness resources. Monitoring helps develop and test methods to reduce or prevent further damage and to help damaged areas recover.

Between 1982 and 1986, about 5,000 campsites were inventoried for area, number, location, vegetative alterations, obtrusiveness, sanitation, and developments. About 1,000 miles of maintained trails and cross-country routes were mapped and rated for width, depth, erosion, associated drainage problems, and multiple tread. Environmental factors such as vegetation and foundation type are also recorded. All inventory activities were accomplished within the restrictions of the Wilderness Act.

Resource managers are using inventory data to formulate a Resource Impacts Monitoring and Mitigation System. This system will provide data to help

- a) define standards for acceptable levels of impacts on physical and visual resources;
- b) identify all campsites and trails that presently fail to meet these standards;
- c) adjust trailhead quotas or impose camping or wilderness travel restrictions to reduce resource impacts;
- d) prioritize trail segments and camp areas for restoration and generate funding requests to support the restoration work;

- e) develop and evaluate revegetation techniques and other trail and campsite restoration methods;
- f) rebuild, repair or remove and revegetate trails so that they meet impact standards; and revegetate, repair, or remove campsites so that they meet impact standards,
- g) at specified intervals, re-inventory campsite and trail impacts to evaluate the Resource Impacts System's success in mitigating unacceptable resource impacts.

A plan for implementing the Resource Impacts Monitoring and Mitigation System will be developed by the Resources Management Division during 1988. Recommendations will be implemented by interdivisional cooperative efforts by Resources Management, Maintenance, Interpretation, and Visitor Protection.

## 2. Human/Bear Management Programs

The human/bear management program has three objectives: a) to restore and maintain the natural integrity, distribution, abundance, and behavior of the endemic black bear population; b) to provide for the safety of park visitors by planning the development and use of the park to prevent conflicts and unpleasant or dangerous encounters with bears; c) to provide opportunities for visitors to understand, observe, and appreciate black bears in their natural habitat with a minimum of human interference. Capture and tagging operations, destruction of problem bears, installation of food storage devices, and wilderness patrols to monitor the bear population and collect pertinent data are all programs used to condition bears to a more natural behavior and integrity while minimizing human impacts on their population.

Wilderness food storage devices such as food lockers, bear poles, bear cables, and portable food storage canisters can help management eliminate artificial food sources provided by wilderness visitors. Food storage devices are available at designated campgrounds in wilderness. All other food storage devices will be removed from wilderness by 1989 and replaced with portable bear-proof food containers carried by wilderness users. Food storage devices are presently available at wilderness locations shown in Appendix E.

Wilderness bear capture and tagging operations enable the identification of problem bears and their movements. Wilderness bear capture is accomplished with free-ranging capture equipment such as Aldrich foot snares and syringe projector rifles with immobilizing drugs. Firearms may occasionally be required.

Release sites for relocating frontcountry-conditioned bears have been reduced by wilderness designation. No exceptions are requested for release sites now within wilderness, and helicopter release into wilderness has been eliminated as a management option. Future research on the bear population may require the use of radio telemetry equipment and low level overflights with fixed-wing aircraft to establish bear locations. The Division will request an exception for helicopter use for that study before

it is initiated.

### 3. Peregrine Falcon Management

The objectives of the Peregrine Falcon management program are to protect and promote Yosemite's breeding pairs of the endangered Peregrine Falcon, to restore the Yosemite breeding population to historic levels, and to establish a core breeding population to aid recovery of the species in the Sierra Nevada. Presently there are two known breeding pairs in Yosemite, the only known breeding pairs of Peregrine Falcons in the Sierra.

These objectives are accomplished by monitoring existing pairs and manipulating aeries. A hacking program to release captive-bred falcons will provide a floating population of replacement birds for existing breeding pairs and establishment of new aeries.

Nest augmentation - replacement of wild eggs with captive-bred hatchlings - is the primary method of ensuring the success of a peregrine aerie. Augmentation is accomplished with standard rock climbing gear.

A hacking program will involve the placement of 4'x4'x8' wooden hack boxes at several locations in park wilderness. Hackboxes will be dismantled and removed when hacksites are no longer needed. Firearms are sometimes necessary at hacksites to scare off or even kill potential peregrine predators. Prior approval by the Superintendent must be obtained before any potential predator is killed.

To help reestablish a viable Peregrine population in Yosemite, the Service will institute closures of air space, climbing routes, or other specific locations or uses to protect nesting pairs during the breeding season. Aircraft in violation of the 2,000 foot ceiling above Valley rims and land surfaces will be reported. Flight plans for administrative flights will be developed around nest locations with the advice of Resources Management. Blasting within two miles of the nesting pair will be scheduled with the advice of Resources Management; any emergency blasting near a breeding pair will be modified significantly to minimize shock waves and noise.

### 4. Bighorn Sheep Management

The bighorn sheep reintroduction program returned an important element of the ecosystem to the park. Bighorn sheep became extinct in the park in 1914 due to the influences of humans. Only in the southern Sierra did two remnant populations survive. The program aims to establish an additional, relatively large population that is geographically isolated from existing herds.

The first actual reintroduction of the sheep took place in March, 1986, on Forest Service lands adjacent to the park. Bighorn sheep are expected to be in Yosemite from June through October and may choose to winter on high windswept slopes. Additional sheep may be fitted with radio transmitters to monitor movement and herd welfare. Research on the herd will continue as the herd establishes itself. Occasional fixed-wing flights will be



necessary, with prior approval of the Superintendent, to monitor herd movements.

#### 5. Deer Herd Management

The deer herd and range monitoring program has as its objective the restoration and maintenance of the Yosemite herd in healthy condition at its 1965 population level. The herd and range goals are a synthesis of the needs of the four government agencies having jurisdiction over the herd and are identified in the interagency Yosemite Deer Herd Management Plan. The deer herd and range monitoring program is coordinated also with prescribed and natural fire programs essential to provide habitat.

Deer herd composition counts, currently done outside the park on winter range, will be extended inside the park. Population monitoring and deer pellet group transects are conducted in accordance with wilderness designation. Vegetation transects done in conjunction with pellet counts are used to monitor deer range.

A deer research project has been requested to analyze deer movements and develop a statistically sound monitoring system. Deer would be captured on their summer range, up to 40 animals radio-collared, then monitored on foot, horseback, and by low level flights in fixed-wing aircraft. All other monitoring equipment is portable and non-motorized. The Division will request approval to make fixed-wing flights in wilderness for this program when the deer research project is initiated.

#### 6. Fisheries Management Program

The objective of the fisheries management program is to restore the natural integrity of aquatic ecosystems while providing opportunities for recreational fishing in locations with naturalized fish populations.

At the time Europeans entered the Sierra Nevada, fish were native only to the lower watercourses, blocked from the high country by waterfalls. The existing high country fishery is a result of fish planting begun as early as 1877 and continued to present. Maintenance of an unnatural fishery through stocking in order to provide visitors with a sport fishing experience is in direct conflict with Park Service mandates to maintain the natural abundance, behavior, diversity, and ecological integrity of native animals. National Park Service Policies state, "Waters naturally barren of fish will not be stocked with either native or exotic fish species but will be allowed to remain in, or revert to, their natural state."

In order to restore more natural conditions in high country lakes and diminish the unnatural influence of exotic fish populations on aquatic plants and animals, the Service began a phased reduction in Yosemite trout stocking in 1972. Objections raised by the California Department of Fish and Game and sport fishermen resulted in a moratorium, and the Service was directed to continue stocking at the 1974 level. Lakes in the park without adequate spawning habitat that are not stocked are being allowed to return to a barren condition. Self-sustaining fish populations occur in 103 lakes

and in many park streams.

To comply with the directive to stock exotic fish in seven lakes annually the Service has identified 13 lakes to be stocked on a rotating basis. All but one of these lakes occur within wilderness. The fish stocking schedule is shown in Appendix K.

#### 7. Great Grey Owl Management Program

The objective of the Great Grey Owl management program is to maintain the natural abundance, behavior, diversity, and ecological integrity of the Great Grey Owl in Yosemite National Park. The population of Great Grey Owls in and adjacent to Yosemite is the only population south of Idaho. While not on the federal list of endangered species, the Great Grey Owl is classified as "endangered" by the State of California. Research and monitoring are being done to evaluate movement, habitat use patterns, reproductive success, and the effects on the owls of visitor, concessioner, and Park Service activities. Such information is critical for evaluation of potential impacts of current development proposals on the species.

Long term monitoring can be conducted on foot using binoculars and a recording of the owl's call. Some research will require attaching transmitters to the birds. Monitoring of radio-transmitter equipped birds would be primarily on foot, but low level aircraft flights may occasionally be required late summer to early winter when greater movements of adults and dispersal of young occur. The Division will request approval from the Superintendent for each fixed-wing flight in wilderness for this program.

#### 8. Vector Control

The objective of the vector control program is to minimize the potential for transmission of diseases important to humans through wildlife populations. Two diseases of consequence to humans have been detected in Yosemite historically and justify continued concern and management action: a) sylvatic plague, resident in rodent populations and transmitted by flea bites, and b) rabies, usually associated with bats, skunks, coyotes, and raccoons, and transmitted by their bites. Both diseases will spread most rapidly in animal populations that are at unusually high densities around developed areas in the park.

Impacts within wilderness will occur only at sites adjacent to developed areas with evidence of a disease outbreak. Activities are coordinated with the California Department of Health. No exceptions to the Wilderness Act are needed for these activities. If infections are detected, trapping and collecting of some animals in the area to determine the extent of the disease will take place. In the case of sylvatic plague, rodents and their burrows may be dusted to kill fleas.

#### 9. Forest Management

The objectives of the forest management program are a) to detect exotic and native forest insects and diseases as early as possible, and b) to detect

and remove hazardous trees from one designated campground in wilderness at Lake Eleanor, three designated campgrounds in wilderness in Little Yosemite Valley, and from the five potential wilderness additions at the High Sierra Camps.

Weakened trees threatening to fall on people and property are identified and removed annually around High Sierra Camps, designated campgrounds, buildings, and park roads. Stumps are usually flushed when trees are removed.

The lodgepole needleminer is closely monitored because this forest insect has dramatic effects on lodgepole pine forests. Information gathered helps explain fluctuations in insect population and activity. That information is also used to support the occurrence of a natural forest process by allaying concerns of the scientific community and visitors over the apparent loss of large areas of lodgepole forest. No management actions against the needleminer are anticipated.

If control actions are necessary to mitigate alien insects and diseases, biological control agents will be used whenever possible. Control agents could be introduced into park wilderness. If biological control fails, pesticides may be considered as alternatives. Requests for exceptions for these programs in wilderness will be made on a case by case basis.

#### 10. Natural and Prescribed Fire Management

The objectives of the fire management program are to reestablish fire as an element in perpetuating natural ecosystems, to preserve park wilderness integrity, and to protect historic cultural and archaeological resources, air quality, and threatened and endangered species.

National Park Service policy recognizes that fire is a natural process necessary to perpetuate certain plant and animal communities. According to policy, fires resulting from natural causes should be considered natural phenomena and allowed to burn without human interference as long as they achieve management objectives and remain within predetermined boundaries. Prescribed burning simulates the effects of natural fire in ecosystems substantially altered from their natural states by long-term fire exclusion.

Natural fires are allowed to burn in designated vegetative communities that have experienced minor unnatural successional changes as a result of fire suppression activities. Natural fires are allowed to burn any time of year unless they threaten human life, cultural resources, physical facilities, or endangered or threatened species. Human caused fires are routinely suppressed except where they pose no risk to resources or public safety and where the impact of suppression would exceed the impact of the fire. Where fire suppression in wilderness is warranted, a variety of means including confinement, containment, or control may be used. This flexibility will minimize impacts on wilderness.

Prescribed burning is used to reestablish more natural fuel and vegetative

conditions in chaparral, mixed-conifer, and meadow areas that have experienced significant unnatural changes in plant succession and fuel loading due to fire suppression. Phasing all wilderness areas into natural fire management is a high-priority program goal. To achieve this goal prescribed fires are ignited under specified conditions, seasons, and periodicity to simulate natural fire regimes and to minimize unnatural manipulations in wilderness areas.

Fire management actions and responsibilities relating to Resources Management and the Fire Management Office are described in detail in the Fire Management Plan (1987) for Yosemite National Park.

#### 11. Air Resources Management

The objectives of the air resources management program are to conduct studies of park air quality to determine baseline air quality conditions and to evaluate changes in air quality. Under the Clean Air Act the Service is mandated to prevent any significant deterioration of air quality and air quality related values such as visibility below baseline conditions in park wilderness, a Class I area. This protection extends to vegetation, water quality, and wildlife if it can be shown that they are affected adversely either directly by air pollution or indirectly by such effects as acid deposition. Although the Service has technical authority to influence the management of air pollution sources outside the park, no effective way has been found to combat regional problems such as smog and acid deposition.

Visibility, total suspended particulates, and fine particulates are monitored in non-wilderness park areas to compile a record of baseline air quality control conditions. These use data are applicable to wilderness areas. Since 1985 ozone has been monitored in three non-wilderness areas, and surveys will be conducted to determine if ozone damage to vegetation is occurring in wilderness areas as well.

#### 12. Water Resources Management

The objectives of the water resources management program are a) to identify and mitigate water resources management problems, b) to develop a park water quality monitoring system, and c) to classify all surface water by existing and proposed uses. Under the Federal Water Pollution Control Act and the Clean Water Act of 1977 the Service is obligated to collect more water resources data, develop a water resources management plan, and conduct routine water resources monitoring projects. Limited water management operations currently conducted in park wilderness and potential wilderness include surface water quality monitoring, Giardia distribution and host research, and acid rain monitoring. Limited studies have been completed on surface water quality and Giardia lamblia. No future studies are planned.

The Service has maintained one acid deposition station in a non-wilderness area since 1981. Since data from this station will be applicable over a wide area, establishment of more such stations in wilderness areas



unnecessary. The Environmental Protection Agency, however, has proposed eleven lakes in park wilderness for inclusion in its National Surface Water Survey to gather baseline data on national surface water acidification. This survey will be carried out by foot or horseback.

#### D. Cultural Resources Management

Cultural Resources Management is the responsibility of two offices. The Park Archaeologist within the Yosemite Research Center is responsible for archaeological resources in Yosemite. The Park Curator, in the Curatorial Branch of the Division of Interpretation, is responsible for historic and ethnographic resources in Yosemite. The primary goal of each is to record the information from cultural resources for park planning and for the park record and also to preserve those resources significant in the understanding of the park's natural and cultural past.

National Park Service protection of cultural resources and a relatively high level of preservation mean that archaeological sites within the park are likely to yield important information regarding the unique cultural story of the Yosemite region. The cultural and environmental information contained in archaeological sites is extremely fragile and warrants prudent management to insure continued preservation. Recovery of available data is mandated by federal legislation when preservation in place is impossible. Policies, legislation, and Regulations governing the preservation and management of cultural resources in wilderness are outlined in Appendix L.

Archaeological investigations of prehistoric cultural resources help answer research questions about paleoenvironments, cultural chronological sequences, economic patterns, settlement patterns, demography, and social organization of the prehistoric inhabitants in the Yosemite area. Numerous archaeological projects have been undertaken to identify and examine cultural resources in the park; however, systematic methodology was used until the 1950's. Since then excavation and survey projects concentrated on modern development areas. Only one limited survey project has involved wilderness areas. An archaeological and ethnographic overview and a park-wide archaeological research design have also been completed.

To date less than five percent of the approximately 750,000 acres included in Yosemite National Park has been surveyed for cultural resources by professional archaeologists; only about 600 cultural resource sites have been located and inventoried, most in frontcountry areas, consisting of midden deposits, buried structural floors, burials, bedrock mortars, rock shelters, pictographs, and ground surface campground debris. Numerous additional sites have been reported by National Park Service employees and visitors but have not been recorded by archaeologists. The remaining 95 percent of the park contains at least 1,500 additional cultural resources sites.

Of twelve prehistoric archaeological districts in Yosemite on the National Register of Historic Places, all or portions of the following districts are located within wilderness in Yosemite:

- Mariposa Grove Archaeological District
- Foresta-Big Meadow Archaeological District
- Eagle Peak Archaeological District
- Snow Creek/Mt. Watkins Archaeological District
- Aspen Valley Archaeological District
- White Wolf Archaeological District

Tuolumne Meadows Archaeological District  
Pate Valley Archaeological District (in process of nomination)  
Procedures for reporting archaeological sites are described in Appendix M.

Unlike archaeological or prehistoric resources, historic cultural resources are the artifacts of recorded history. Historic cultural resources related to Yosemite are widely scattered throughout the park and bordering Forest Service areas.

Like archaeological resources, historic resources in wilderness have been only partly inventoried. Field inventories are necessary for the largely uncharted historic resources in wilderness to locate those historic resources possibly impacted by wilderness operations. Only a very few historic resources in wilderness have been put on the List of Classified Structures for Yosemite or nominated to the National Register of Historic Places. Those features are:

National Register

Great Sierra Mine  
Great Sierra Wagon Road  
McGurk Cabin

List of Classified Structures

Buck Camp Ranger Station  
Chilnualna Falls Ranger Patrol Cabin  
Dana Fork Cabin  
Gin Flat Cabin  
Golden Crown Mine (four cabins, two shafts)  
Great Sierra Mine (five cabins, two shafts, and Dana Cabin)  
Leonard Cabin, Little Yosemite Valley  
Merced Lake Ranger Station  
Mono Pass Trail Cabin

Other nominations are being made to list and register on the basis of Linda W. Green's HISTORIC RESOURCES STUDY FOR YOSEMITE NATIONAL PARK (1987).

List of Classified Structures status requires regular inventory of maintenance and preservation needs. National Register status means the Service is responsible for preserving the structure or its remains, that all work on the structure must be in accordance with National Park Service Guideline 28, and that any repair or replacement must duplicate original materials. Service policy governs what can be neglected or removed. An Executive Order 11593 Section 106 action - a finding of significant adverse impact by a non-maintenance option - is necessary for structures so affected, with clearance through the State Office of Historic Preservation. Park Service guidelines for natural fires and historic properties provide for protection of historic resources in any fire situation.

Fragile and nonrenewable recorded and unrecorded archaeological sites and historic structures in Yosemite National Park are threatened by natural and human-induced impacts. Various projects address the general concerns of the Cultural Resource Management Program in Yosemite wilderness.

## 1. Archaeological Survey of Wilderness Trails and Historic Resource Inventory.

An undetermined number of cultural resources are being altered or destroyed by natural erosion, visitor use, and illegal artifact collection by visitors. Visitor impacts are great in wilderness areas which have received the least attention. Less than 20 of the over 800 miles of established trails have been surveyed for archaeological sites, while inventory of historic resources has been limited largely to cabin sites and resources known from the written record. These survey projects will inventory and then monitor sites over several years to document the extent of natural and human-caused impacts and to plan for necessary stabilization or preservation measures. These inventories are an essential part of park planning for wilderness operations.

## 2. Archaeological Clearance Program and Historic Compliance Program

National Park Service maintenance and construction operations through the park are increasing. Many of these activities are scheduled to occur in wilderness in locations not previously subjected to archaeological survey or historic resources inventory. These projects must allow ample time for surveys, inventories, and significance determinations by the archaeology staff and Park Curator. All proposals for maintenance and construction in wilderness - including the construction of trail crew camps, construction and maintenance of trails, sanitation systems, other earth disturbing activities, and prescribed fires - should be submitted to the Yosemite committee for review and compliance processing. Within the NEPA review process, archaeological consultation and clearance surveys can be scheduled through the Office of the Park Archaeologist. Historic compliance can be scheduled through the Park Curator's Office.

## E. Interpretation

The Statement of Objectives for the Division of Interpretation outlines the division's role in wilderness management. Applicable objectives are:

- to provide each visitor the opportunity to obtain a basic orientation to Yosemite National Park's resources;
- to provide information about the park's inherent dangers, resource values, and available options for permissible and appropriate use;
- to provide a balanced mix of interpretive services and media that foster understanding, appreciation, and a sense of identity with significant park resources, their management, threats to them, the natural processes that govern them, and the need to preserve them;
- to support and promote actively the park's major management programs, policies, and concerns - notably public health and safety, minimum impact, bear, fire, forest, endangered species, wilderness and concessions management, law enforcement, and the General Management Plan;
- to facilitate physical, intellectual, and emotional visitor involvement, and to shape perceptions and modes of visitor behavior that result in minimal resource impact and quality experience.

To support these objectives the Division of Interpretation provides a variety of visitor services related to wilderness management.

Division of Interpretation personnel issue wilderness permits at park visitor centers and information stations in the absence of wilderness management staffing. The Interpretive Division assumes the principal responsibility for permit issuance between November 1 and April 1. A self-help trip-planning area equipped with maps, exhibits, and audiovisual programs is maintained in the Valley Visitor Center for off-season use. For that visitor center the division has also produced summer and winter versions of a computerized quiz that tests prospective wilderness users on their knowledge of wilderness rules and minimum impact techniques. Interpretive computers in the Valley Visitor Center provide a broad base of information about park resources, services, and facilities, including information about trails, wilderness regulations and policies, and minimum impact techniques. The division also maintains a taped, viewer-actuated slide program focussing on wilderness safety and proper wilderness use at the Big Oak Flat Information Station.

The interpretive staff provides information about wilderness resources, policies, regulations, conditions, and trails to visitors at information outlets and on roving contact assignments. To assure currency and accuracy of information, interpreters stay abreast of wilderness conditions and keep informed of pertinent changes. The division also develops printed information materials and maintains supplies of handouts in visitor centers and the Park Information Office.

The Interpretive Division collaborates with the Wilderness Unit to plan, organize, and coordinate the summer wilderness interpretation program. Interpretive staff members participate in recruiting and training personnel for this program, monitoring their activities, providing oversight, and evaluating the operation.

The interpretive program includes seasonal minimum impact demonstrations, particularly in Yosemite Valley and at Tuolumne Meadows. Minimum impact messages are incorporated into virtually all evening programs. Some programs in all operational areas address specific wilderness management issues.

The interpretive program includes a variety of field services which directly support wilderness management by increasing visitor understanding of park resources and management concerns. The programs range in duration from one hour to all day hikes and trips around the High Sierra Loop. Many interpretive hikes venture into designated wilderness.

In an effort to mitigate the impact of interpretive activities on park resources, day use field programs are generally restricted to a one quarter mile corridor along official park trails and to a group size of 34 participants plus the leader. Conducted hikes that require cross-country travel or the use of volunteer routes are limited to seven people plus the leader. Specific exceptions authorized for interpretive walks on routes offering significant natural, cultural, or scenic resources are included in Appendix G.

Walks to Sentinel Dome and to Harden Lake often draw over 100 persons. It is the intent of the Division of Interpretation to limit these walks to 50 people, as shown on the list of authorized exceptions, as administrative means are developed to do so. Group leaders of cross-country walks will make every effort to reduce impact by monitoring cross-country routes and changing or eliminating routes as detrimental impacts show signs of development. The Interpretive Division may amend this list with the approval of the Wilderness Committee and Superintendent.

Interpretive staff members serve as leaders or facilitators in special wilderness seminars and workshops.

## F. Concessions Management

The Chief of Concessions Management works directly under the Superintendent. The primary goal of Concessions Management is to ensure the quality of concession facilities for the public, the meeting of contract requirements for those facilities in wilderness and the compatibility of these facilities within guidelines for wilderness areas. The Concessions Management Office is responsible for monitoring and evaluating the High Sierra Camps' operation by examining food and beverage service, employee housing, overnight accommodations and any proposed changes in facilities.

The Concessions Office will work with the Wilderness Unit Manager and with the Chief, Resources Management on opening and closing dates for the Yosemite Park and Curry Company stables and High Sierra Camps. While there are economic reasons for opening facilities early, environmental considerations must take precedence in determining these opening and closing dates. Before allowing the public to use these facilities, Concessions Management works to ensure that all systems are operational and up to appropriate standards, following the requirements of the concession contract and National Park Service Guideline 48 - Concessions. Concessions Management confers regularly with the Park Sanitarian, Maintenance, Interpretation, Resources Management, and Visitor Protection on work with the High Sierra Camps.

Under the concession contract, Concessions Management also monitors and evaluates the concessioner's horse and mule operation and facilities. The Office evaluates facilities, makes certain that state codes and requirements on animal health are met, and may also evaluate horse and mule use on the trail.

Concessions Management also issues commercial use licenses to packers and to backpack groups entering Yosemite wilderness. The Office confers with the Wilderness Unit Manager and District Rangers on complaints and compliance with wilderness regulations and for decisions in license renewal. A part of the licensing procedures is to supply licensees with appropriate information and regulations in wilderness use so that the guidelines of this plan and the Park Horse and Mule Plan are met.

## G. Research

The Wilderness Act recognizes scientific research as a valid use of wilderness areas. National Park Service policy reiterates that purpose and permits those kinds of research and data gathering which use wilderness areas for their accomplishment and which will neither adversely modify either the physical or biological resources and processes of the ecosystems nor intrude upon the aesthetic values and recreational enjoyment of wilderness environments. All research activities must be in accord with the provisions of this Wilderness Management Plan.

Information concerning conducting research and obtaining collecting permits is available from the Research Scientist. Research projects which propose to use methods or equipment prohibited by Federal regulations, applicable legislation, or administrative policies must obtain a permit in accordance with Section 1.6, Title 36, Code of Federal Regulations.



V. Organizational Uses

- A. Yosemite Park and Curry Company  
High Sierra Camps
- B. Yosemite Association
- C. Yosemite Institute

## A. Concessioner High Sierra Camps

Yosemite Park and Curry Company operates five permanent summer camps in potential wilderness additions inside designated wilderness in Yosemite. The camps provide tent accommodations with bunks, linen, and blankets. Breakfast and dinner are served family style in a central dining facility. There are hot showers, restroom facilities, and limited camper supplies.

The operation of the several High Sierra Camps is required under the National Park Service contract with the Yosemite Park and Curry Company. Commercial facilities at the camps are relatively primitive and are limited by weather, transportation, and space. No additional facilities will be built and, should increased adverse impact on adjacent wilderness environments result from the operation of existing facilities, those facilities will be removed.

The Yosemite Park and Curry Company works with the Concessions Office, the Chief Ranger, and the Wilderness Unit Manager on opening dates for the Yosemite Park and Curry Company stables and High Sierra Camps. While there are economic reasons for opening facilities early, environmental considerations will take precedence in determining these opening date.

Located about eight miles apart, the camps are connected by well-defined trails and are normally provisioned by pack animals. There are occasional requirements for helicopter service for emergencies or for ferrying objects too cumbersome for pack animals. Nonemergency flights over wilderness must be approved by the Superintendent. Under the General Management Plan operation and scope of the High Sierra Camps are not permitted to expand. Located in potential wilderness additions, the High Sierra Camps will be managed as much as possible as wilderness.

Merced Lake is located on the east end of Merced Lake at 7,150 feet elevation with the capacity to serve 60 guests. It has a sewer mound system, and its water source is the Merced River.

Glen Aulin is located at the foot of the White Cascades on the Tuolumne River at an elevation of 7,800 feet, approximately four miles above Waterwheel Fall, with a capacity for 32 guests. A sewer mound system services the camp, and water comes from the Tuolumne River.

May Lake is located beneath the eastern wall of Mt. Hoffmann at 9,270 feet elevation on the shore of May Lake and can accommodate 36 guests. Water is pumped from the lake, and sewage is treated in a leach field.

The Vogelsang camp is located at 10,300 feet elevation on Fletcher Creek and can accommodate 42 guests. The camp has a sewer mound system and receives its water from springs.

Sunrise camp is situated on a shelf above Long Meadow at 9,400 feet and can accommodate 34 guests. A spring provides water for the camp. A mound is proposed to service the operation.

## B. Yosemite Association

The Yosemite Association, a private, non-profit organization established in 1925 to aid and support the National Park Service's interpretive, educational, and scientific programs, embraces a number of wilderness-related services and functions. All of its activities in some way reinforce Park Service objectives for wilderness preservation and use.

The Association sponsors and conducts in wilderness an extensive program of field seminars, many of which entail backpacking and overnight use, trans-Sierra and Ostrander Lake ski trips of several days, summer classes at Ostrander Lake, and the seven-day High Sierra Loop trip, a summer activity assumed by YA in 1982 at the request of the National Park Service. Leaders of these activities are employees or contractors of the Association, and participant fees are levied by YA to fund the costs of these services. All Yosemite Association trips must comply with wilderness management policies and applicable regulations governing park wilderness use, including permits, quotas, and group size limits. Trip leaders must be well-versed in legal and policy constraints and exemplify minimum-impact philosophy and techniques.

As a support entity for park management the Association operates the Ostrander Lake Ski Hut during the winter at the request of and under agreement with the National Park Service. One caretaker employed by YA is on duty at the hut at all times throughout the period of operation. The fees collected from hut users are applied by YA to help defray operational costs. Should YA incur a net operating deficit, the National Park Service reimburses the Association that amount. In the event of excess revenues over expenses, the surplus is earmarked for the following year's operational costs such as stocking of wood and supplies. Since the hut is a government-owned structure, the National Park Service bears the responsibility for building and utilities maintenance and repairs and ensures that applicable regulations and health codes are met.

The Association also operates Parsons Lodge at Tuolumne Meadows as a wilderness information and publications sales center from mid-June until Labor Day. Located on the trail to Glen Aulin, the facility receives modest visitation. It is staffed principally by an Association sales clerk and YA student interns.

The Yosemite Association has a vigorous publishing program and operates six major sales outlets and several lesser ones throughout the park. An extensive inventory of both Association-produced and commercial publications relevant to the park includes an assortment of backpacking, hiking, and climbing guides as well as all pertinent USGS topographic maps. Selected items, primarily maps, are also available for sale at wilderness permit stations.

Net revenues from the Association's sales program are made available to the National Park Service to finance projects and activities that fall within the Association's prescribed scope and purposes. Aid to the National Park Service may assume the form of printed materials for free distribution to

wilderness users, such as "Welcome to the Yosemite Backcountry," or publications provided for in-house reference or trip-planning purposes.

In 1984 the Association launched The Yosemite Fund, a massive, ambitious fundraising venture that targets a number of specific projects and programs for private-sector funding. The campaign encompasses several proposals that will affect park wilderness, including restoration of the Pacific Crest Trail (\$1.1 million), reintroduction of bighorn sheep (\$170,000), and augmentation of the park's Peregrine Falcon population (\$232,000). The Park Superintendent and the Yosemite Fund Board of Directors, appointed to assist management in directing and implementing programs, must approve expenditures of donated funds.

## APPENDICES TO THE WILDERNESS MANAGEMENT PLAN FOR YOSEMITE NATIONAL PARK

- A. Description of Yosemite Wilderness Boundaries
- B. Motorized or Mechanized Tools Approved as Minimum Tools for Agency Use in Wilderness
- C. Nonemergency Administrative Uses of Aircraft in Wilderness, Subject to Approval
- D. Administrative Facilities in Wilderness
- E. Abandoned Roads in Wilderness
- F. Trailhead Quotas
- G. Exceptions to Group Size Limits
- H. Wilderness Permit Information
- I. National Park Service, Yosemite National Park, Organizational Chart Showing Wilderness Related Offices and Activities
- J. Location of Bear Proof Food Storage Devices in Wilderness in 1987
- K. Fish Stocking Schedule, Yosemite National Park, 1985-1990
- L. Policies, Legislation, and Regulations Regarding the Preservation and Management of Cultural Resources in Wilderness
- M. Archaeological Site Discovery Reporting

### C. Yosemite Institute

The Yosemite Institute, a private non-profit organization founded in 1971, provides environmental education programs in Yosemite National Park with the cooperation of the National Park Service. The Institute is dedicated to the promotion of self-respect, responsibility, and ethics through a better understanding of our natural environment. In May, 1985, a 20-year cooperative agreement was signed between the National Park Service and the Yosemite Institute to undertake and conduct a program of interpretive and educational activities, including but not limited to resident youth programs, environmental education programs for educational institutions, outreach programs, wilderness trips, seminars and conferences related to environmental and park resource issues, teacher training and internship programs in environmental education, and instruction of its educational and interpretive personnel.

All programs conducted by the Institute in Yosemite wilderness adhere to the principles of the California Wilderness Act and National Park Service policy and regulations. Group trips must obtain wilderness permits, adhere to established quotas and group sizes, and coordinate routes with the Wilderness Unit Office. Yosemite Institute instructors are trained in National Park Service policy relating to wilderness management and are certified in advanced first aid; many work seasonally for the National Park Service. In accordance with National Park Service guidelines, campsite clean-up programs, work projects, and resource monitoring are integral parts of Yosemite Institute wilderness trips. The Institute has developed a wilderness standards manual for staff and has agreed to select routes which avoid popular trailheads.

## APPENDIX A: DESCRIPTION OF YOSEMITE WILDERNESS BOUNDARIES

The wilderness boundary description and the accompanying maps of the Yosemite Wilderness comply with the requirements of Public Law 98-425, dated September 28, 1984 in Section 107 of Title 1 of the "California Wilderness Act of 1984" and have the same force and effect as if included in that title.

The wilderness and potential wilderness additions are depicted on that map titled "Yosemite Wilderness, Yosemite National Park, California", Number 104/20,003E, sheets 2 of 4 thru 4 of 4, dated July 1985, and are described as follows:

### MT. DIABLO MERIDIAN

#### WILDERNESS UNIT 1

Beginning at the northeast corner of Section 1, Township 1 South, Range 19 East on the boundary line of Yosemite National Park;

thence, westerly on the park boundary to a point 200 feet easterly at right angles to the Hetch Hetchy Road centerline near the south 1/4 corner of Section 36, T. 1 N., R. 19 E.;

thence, northerly on the parallel line 200 feet distant from the Hetch Hetchy Road centerline to the west line of Section 29, T. 1 N., R. 20 E.;

thence, northerly on the section line to a point 200 feet southeasterly at right angles to the Hetch Hetchy Road centerline near the south 1/16 corner of said Section 29;

thence, northerly on the parallel line 200 feet distant from Hetch Hetchy Road centerline to a point 100 feet southerly of the Hetch Hetchy Ranger Station buildings and development area in Section 16, T. 1 N., R. 20 E.;

thence, counterclockwise on a line lying southerly and easterly 100 feet distant from all ranger station developments and the quarry, water tank and buildings belonging to the City and County of San Francisco to a point on the high water line (3,796 foot elevation) of Hetch Hetchy Reservoir;

thence, counterclockwise on the high water line of Hetch Hetchy Reservoir to a point directly downslope of the first major switchback of the Miguel Meadow Road at benchmark 4050 near the center of Section 9, T. 1 N., R. 20 E.;

thence, northerly uphill and, thence, crossing said Miguel Meadow Road at the switchback to a point 100 feet westerly at right angles to the Miguel Meadow Road centerline;

thence, southwesterly on the parallel line 100 feet distant from the Miguel Meadow Road centerline and from O'Shaughnessy Dam to a point on the 3,600 foot contour line in the NW1/4 of Section 16, T. 1 N., R. 20 E.;

thence, westerly on the 3,600 foot contour line and also on a line lying westerly 100 feet distant from the base of the spoil pile in the S1/2NE1/4 of Section 17, T. 1 N., R. 20 E. to a point 100 feet northerly of the Tuolumne River centerline;

thence, southwesterly on the parallel line 100 feet distant from the Tuolumne River centerline to a point 100 feet downstream from the gauging station near the south 1/4 corner of said Section 17;

thence, southeasterly crossing the Tuolumne River at right angles to a point 100 feet southeasterly of said Tuolumne River centerline;

thence, northeasterly on the parallel line 100 feet distant from the Tuolumne River centerline to a point 100 feet southwesterly at right angles to the gauging station access road centerline near the east 1/4 corner of said Section 17;

thence, easterly on the parallel line 100 feet distant from said access road centerline to a point 200 feet westerly at right angles to the Hetch Hetchy Road centerline near the west 1/4 corner of Section 16, T. 1 N., R. 20 E.;

thence, southerly on the parallel line 200 feet distant from the Hetch Hetchy Road centerline to the park boundary near the south 1/4 corner of Section 36, T. 1 N., R. 19 E.;

thence, westerly on the park boundary to a point 200 feet easterly at right angles to the Hetch Hetchy Road centerline near Mather Ranger Station in said Section 36;

thence, westerly on the parallel line 200 feet distant from the Hetch Hetchy Road centerline to the park boundary near the southeast corner of Section 35, T. 1 N., R. 19 E.;

thence, west and north on the park boundary to a point 100 feet southerly at right angles to the Lake Eleanor Road centerline near the west 1/4 corner of Section 3, T. 1 N., R. 19 E.;

thence, northeasterly on the parallel line 100 feet distant from the Lake Eleanor Road centerline to a point 100 feet distant from the Lake Eleanor Ranger Station development near the center of said Section 3;

thence, counterclockwise on a line lying southerly and easterly 100 feet distant from all roads, water systems, buildings and other developments associated with Lake Eleanor Ranger Station to a point on the high water line (4,657 foot elevation) of Lake Eleanor;



thence, counterclockwise on the high water line of Lake Eleanor to a point 100 feet northerly at right angles to Lake Eleanor Road centerline in the SW1/4NW1/4 of Section 3, T. 1 N., R. 19 E.;

thence, southwesterly on the parallel line 100 feet distant from the Lake Eleanor Road centerline to the park boundary near the west 1/4 corner of said Section 3;

thence, northerly, easterly and southerly on the park boundary to a point 100 feet westerly of the Tioga Pass Entrance Station development area near the north 1/4 corner of Section 31, T. 1 N., R. 25 E.;

thence, counterclockwise on a line lying westerly and southerly 100 feet distant from the parking lot, water tank and all other developments associated with Tioga Pass Entrance Station to a point 200 feet westerly at right angles to the Tioga Road centerline;

thence, southerly on the parallel line 200 feet distant from the Tioga Road centerline to the east line of the W1/2W1/2 of Section 2, T. 1 S., R. 24 E.;

thence, north on a straight line to a point 100 feet northerly of the Old Tioga Road centerline in said Section 2;

thence, southwesterly on the parallel line 100 feet distant from the Old Tioga Road centerline to a point 200 feet northerly at right angles to the Tioga Road centerline near the west line of E1/2E1/2 of Section 3, T. 1 S., R. 24 E.;

thence, westerly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet easterly of the Lambert Dome picnic area in the SE1/4 of Section 5, T. 1 S., R. 24 E.;

thence, counterclockwise on a line lying easterly 100 feet distant of all Lambert Dome picnic area developments on Parsons Lodge Road to a point 100 feet southeasterly at right angles to the centerline of the spur road leading to the telephone relay buildings lying northwesterly of said Lambert Dome picnic area;

thence, northerly on the parallel line 100 feet distant from the centerline of said spur road to a point lying 100 feet from said telephone relay buildings;

thence, counterclockwise on a line lying 100 feet from said telephone relay buildings and thence, crossing at the end of said spur road to a point on the west bank of Dog Lake Creek in said Section 5;

thence, downstream on the west bank of Dog Lake Creek to a point 100 feet northerly at right angles to the centerline of the road leading to the Yosemite Park and Curry Company stables in said Section 5;

thence, westerly on the parallel line 100 feet distant from centerline of said road leading to the stables and, thence, on a line 100 feet distant from said stables and the parking area to a point 100 feet northerly at right angles to the Parsons Lodge Road centerline in said Section 5;

thence, westerly on the parallel line 100 feet distant from the Parsons Lodge Road centerline to a point 100 feet easterly of Parsons Lodge;

thence, counterclockwise on a line 100 feet distant from Parsons Lodge to a point 100 feet northerly at right angles to the centerline of the road leading to the Tuolumne Meadows waste water treatment plant ponds and spray fields near the west line of said Section 5;

thence, westerly on the parallel line 100 feet distant from the centerline of said road leading to the ponds and spray fields and, thence, on a line 100 feet distant from said ponds and spray fields to a point on the north line of SW1/4 of Section 6, T. 1 S., R. 24 E.;

thence, west on the north line of said SW1/4 of Section 6 to the west bank of the Tuolumne River;

thence, upstream on the west bank of the Tuolumne River to its confluence with the west bank of Budd Creek;

thence, upstream on the west bank of Budd Creek to a point 200 northerly at right angles to the Tioga Road centerline near the south line of said Section 6;

thence, westerly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet northerly of the turnout in the NE1/4 of Section 10, T. 1 S., R. 23 E.;

thence, southwesterly on a line lying northwesterly 100 feet distant from the turnout to a point 200 feet northwesterly at right angles to the Tioga Road centerline;

thence, southwesterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 200 feet southeasterly at right angles to the May Lake Road centerline in the W1/2 of Section 25, T. 1 S., R. 22 E.;

thence, northeasterly on the parallel line 200 feet distant from the May Lake Road centerline to a point due south of benchmark 8711 in the SE1/4 of Section 24, T. 1 S., R. 22 E.;

thence, northeast on a straight line to a point 100 feet easterly of Snow Flat Cabin in said SE1/4 of Section 24;

thence, northwest on a straight line to a point 200 feet easterly at right angles to the May Lake Road centerline in said SE1/4 of Section 24;

thence, northeasterly on the parallel line 200 feet distant from the May Lake Road centerline to a point 100 feet distant from the May Lake parking area in Section 19, T. 1 S., R. 23 E.;

thence, counterclockwise on a line 100 feet distant from the May Lake parking area to a point 200 feet westerly at right angles to the May Lake Road centerline;

thence, southwesterly on the parallel line 200 feet distant from the May Lake Road centerline to a point 200 feet northerly of the Tioga Road centerline in the W1/2 of Section 25, T. 1 S., R. 22 E.;

thence, westerly on the parallel line 200 feet distant from the Tioga Road centerline to a point 200 feet easterly at right angles to the Porcupine Flat Campground Road centerline in the W1/2 of Section 33, T. 1 S., R. 22 E.;

thence, northwesterly on the parallel line 200 feet distant from the Porcupine Flat Campground Road centerline and also on a line 100 feet distant from any Porcupine Flat Campground developments to the west line of said Section 33;

thence, south on the section line to a point 200 feet northerly at right angles to the Tioga Road centerline;

thence, northwesterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet easterly of the Ten Lakes Trailhead parking area in the S1/2 of Section 17, T. 1 S., R. 22 E.;

thence, westerly on a line lying northerly 100 feet distant from the Ten Lakes Trailhead parking area to a point 200 feet northerly at right angles to the Tioga Road centerline;

thence, westerly on the parallel line 200 feet distant from the Tioga Road centerline to a point 200 feet northeasterly at right angles to the White Wolf Road centerline in the NE1/4 of Section 15, T. 1 S., R. 21 E.;

thence, northerly about 3/4 mile on the parallel line 200 feet distant from the White Wolf Road centerline to the south edge of a meadow near the north 1/4 corner of said Section 15;

thence, easterly along the southern edge of said meadow to a point 800 feet easterly at right angles to said White Wolf Road centerline;

thence, northerly on the parallel line 800 feet distant from the White Wolf road centerline to the Lukens Lake Trail centerline near the center of Section 10, T. 1 S., R. 21 E.;

thence, easterly about 1/4 mile on the Lukens Lake Trail centerline the east line of the W1/2NE1/4SE1/4 of said Section 10;

thence, north to the Middle Fork Tuolumne River centerline in the E1/2E1/2 of said Section 10;

thence, downstream on the Middle Fork Tuolumne River centerline to a point 100 feet easterly at right angles to the White Wolf Road centerline near the center of said Section 10;

thence, northerly on the parallel line 100 feet distant from the White Wolf Road centerline to a point 100 feet distant from the proposed spray field associated with the White Wolf Wastewater Treatment Facility in the NW1/4 of Section 3, T. 1 S., R. 21 E.;

thence, counterclockwise on a line lying 100 feet easterly and northerly of said proposed Treatment Facility, crossing White Wolf Road, and, thence, on a line lying 100 feet westerly and southerly of the existing pond and spray field associated with said Treatment Facility to a point 100 feet southwesterly at right angles to the White Wolf Road centerline in the S1/2 of said Section 3;

thence, southerly on the parallel line 100 feet distant from the White Wolf Road centerline to a point 500 feet northerly of the White Wolf development area near the center of Section 10, T. 1 S., R. 21 E.;

thence, counterclockwise on a line lying 500 feet from the employment housing area, concessioner buildings and water tank at White Wolf to a point 200 feet westerly at right angles to the White Wolf Road centerline;

thence, southerly on the parallel line 200 feet distant from the White Wolf Road centerline to a point 200 feet northwesterly at right angles to the Tioga Road centerline in the NE1/4 of Section 15, T. 1 S., R. 21 E.;

thence, southwesterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet northeasterly at right angles to the Old Big Oak Flat Road centerline at Gin Flat in the NW1/4 of Section 16, T. 2 S., R. 20 E.;

thence, northwesterly on the parallel line 100 feet distant from the Old Big Oak Flat Road to a point 100 feet from the hydrometeorological installation on the ridgetop in said NW1/4 of Section 16;

thence, counterclockwise on a line lying 100 feet from the hydrometeorological installation and, thence, crossing the Old Big Oak Flat Road to a point 100 feet southerly at right angles to the centerline of said Road;

thence, southerly on the parallel line 100 feet distant from the centerline of the road leading to the Hodgdon Meadow Waste Water Treatment Facility to a point 200 feet easterly at right angles to the Tuolumne Grove Road centerline in the SW1/4 of Section 35, T. 1 S., R. 19 E.;

thence, northerly on the parallel line 200 feet distant from the Tuolumne Grove Road centerline to the park boundary in the NW1/4 of said Section 35; and

thence, north and east on the park boundary to the point of beginning.

Excluding from the above described wilderness the following potential wilderness additions.

#### POTENTIAL WILDERNESS ADDITIONS UNIT 1

Lake Vernon (owned by the City and County of San Francisco): NE1/4SE1/4 of Section 24, T. 2 N., R. 20 E. and SW1/4NW1/4 and NW1/4SW1/4 of Section 19, T. 2 N., R. 21 E. totaling 121.49 acres. This parcel will become part of the Yosemite Wilderness when title is transferred to the National Park Service;

Miguel Meadows (owned by the City and County of San Francisco): SE1/4NW1/4, E1/2SW1/4 and NW1/4SE1/4 of Section 12, T. 1 N., R. 19 E. totaling 160 acres. This parcel will become part of Yosemite Wilderness when title is transferred to the National Park Service;

Poopenaut Valley (owned by the City and County of San Francisco): W1/2NE1/4 of Section 30, T. 2 N., R. 20 E. totaling 80 acres. This parcel will become part of the Yosemite Wilderness when title is transferred to the National Park Service;

#### Base Line Camp Water System and Access Road:

A strip of land 200 feet in width lying 100 feet on each side of the Base Line Camp Access Road centerline beginning at the park boundary on the west line of Section 6, T. 1 S., R. 20 E. and ending at Base Line Camp near the south 1/4 corner of Section 32, T. 1 N., R. 20 E. and all that land lying within 100 feet of all roads, water systems, buildings and other developments associated with said Base Line Camp. This parcel of land will become part of the Yosemite Wilderness when the water system serving the City and County of San Francisco recreation camp at Mather is removed.

#### Aspen Valley:

A strip of land 200 feet in width lying 100 feet on each side of the Old Tioga Road centerline beginning at the park boundary on the west line of Section 25, T. 1 S., R. 19 E. and ending at Aspen Valley in Sections 27 and 28, T. 1 S., R. 20 E., all land lying within 100 feet of all roads, water systems, buildings and other developments associated with said Aspen Valley and

thence, southeasterly on the parallel line 100 feet distant from the Old Big Oak Flat Road centerline to a point 200 feet northwesterly at right angles to the Tioga Road centerline in the NW1/4 of Section 16, T. 2 S., R. 20 E.;

thence, southwesterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet easterly of the Crane Flat Yosemite Institute parking area near the center of Section 18, T. 2 S., R. 20 E.;

thence, counterclockwise on a line lying 100 feet from all Crane Flat Yosemite Institute development to a point 100 feet north of the northernmost development of said Crane Flat Yosemite Institute;

thence, west to a point 200 feet easterly at right angles of the Tuolumne Grove Road centerline near the center of Section 18, T. 2 S., R. 20 E.;

thence, northerly on the parallel line 200 feet distant from the Tuolumne Grove Road centerline to a point 100 feet southerly of the parking area at Tunnel Tree near the south 1/4 corner of Section 7, T. 2 S., R. 20 E.;

thence, northerly on a line lying easterly 100 feet distant from the parking area at Tunnel Tree to a point 200 feet easterly at right angles to said Tuolumne Grove Road centerline in said Section 7;

thence, northerly on the parallel line 200 feet distant from the Tuolumne Grove Road centerline to a point 100 feet southeasterly of the picnic area at North Crane Creek in the E1/2 of Section 2, T. 2 S., R. 19 E.;

thence, northwesterly on a line lying northeasterly 100 feet from said picnic area to a point 200 feet northeasterly at right angles to the Tuolumne Grove Road centerline;

thence, northwesterly on the parallel line 200 feet distant from the Tuolumne Grove Road centerline to a point 100 feet easterly at right angles to the centerline of the road leading to the Hodgdon Meadow Waste Water Treatment Facility in the NE1/4 of Section 3, T. 2 S., R. 19 E.;

thence, northerly on the parallel line 100 feet distant from said centerline of the road leading to the Hodgdon Meadow Waste Water Treatment Facility to a point lying 100 feet southerly of said Treatment Facility;

thence, counterclockwise on a line lying 100 feet from the Hodgdon Meadow Waste Water Treatment Facility and crossing the road leading to said Treatment Facility to a point 100 feet westerly at right angles to the centerline of said road;

those parcels of privately owned land lying within said Aspen Valley. This parcel of land will become part of the Yosemite Wilderness when all titles to the private tracts are transferred to the National Park Service.

**Harden Lake Road:**

A strip of land 200 feet in width lying 100 feet on each side of the Harden Lake Access Road centerline beginning at the line lying 100 feet westerly of the proposed White Wolf Treatment Facility in Section 4, T. 1 S., R. 21 E. and ending at the horse corral at Harden Lake and all that land lying within 100 feet of said horse corral and any other developments. This parcel of land will become part of the Yosemite Wilderness when a Park Service corral and trail maintenance facility is constructed at White Wolf.

**May Lake High Sierra Camp:**

All that land lying within 100 feet of all structures, buildings and any other development at May Lake High Sierra Camp in Section 18, T. 1 S., R. 23 E., lying within 100 feet of all septic tanks, sewer lines and leach fields associated with said Camp and lying within 100 feet of the water system filtration building and water intake at May Lake. This parcel of land will become part of Yosemite Wilderness when the High Sierra Camp is removed.

**Glen Aulin High Sierra Camp:**

All that land lying within 100 feet of all structures, buildings and any other developments at Glen Aulin High Sierra Camp in T. 1 N., R. 23 E. and lying within 100 feet of all septic tanks, sewer lines and leach fields associated with said Camp. This parcel of land will become a part of the Yosemite Wilderness when the High Sierra Camp is removed.

**WILDERNESS UNIT 2**

Beginning at the southeast corner of Section 36, Township 4 South, Range 22 East on the boundary line of Yosemite National Park;

thence, westerly and southerly on the park boundary to a point 100 feet northerly at right angles to the Mount Raymond Road centerline near the west 1/4 corner of Section 16, T. 5 S., R. 22 E.;

thence, southwesterly on the parallel line 100 feet distant from the Mount Raymond Road to the park boundary in Section 17, T. 5 S., R. 22 E.;

thence, west on the park boundary to a point 100 feet easterly at right angles to the centerline of the road connecting the Mariposa Grove Road with the Mount Raymond Road in Section 18, T. 5 S., R. 22 E.;

thence, northerly on the parallel line 100 feet distant from said connecting road centerline to a point 200 feet southerly at right angles to the Mariposa Grove Road centerline;

thence, northeasterly on the parallel line 200 feet distant from the Mariposa Grove Road centerline to a point 100 feet southerly at right angles to the centerline of the trail leading to the Grove, said point being near the intersection of the 6,000 foot contour with said Mariposa Grove Road;

thence, northeasterly on the parallel line 100 feet distant from said trail centerline to a point 200 feet northeasterly at right angles to the Mariposa Grove Road centerline, said point being northerly about 1/8 mile from the Tunnel Tree on said Mariposa Grove Road;

thence, northwesterly on the parallel line 200 feet distant from the Mariposa Grove Road centerline to the ridgeline located southwesterly of Wawona Point;

thence, southwesterly on said ridgeline to a point on the Wawona Point Trail centerline;

thence, south to a point 200 feet northwesterly at right angles to the Mariposa Grove Road centerline;

thence, southerly on the parallel line 200 feet distant from the Mariposa Grove Road centerline to a point 100 feet northerly of Grizzly Giant Tree development area;

thence, counterclockwise on a line lying 100 feet distant from the Grizzly Giant Tree development area to a point 200 feet northerly at right angles to the Mariposa Grove Road centerline;

thence, westerly on the parallel line 200 feet distant from the Mariposa Grove Road centerline to a point 100 feet easterly of the tram loading and parking area;

thence, counterclockwise on a line lying 100 feet distant from all development associated with said tram loading and parking area to a point 200 feet northerly at right angles to the Mariposa Grove Road centerline;

thence, westerly on the parallel line 200 feet distant from the Mariposa Grove Road centerline to a point 200 feet northerly at right angles to the Wawona Road centerline in the SW1/4 of Section 12, T. 5 S., R. 21 E.;

thence, westerly on the parallel line 200 feet distant of the Wawona Road centerline to a point 100 feet easterly of the South Entrance Station development area in said SW1/4 of Section 12;



thence, counterclockwise on a line lying 100 feet distant from all roads and buildings associated with said South Entrance Station development area to a point 200 feet northerly at right angles to the Wawona Road centerline;

thence, northerly on the parallel line 200 feet distant from the Wawona Road centerline to the west line of Section 1, T. 5 S., R. 21 E.;

thence, north on the section line to the northwest corner of said Section 1;

thence, east on the township line to the southeast corner of Section 35, T. 4 S., R. 21 E.;

thence, north on the section line to a point 100 feet southerly of any road, building or other developments lying southerly of the South Wawona Road;

thence, easterly on a line lying 100 feet southerly of said developments along the South Wawona Road to a point 200 feet southerly at right angles to the South Wawona Road centerline;

thence, southeasterly on the parallel line 200 feet distant from the South Wawona Road centerline to the Road's terminus and, thence, to a point lying 100 feet from the water intake system near the south 1/4 corner of Section 36, T. 4 S., R. 21 E.;

thence, counterclockwise on a line lying 100 feet southerly of said water intake system to a point lying 100 feet east of said water intake system;

thence, north to a point on the northeasterly bank of the South Fork Merced River;

thence, downstream on the northeast bank of the South Fork Merced River to the east line of Section 35, T. 4 S., R. 21 E.;

thence, north on the section line to the northeast corner of the SE1/4SE1/4NE1/4 of said Section 35;

thence, northwesterly on a straight line to the northeast corner of the NW1/4NW1/4NE1/4 of said Section 35;

thence, west on the section line to the northwest corner of said Section 35;

thence, south on the section line to a point lying 100 feet northerly of any road, building or other development of North Wawona;

thence, southwesterly on a line lying 100 feet northerly of all roads, buildings, the ranger station and all other developments in Section 34, T. 4 S., R. 21 E. to a point 200 feet northerly at right angles to the Wawona Road centerline in the SW1/4 of said Section 34;

thence, northwesterly on the parallel line 200 feet distant from the Wawona Road centerline to a point 100 feet westerly of the Mosquito Creek trailhead parking area in the NW1/4 of Section 21, T. 4 S., R. 21 E.;

thence, counterclockwise on a line lying 100 feet distant from the Mosquito Creek trailhead parking area to a point 200 feet easterly at right angles to the Wawona Road centerline;

thence, northerly on the parallel line 200 feet distant from the Wawona Road centerline to a point 200 feet southerly at right angles to the Deer Camp Road centerline in the NW1/4 of Section 29, T. 3 S., R. 21 E.;

thence, north to a point 200 feet northerly at right angles to the Deer Camp Road centerline;

thence, northwesterly on the parallel line 200 feet distant from the Deer Camp Road centerline to a point 200 feet easterly at right angles to the Wawona Road centerline in said NW1/4 of Section 29;

thence, northerly on the parallel line 200 feet distant from the Wawona Road centerline to a point 100 feet southeasterly of the Chinquapin Ranger Station turnout in the SW1/4 of Section 20, T. 3 S., R. 21 E.;

thence, northerly on a line lying easterly 100 feet distant from all roads, buildings and all other developments associated with the Chinquapin Ranger Station to a point 200 feet easterly at right angles to the Glacier Point Road centerline;

thence, northerly on the parallel line 200 feet distant from the Glacier Point Road centerline to a point 200 feet westerly at right angles to the Badger Pass Ski Road centerline in the NW1/4 of Section 22, T. 3 S., R. 21 E.;

thence, southerly on the parallel line 200 feet distant from the Badger Pass Ski Road centerline to a point 100 feet northerly of the access road centerline surrounding the Badger Pass Ski area;

thence, counterclockwise on the parallel line 100 feet distant from said access road centerline to a point 200 feet from the edge of the Badger Pass Ski area parking area;

thence, northerly on a line lying easterly 200 feet distant from the Badger Pass Ski area parking area to a point 200 feet north of northernmost portion of said parking area;

thence, north to a point 200 feet southeasterly at right angles to the Glacier Point Road centerline in the SW1/4 of Section 15, T. 3 S., R. 21 E.;

thence, northeasterly on the parallel line 200 feet distant from the Glacier Point Road centerline to a point 200 feet southwesterly at right angles to the Bridalveil Creek Campground Road centerline in the SW1/4 of Section 13, T. 3 S., R. 21 E.;

thence, southeasterly on the parallel line 200 feet distant from the Bridalveil Creek Campground Road centerline to a point on the centerline of the first encountered creek near the north 1/4 corner of Section 24, T. 3 S., R. 21 E.;

thence, upstream on the centerline of said creek and, thence, crossing the Old Glacier Point Road to a point 100 feet southerly at right angles to said road centerline;

thence, easterly on the parallel line 100 feet distant from the Old Glacier Point Road centerline to a point 100 feet distant from the developed campsites in Bridalveil Campground;

thence, southeasterly on a line lying 100 feet distant from all roads, campsites and any developments associated with Bridalveil Campground to a point 100 feet northwesterly at right angles to the centerline of the access road to the water system tank for said campground;

thence, southwesterly on the parallel line 100 feet distant from said access road centerline to a point 100 feet distant from the water tank in the SW1/4 of Section 24, T. 3 S., R. 21 E.;

thence, counterclockwise on a line lying 100 feet distant from said water tank to a point 100 feet easterly of the access road centerline;

thence, northeasterly on the parallel line 100 feet distant from said access road centerline to a point 100 feet distant from the developed campsites at Bridalveil Campground;

thence, counterclockwise on a line lying 100 feet distant from developed campsites, special use campsites, roads and any other developments associated with the Bridalveil Campground to a point 200 feet easterly at right angles to the Bridalveil Creek Campground Road;

thence, northerly on the parallel line 200 feet distant to a point 200 feet southerly of the Glacier Point Road centerline in the SW1/4 of Section 13, T. 3 S., R. 21 E.;

thence, easterly on the parallel line 200 feet distant from the Glacier Point Road centerline to a point 100 feet westerly of the Ostrander Lake Trailhead parking area near the south 1/4 corner of Section 18, T. 3 S., R. 22 E.;

thence, easterly on a line lying southerly 100 feet distant from Ostrander Lake Trailhead parking area to a point 200 feet southerly, right angles to the Glacier Point Road centerline;

thence, easterly on the parallel line 200 feet distant from the Glacier Point Road centerline to a point 100 feet southerly of the Mono Meadows Trailhead parking area near the center of Section 17, T. 3 S., R. 22 E.;

thence, northerly on a line lying easterly 100 feet distant from the Mono Meadows Trailhead parking area to a point 200 feet easterly at right angles to Glacier Point Road centerline;

thence, northerly on the parallel line 200 feet distant from the Glacier Point Road to a point 100 feet distant from any development area at Glacier Point;

thence, counterclockwise on a line 100 feet distant from trails, roads, buildings, structures and any other developments associated with Glacier Point to the 7,200 foot contour line lying northwesterly of the Glacier Point parking area;

thence, northwesterly on the 7,200 foot contour line to the north-south ridgeline leading to Sentinel Dome;

thence, southerly on said ridgeline of Sentinel Dome and also on line lying westerly 100 feet of the telephone relay buildings and telephone and TV receivers to a point 100 feet northerly at right angles to the Sentinel Dome Road centerline;

thence, southerly on the westerly parallel line 100 feet distant from the Sentinel Dome Road centerline to a point 200 feet southerly at right angles to Glacier Point Road centerline;

thence, southerly on the parallel line 200 feet distant from the Glacier Point Road centerline to a point 100 feet northerly of the Sentinel Dome Trailhead parking area;

thence, southerly on a line lying westerly 100 feet distant from the Sentinel Dome Trailhead parking area to a point 200 feet westerly at right angles to the Glacier Point Road centerline;

thence, southerly and westerly on the parallel line 200 feet distant from the Glacier Point Road centerline to a point 100 feet easterly of the McGurk Meadow Trailhead parking area in the SW1/4 of Section 13, T. 3 S., R. 21 E.;

thence, westerly on a line lying northerly 100 feet distant from the McGurk Meadow Trailhead parking area to a point 200 feet northerly at right angles to the Glacier Point Road centerline;

thence, westerly on the parallel line 200 feet distant from the Glacier Point Road centerline to a point 200 feet northeasterly at right angles to Wawona Road centerline in the SW1/4 of Section 20, T. 3 S., R. 21 E.;

thence, northerly on the parallel line 200 feet distant from the Wawona Road centerline to a point 100 feet southerly at right angles to the Turtleback Dome Road centerline in the SE1/4 of Section 36, T. 2 S., R. 20 E.;

thence, easterly on the parallel line 100 feet distant from the Turtleback Dome Road centerline to a point on the ridgeline lying 100 feet easterly of the radio repeater;

thence, northeasterly on a line lying easterly 100 feet of the radio repeater and also the powerline northeast of said radio repeater to a point 200 feet southerly at right angles to the Wawona Road centerline;

thence, easterly on the parallel line 200 feet distant from the Wawona Road centerline and passing over the Wawona Tunnel to a point 100 feet westerly of the Tunnel View parking area;

thence, easterly on a line lying southerly 100 feet distant from the Tunnel View parking area to a point 200 feet southerly at right angles to the Wawona Road centerline;

thence, easterly on the parallel line 200 feet distant from the Wawona Road centerline to the 4,200 foot elevation contour line near Bench Mark 4127 lying northerly of Stanford Point;

thence, easterly on the 4,200 foot contour line to a point 100 feet westerly at right angles to the horse trail centerline in Illilouette Gorge, said trail leads to Nevada Falls;

thence, easterly on the parallel line 100 feet distant from said horse trail to a point 100 feet past the bridge above Nevada Falls;

thence, north to a point 100 feet northerly at right angles to the Mist Trail centerline below Liberty Cap;

thence, westerly on the parallel line 100 feet distant from the Mist Trail centerline to the 4,200 foot elevation contour line near the base of Sierra Point;

thence, northerly and westerly on the 4,200 foot contour line to a point 200 feet northerly at right angles to the Big Oak Flat Road centerline near the unnamed stream between Fireplace Creek and Cascade Creek;

thence, westerly on the parallel line 200 feet distant from the Oak Flat Road centerline to a point 100 feet southerly at right angles to the Crane Flat Store access road in the SE1/4 of Section 18, T. 2 S., R. 20 E.;

thence, northeasterly on the parallel line 100 feet distant from said access road and also on a line lying easterly 100 feet of the Crane Flat Store parking area to a point 200 feet southerly at right angles to the Tioga Road centerline;

thence, easterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet southerly of the water pipes serving Crane Flat;

thence, easterly on a line lying southerly of said water pipes to a point 200 feet southerly at right angles to Tioga Road centerline in the SW1/4 of Section 17, T. 2 S., R. 20 E.;

thence, easterly on the parallel line 200 feet distant of the Tioga Road centerline to a point 100 feet southerly of the Gin Flat turnout in the NW1/4 of Section 16, T. 2 S., R. 20 E.;

thence, northerly on a line lying easterly 100 feet distant from the Gin Flat turnout to a point 200 feet easterly at right angles to the Tioga Road centerline;

thence, northeasterly on the parallel line 200 feet distant from Tioga Road centerline to a point 100 feet westerly of the Tamarack Creek/Aspen Valley Trailhead parking area near the southeast corner of Section 3, T. 2 S., R. 20 E.;

thence, easterly on a line lying southerly 100 feet distant from the Tamarack Creek/Aspen Valley Trailhead parking area to a point 200 feet southeasterly at right angles to the Tioga Road centerline;

thence, northeasterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 200 feet southwesterly at right angles to the Yosemite Creek Campground Road centerline near the west 1/4 corner of Section 14, T. 1 S., R. 21 E.;

thence, southeasterly on the parallel line 200 feet distant from the Yosemite Creek Campground Road centerline to the Yosemite Creek centerline near the center of Section 30, T. 1 S., R. 22 E.;

thence, counterclockwise on a line 100 feet distant from developed campsites and special use campsites and, thence, crossing the Campground Road 100 feet from the easterly end of the Yosemite Creek Campground to a point 200 feet northerly at right angles to said Campground Road;

thence, westerly on the parallel line 200 feet distant from the Yosemite Creek Campground Road centerline to a point 200 feet southwesterly at right angles to the Tioga Road centerline;

thence, southeasterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet westerly of the Lukens Lake Trailhead parking area near the south 1/4 corner of Section 13, T. 1 S., R. 21 E.;

thence, southeasterly on a line lying southerly 100 feet of the Lukens Lake Trailhead parking area to a point 200 feet southerly at right angles to the Tioga Road centerline;

thence, easterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet westerly at the Yosemite Creek Trailhead parking area near the southeast corner of the NE1/4SW1/4 of Section 17, T. 1 S., R. 22 E.;

thence, easterly on a line lying southerly 100 feet distant from the Yosemite Creek Trailhead parking area to a point 200 feet southerly at right angles to Tioga Road centerline;

thence, southerly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet northwesterly of the Yosemite Creek picnic area near the southeast corner of the SW1/4SE1/4 of Section 17, T. 1 S., R. 22 E.;

thence, southerly on a line lying westerly 100 feet distant from the Yosemite Creek picnic area to a point 200 feet westerly at right angles to the Tioga Road centerline;

thence, southerly on the parallel line 200 feet distant from the Tioga Road centerline to a point 200 feet westerly of the Porcupine Flat turnout near the west line of Section 33, T. 1 S., R. 22 E.;

thence, easterly on a line lying southerly 100 feet distant from the Porcupine Flat turnout to a point 200 feet southerly at right angles to the Tioga Road centerline;

thence, easterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet westerly of the Porcupine Creek Trailhead parking area near the east line of Section 33, T. 1 S., R. 22 E.;

thence, easterly on a line lying southerly 100 feet distant from the Porcupine Creek Trailhead parking area to a point 200 feet southerly at right angles to the Tioga Road centerline;

thence, easterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet northerly of the access road centerline to the old quarry on the ridge above Snow Creek in the SW1/4 of Section 25, T. 1 S., R. 22 E.;

thence, counterclockwise on a line 100 feet distant from said access road and said quarry to a point 200 feet southerly of the Tioga centerline;

thence, easterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet southerly of the Olmstead Point turnout near the southeast corner of Section 30, T. 1 S., R. 23 E.;

thence, northeasterly on a line lying southeasterly 100 feet distant from the Olmstead Point turnout to a point 200 feet easterly at right angles to the Tioga Road centerline;

thence, northerly on the parallel line 200 feet distant from the Tioga Road centerline to a point 200 feet westerly at right angles to the access road centerline leading to the Tenaya Lake Walk-In Campground near the south line of Section 20, T. 1 S., R. 23 E.;

thence, southerly on the parallel line 200 feet distant from said access road centerline to the trail on the southeast shore of Tenaya Lake;

thence, northeasterly on said trail to a point 200 feet southeasterly at right angles to the Tioga Road centerline near Pywiack Dome;

thence, northeasterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 200 feet westerly of the Cathedral Lakes Trailhead parking area near the northwest corner of Section 1, T. 1 S., R. 24 E.;

thence, southerly on a straight line to the junction of Cathedral Lakes Trail and the trail coming from Tenaya Lake in the NW1/4NW1/4 of said Section 7;

thence, south to a point 100 feet southerly at right angles to the centerline of said trail coming from Tenaya Lake;

thence, easterly on the parallel line 100 feet distant from the centerline of said trail coming from Tenaya Lake to its intersection with the trail lying southerly of the Lyell Fork of the Tuolumne River near the southeast corner of Section 5, T. 1 S., R. 24 E.;

thence, northeasterly on a straight line at right angles to the Lyell Fork of the Tuolumne River to a point on the south line of Section 4, T. 1 S., R. 24 E.;

thence, east on the section line to the easterly bank of the Dana Fork of the Tuolumne River;

thence, upstream on the east and south bank of the Dana Fork of the Tuolumne River to a point 200 feet southerly at right angles to the Tioga Road centerline in the SW1/4 of Section 3, T. 1 S., R. 24 E.



thence, easterly on the parallel line 200 feet distant from the Tioga Road centerline to a point 100 feet southerly of the Mono Pass Trailhead parking area in the N1/2 of Section 6, T. 1 S., R. 25 E.;

thence, northeasterly on a line lying southeasterly 100 feet distant from the Mono Pass Trailhead parking area to a point 200 feet southeasterly at right angles to the Tioga Road centerline;

thence, northerly on the parallel line 200 feet distant from the Tioga Road centerline to the park boundary near the north 1/4 corner of Section 31, T. 1 N., R. 25 E.;

thence, easterly, southerly and westerly on the park boundary to the point of beginning.

Excluding from the above described wilderness the following potential wilderness additions.

#### POTENTIAL WILDERNESS ADDITIONS UNIT 2

##### Tamarack Flat Campground:

A strip of land 200 feet in width lying 100 feet on each side of the Tamarack Campground Access Road centerline beginning at the parallel line lying 200 feet easterly of the Tioga Road centerline in the NW1/4 of Section 16, T. 2 S., R. 20 E. and ending at Tamarack Campground in Sections 14 and 23, T. 2 S., R. 20 E. and all that land lying within 100 feet of all developed campgrounds, roads, buildings and any other developments associated with said Tamarack Campground. This parcel of land will become part of the Yosemite Wilderness when campground sites are constructed at White Wolf Campground.

##### Glacier Point Powerline:

A strip of land 200 feet in width lying 100 feet on each side of the Glacier Point Powerline beginning at the 4,200 foot elevation contour line northeasterly of Sentinel Creek and ending at the north-south ridgeline leading to Sentinel Dome. This parcel of land will become part of the Yosemite Wilderness when power to Glacier Point is constructed underground in the Glacier Point Road corridor.

##### Chinquapin Water System:

A strip of land 200 feet in width lying 100 feet on each side of the Old Glacier Point Road centerline beginning at the parallel line lying 200 feet easterly of the Glacier Point Road centerline at Chinquapin in the SW1/4 of Section 20, T. 3 S., R. 21 E. and ending at the parallel line lying 100 feet westerly of the centerline of the access road surrounding the Badger Pass Ski Area in the NE1/4 of Section 21, T. 3 S., R. 21 E. This parcel will become part of the Yosemite Wilderness when vehicular access to the Chinquapin water system is no longer needed.

Mariposa Grove Powerline:

A strip of land 200 feet in width lying 100 feet on each side of the Mariposa Grove Powerline beginning at the parallel line lying 200 feet northerly of the Mariposa Grove Road centerline near west line of the SE1/4 of Section 12, T. 5 S., R. 21 E. and ending at the parallel line lying 200 feet westerly of the Mariposa Grove Road centerline about 1/2 mile easterly of the east line of said Section 12. This parcel of land will become part of the Yosemite Wilderness when power to Mariposa Grove is constructed underground in the Mariposa Grove Road corridor.

Vogelsang High Sierra Camp:

All that land lying within 100 feet of all structures, buildings and any other developments at Vogelsang High Sierra Camp and lying within 100 feet of all septic tanks, sewer lines and leach fields associated with said Camp. This parcel of land will become part of the Yosemite Wilderness when the High Sierra Camp is removed.

Sunrise High Sierra Camp:

All that land near the south line of Section 34, T. 1 S., R. 23 E. lying within 100 feet of all structures, buildings and any other developments at Sunrise High Sierra Camp and lying within 100 feet of all septic tanks, sewer lines and leach fields associated with said Camp. This parcel of land will become part of the Yosemite Wilderness when the High Sierra Camp is removed.

Merced High Sierra Camp:

All that land lying within 100 feet of all structures, buildings and any other developments at Merced High Sierra Camp and lying within 100 feet of all septic tanks, sewer lines and leach fields associated with said Camp. This parcel of land will become part of the Yosemite Wilderness when the High Sierra Camp is removed.

Ostrander Ski Hut:

All that land within 100 feet of the water system intake lying northerly of Ostrander Lake within 100 feet of Ostrander Hut and near the center of Section 24, T. 3 S., R. 22 E. This parcel of land will become part of the Yosemite Wilderness when commercial visitor services are no longer offered.

Within the above described Yosemite Wilderness certain structures and installations exist necessary to meet minimum management needs. These include patrol cabins at Miguel Meadows, Sachse Springs, Wilma Lake, Lake Vernon, Snow Creek, Merced Lake and Buck Camp; automated hydrometeorological devices at Lower Kibbie Ridge, Paradise Valley and Slide Canyon, and Dana Meadows; and a radio repeater on Mount Hoffmann. Automated hydrometeorological devices are proposed for Ostrander Lake, Merced Lake and Moraine Meadows.

In addition, underground utilities include telephone lines from Yosemite Valley to Tuolumne Meadows and White Wolf (10 miles), Yosemite Valley to Wawona (13 miles), Chinquapin to Glacier Point (5 miles) and Wawona to Mariposa Grove (2 miles); power transmission lines from Chinquapin to Badger Pass Ski Area (2 miles) and South Entrance to Mariposa Grove (2 miles); water line from Biledo Meadow to South Entrance (3 miles); and hydroelectric water tunnels from Hetch Hetchy Reservoir to Early Intake (6 miles) and Lake Eleanor to Cherry Lake (1/2 mile).

APPENDIX B: MOTORIZED OR MECHANIZED TOOLS APPROVED AS MINIMUM TOOLS FOR  
AGENCY USE IN WILDERNESS

National Park Service Management Policies (VI-6 &7) states,

In the management of wilderness resources and of wilderness use, the Service will use the minimum tool necessary to successfully, safely and economically accomplish its management objectives. When establishing the minimum tool, economic factors should be considered the least important of the three criteria. The chosen tool or equipment should be the one that least degrades wilderness values temporarily or permanently.

The Policies further state that "the specifics of wilderness management for a given park will be included in the park's backcountry management plan" and that "specific approval is required for the nonemergency use of motorized or mechanical equipment." Administrative use of motorized or mechanized tools or equipment for emergency purposes is permitted under the wilderness acts.

The Service recognizes that some impacts will occur in the course of managing wilderness. It is incumbent upon the Service and its offices, however, to consider and review carefully each use of tools and equipment excepted for nonemergency administrative purposes to minimize long term environmental impacts on wilderness. The approval process works in the following manner. Each office with wilderness related operations submits to the park Wilderness Committee statements for motorized or mechanical tools or equipment needed for their work. That committee reviews proposals for recommendation to the Superintendent and Regional Director. One time uses of mechanical or motorized equipment for nonemergency administrative purposes can be approved by the Superintendent provided such use meets the minimum tool criteria for the job to be done. Any new proposal for a motorized or mechanized tool or piece of equipment not on the approved list in this Wilderness Management Plan must go through the approval process using minimum tool criteria before that tool can be used in designated wilderness.

Approved exceptions are organized in this appendix by equipment or tool and then by Park Service office and use.

OVERSNOW VEHICLES

Protection

Mather District

An exception has been approved for the use of oversnow vehicles on that portion of the old Tioga Road from its terminus with the May Lake trailhead parking lot to its junction with the modern Tioga Road, a distance of approximately one mile in designated wilderness. The use of the old road two or three times per winter avoids an alternate route via Olmsted Point which can be an extreme avalanche hazard. Snow survey trips are also used to resupply the Tuolumne Meadows winter rangers with fresh food.

and equipment and supplies necessary to live and perform their duties in an isolated winter environment. Snow surveys themselves are accomplished on skis or snowshoes, while oversnow vehicles provide access and support.

#### Nordic Ski Patrol

Off-road snow machine use in wilderness is restricted to emergency and administrative purposes. Although they are not designated wilderness, unplowed roads with the exception of the Glacier Point Road are managed as de-facto wilderness in winter and are used by visitors seeking wilderness values. Therefore, the use of snow machines on roads in winter is restricted to emergency use only. On the Glacier Point Road snow machines are currently permitted to set tracks to Glacier Point, maintain nonwilderness facilities, and occasionally service telephone and television repeaters.

#### HYDRAULIC TREE JACK

##### Resources Management Forestry

Hydraulic tree jacks are used occasionally as wedges to fall hazard trees safely. In hazard tree removal chainsaws and hydraulic jacks may have to be used beyond 200 feet from road centerlines, an intrusion into wilderness made only to protect life and property along park roadways.

#### CHAINSAWS

##### Maintenance

##### Wilderness Maintenance

Use of chainsaws to open trails quickly minimizes the formation of new trails around down trees and helps confine travel and trail erosion to the treads of officially maintained trails. Wilderness designation brought the total of official trails in Yosemite to around 800 miles. Without chainsaws, regular and safe opening of this extensive network would be practically impossible. Expeditious opening of the trails reduces health and safety hazards to wilderness users by keeping marked and maintained trails open and clear and by keeping users on the trails.

The use of chainsaws to provide trail, camp and patrol cabin wood supplies releases people for work on trail erosion problems in limited work seasons at higher elevations. Without the wood the health and safety of the work crews, especially in spring and fall, can be impaired enough to affect production on trail maintenance and erosion problems.

An Alaskan mill, a mechanized frame attached to a chainsaw, is used to manufacture on-site bridge timbers and decking. Though the Service is moving away from on-site bridge construction in Yosemite in most cases, the mill remains essential to construct or repair many bridges over high

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## JACKHAMMER

### Maintenance

#### Wilderness Maintenance

Jackhammers are used to drill holes for pins and for plugs and feathers to cut rock for trail work. Jackhammers are also used for blasting operations, though these have been minimized in favor of cutting rock with plugs and feathers. To repair safe trails with minimum long term environmental impact, to maintain trails to accept the levels and kinds of uses they get, and to reduce trail erosion and impacts especially in heavy use areas, the jackhammer is a minimum motorized tool to successfully and safely meet wilderness management objectives.

## PUMP

### Maintenance

#### Wilderness Maintenance

Portable gas-driven pumps are necessary to drain sumps during construction of the sewer mounding systems in potential wilderness additions. These pumps are also necessary for periodic removal of human waste from septic tanks connected with the sewer mounds so that human wastes can be packed out of wilderness. A gas-driven pump is used to supply water for the May Lake water system.

Water-driven pumps are the driving force for the sewer mounds at Merced Lake and Glen Aulin.

Gas-driven pumps are used in some situations by wilderness maintenance crews. Drought, crew size for special projects, and camp location for specific projects have all created situations in which a gas-driven pump became necessary to maintain a safe supply of water for maintenance employees in wilderness.

### Resources Management

#### Prescribed Fires

Gas-driven pumps are used for water to secure prescribed fire boundaries.

### Protection

#### Fire Management

Gas-driven pumps are used for water to suppress fires posing a threat to life, public health, property, or significant natural or cultural resources.

## WELDER AND CUTTING TORCH

### Maintenance

#### Wilderness Maintenance

Since so much steel was used in bridges in the 1950's and 1960's, welders and cutting torches are essential for repair

and, most important, for removal when steel bridges are washed out. Only by cutting up heavy parts can steel bridge remnants be removed from wilderness.

Welders and cutting torches are also essential for repair of safety railings in wilderness at points above Yosemite Valley.

#### CHLORINATOR

##### Maintenance

##### Wilderness Maintenance

Chlorinators are necessary to sustain the quality of public water supplies in potential wilderness additions as mandated by Federal and State law. Chlorinators are maintained at the High Sierra Camps. There are no chlorinators or treated public water supplies in wilderness in Yosemite.

#### WHEELBARROW

##### Maintenance

##### Wilderness Maintenance

Wheelbarrows are used occasionally for large trail, bridge, or sewage projects in wilderness. A wheelbarrow minimizes impacts of gathering material and of mixing cement. Wheelbarrows are packed in to job sites and have balloon tires to minimize tread impacts.

#### ORCHARD WAGON/FORECART

##### Maintenance

##### Wilderness Maintenance

This horsedrawn wagon with a belly or tailgate dump and the ability to turn in its own axis is used for special heavy projects to provide flexibility, to distribute impact in material gathering, and to minimize meadow impacts. The wagon is broken down and packed in to job sites; it has balloon tires to minimize tread impact. The wagon will not be used for camp transport or driven except to move materials on the job.

#### CLIVIS MULTRUM

##### Maintenance

##### Wilderness Maintenance

Composting toilets have been constructed at three backcountry or potential wilderness locations (Emerald Pool, Glen Aulin, Vogelsang) to help solve human waste problems in heavily used wilderness and backcountry areas as alternatives to more heavily mechanized maintenance-intensive systems. These or other public toilet facilities will be provided only at designated campgrounds in wilderness. Essential to toilet operation is a small solar-powered fan. Toilets being considered for future use may have small fans and a propane heating feature.



APPENDIX C: NONEMERGENCY ADMINISTRATIVE USES OF AIRCRAFT IN WILDERNESS,  
SUBJECT TO APPROVAL

Helicopter and fixed-wing aircraft flights are permitted over the park, including designated wilderness, only for emergency operations relating to wildland fire suppression, search and rescue, victim recovery, and medical evacuation. All other flights relating to park operations such as administration, maintenance, and resources management must have prior written permission of the Superintendent for each specific mission based on minimum needs to manage the area. The House Report on the 1984 California Wilderness Bill recommended, "Helicopter use for routine nonemergency purposes associated with visitor use is a questionable activity in national park system wilderness areas and should be eliminated within designated national park system wilderness."

All aircraft operations are managed by the Park Air Manager and scheduled through the Air Operations Officer and the Fire Dispatcher. Temporary air space closures in emergency situations are established with the FAA through the Air Manager. Records of all aircraft missions and known violations are maintained by the Fire Dispatcher and are readily available for examination by authorized persons.

Proposed or planned nonemergency administrative flights over wilderness are listed in this appendix by aircraft type and then by Park Service office and use. Each of these flights must be approved by the Park Superintendent.

HELICOPTER

Maintenance  
Roads

During April the Road Department places cinders and/or charcoal on the Tioga Road at Olmsted Point and Spring Hill to increase snowmelt. Both areas present potential avalanche hazards during the spring road opening and afterwards until the snow and ice have melted off the rock above the road. At Olmsted Point a light dusting of cinders and/or charcoal is placed on the snow for 2,000 linear feet and not farther than 450 feet from the centerline of the road on its uphill side. At Spring Hill, cinder and/or charcoal are placed on the snow for 1,200 linear feet and no farther than 300 feet from the centerline of the road along its uphill side. All cinders and/or charcoal are applied by helicopter equipped with a fertilizer spreader drop bucket. If the helicopter is required to land, it would use the parking area at Olmsted Point. Project completion requires six to eight hours of helicopter flight time.

Since the cinder spreading includes some spreading in designated wilderness over 200 feet from the Tioga Road centerline, an exception has been authorized for helicopter use and cinders inside wilderness for this annual road

operation. The helicopter and foreign materials will be used only as a last resort if other means to clear the area prove infeasible. The Park Service is committed to investigate and develop more innovative techniques having less impact on wilderness.

### Resources Management

#### Peregrine Falcon Management

A helicopter may be used to survey potential nest cliffs and to set up remote hacksites for peregrine falcons in wilderness if foot and horseback prove infeasible. Helicopters would transport hack boxes if locations were too remote for stock transport. Helicopters would also be used to transport rock climbers to aerie sites for nest augmentation, reducing the stress to hatchlings associated with a long climb. A helicopter would be used one day each year at each aerie location at most.

#### Prescribed Fires

Prescribed fires are monitored from the air or ground. Aerial reconnaissance may be by helicopter; such flights will be kept as unobtrusive as possible. Ground crews will only be landed and removed from wilderness areas by helicopter in emergency situations.

Many fires are several thousand acres in size, making ground reconnaissance excessively difficult and in some cases dangerous. Fire status must be checked periodically to insure public safety in camping areas and along trails, to help predict fire course and intensity, to assess whether the fires will remain within designated management units, and to predict smoke impacts on nearby nonwilderness developed areas.

To ignite prescribed fires in dense chaparral within wilderness an exception has been approved to use the helitorch to ignite these fires from the air. The use of a spot or short strip ignition technique will require the helitorch to be in the wilderness for only a few minutes even in a prescribed burn unit of several thousand acres. For steep, relatively inaccessible brush covered slopes the helitorch is the minimum tool for successful prescribed burning. Sending people into fire situations in which their mobility is severely restricted by dense brush and intense, erratic fires poses an unacceptable risk to personal safety.

### Protection

#### Search and Rescue

Exceptions are authorized for administrative helicopter use in designated wilderness by Search and Rescue in some nonemergency situations. When fatalities occur in hazardous terrain with high angle areas containing loose rock or

and ice, such as North Dome Gully or LeConte Gully, a ground operation would put large numbers of rescuers at risk possibly over long periods of time. Fatalities which occur in winter in remote areas such as Lyell Canyon or the Clark Range would be dangerous to evacuate if handled on the ground rather than by air. Use of a helicopter can minimize the risk to rescuers. Sometimes SAR responds to an accident with the helicopter and finds upon arrival that the victim is a fatality. It would be grossly inefficient if the helicopter did not evacuate the body when it was already close to the scene even in low risk situations.

Six helicopter flights of two to four hours each are needed to orient helicopter crews to Yosemite's terrain and flying conditions, especially around the Valley walls, and to train crews in specialized helicopter techniques prior to a search or rescue. These flights would occur during the late fall, winter, and early spring each year. Most on the ground training occurs on the Rostrum outside wilderness, but some may occur inside wilderness under actual rescue conditions. In the event helicopter landings inside wilderness for SAR training under nonemergency conditions become necessary, exceptions for those landings will be requested by the Division.

#### Cannabis Plot Searches

Helicopter or fixed-wing aircraft will be used for searches for Cannabis growing inside wilderness boundaries. These searches will be conducted at an altitude of less than 2,000 feet above the ground. Because Cannabis grows poorly at higher elevations, searches will be confined to areas under 7,500 feet elevation. Aircraft would not land except in emergency situations. Three to five flights a year are necessary between the months of May and October. Inconvenience to park visitors will be minimized by flying on weekdays and concentrating on areas that have little wilderness use. If no other practical or safe means are available, helicopters may be used to remove contraband and Cannabis once a plot is found.

#### Fire Management

Helicopters may be used for reconnaissance of wild and human-caused fires if the Fire Management Officer determines the situation warrants aerial reconnaissance. Helicopters will be used in attack on wilderness fires only if a fire poses a threat to life, property, or significant cultural resources. Heli-rappel crews will be used if natural aircraft landing sites are unavailable.

#### FIXED-WING AIRCRAFT

Resources Management  
Fish Stocking

The Service has identified 13 lakes to be stocked on a rotating basis, 12 of them in wilderness. Once each summer the California Department of Fish and Game conducts a stocking operation using fixed-wing aircraft to drop a previously designated number of rainbow trout fingerlings into six specified wilderness lakes. The entire stocking operation lasts no more than two hours. The fish stocking schedule is shown in Appendix K.

#### Prescribed Fires

Fixed-wing aircraft are used for fire reconnaissance. Such flights will be kept as unobtrusive as possible.

#### Bighorn Sheep Reintroduction

Sheep fitted with radio-transmitters will be monitored primarily on foot, but fixed-wing aircraft will also be used. Low level flights will be conducted once every other week during the first year with progressively fewer flights occurring in later years. Flights will be primarily in the summer months unless wintering sheep are in the park. Each flight may last from two to four hours to permit locating all transmitter equipped animals. Although aircraft will be flying at low elevations within park wilderness, they will neither land nor drop equipment or supplies.

#### Great Grey Owl Management

Monitoring of birds with radio transmitters occurs primarily on foot, but low level aircraft flights are occasionally required late summer to early winter when greater movements of adults and dispersal of young occur. Some of the necessary flights will remain over 2,000 feet above wilderness land surfaces.

#### Forest Management

Fixed-wing aircraft flights two days each year are used to photograph annual status of needleminer activity in lodgepole forests throughout the park.

#### Protection

##### Cannabis Searches

Three to five flights a year are necessary between May and October at altitudes of less than 2,000 feet above the ground to search for Cannabis growing plots in areas of wilderness under 7,500 feet elevation.

## APPENDIX D: ADMINISTRATIVE FACILITIES IN WILDERNESS

1. Railings have been established in wilderness above Yosemite Valley at Columbia Point, Valley View Point, Yosemite Falls Overlook, Yosemite Point, Sierra Point, Illilouette Fall, Union Point, Taft Point, and Rainbow View in addition to railings outside wilderness at Vernal Fall, Nevada Fall, and on the Mist Trail. The cables on Half Dome are also a form of railing.
2. Food Storage Devices established in wilderness are listed in Appendix J of this plan.
3. Designated campgrounds exist at Lake Eleanor and at three locations in Little Yosemite Valley (Half Dome junction, Sunrise Creek, and Moraine Dome) in wilderness. There are also designated campsites at Miguel Meadows and at each High Sierra Camp in potential wilderness additions. Some facilities are provided in the potential wilderness addition at Ostrander Lake as well. Food storage facilities, toilets, and removal of hazard trees are provided at designated campsites. At Glen Aulin and Vogelsang High Sierra Camps there are composting toilets. Public restrooms are tied in with High Sierra Camp sewer systems at May Lake and Merced Lake. Sunrise High Sierra Camp, Ostrander Lake, and Little Yosemite Valley all have chemical toilets. Pit toilets are provided at Lake Eleanor but may be changed in the future to facilities more compatible with wilderness. Ground water pollution resulting from chemical toilets has made essential their removal and replacement by non-polluting facilities appropriate in wilderness settings.
4. Public pit toilets in wilderness are present at the top of Yosemite Falls, Washburn Lake, Lake Eleanor, Frog Creek, and at Miguel Meadows. These toilets are maintained by periodic cleaning and supply of paper and chlorinated lime. These last public pit toilets in wilderness will be eliminated unless they are included in a designated campground area, in which case they may be replaced by a composting or other toilet compatible with wilderness guidelines.
5. Drift fences and stock gates for ranger patrols, maintenance crews, and other wilderness personnel have been established at various places in the larger canyons around meadow areas along major trails to hold horses and mules and to control grazing impact. Though built for administrative use, these fences and gates are frequently used by the public as well. Drift fences and gates are maintained as use requires. Fences exist at Miguel Meadows, Paradise, Wilmer Lake, Pate Valley, Pleasant Valley, Neall Meadow, Benson Lake, Rodgers Lake, Smedberg Lake, Matterhorn Canyon, Lower Glen Aulin, Echo Valley, Merced Lake, Merced Lake Ranger Station, Washburn Lake, Triple Divide, Moraine Meadows, and Buck Camp.
6. Permanent hitch racks exist only at some of the patrol cabins. Hitching racks at trail camps are removed when camps are disbanded.
7. Patrol cabins at Merced Lake, Buck Camp, and Miguel Meadows are used as duty stations for wilderness rangers in the summer months. The cabins at Lake Vernon and Sachse Springs, in addition to being used for snow surveys,

are staffed or visited when possible by wilderness patrol rangers. The Wilmer Lake cabin was destroyed by avalanche in spring, 1986, but will be rebuilt by agreement with California Department of Water Resources for surveys. The Snow Creek cabin is used by nordic ski personnel. These cabins have simple facilities often including pit toilets, hitch racks, corrals, and primitive water systems. Maintenance work on these cabins is done in keeping with the original designs as funds become available. The cabins are not used for public accommodations.

Since they are not useful for administrative or patrol functions, the Frog Creek cabin and pit toilet are tentatively scheduled for removal and their area restored to its natural state. The concrete fish weirs used for the hatchery at Frog Creek should also be removed and the stream returned to its natural flow. Removal of these facilities will comply with NPS Guideline 28 governing cultural resources.

8. Trails making up the official trail system in wilderness are shown on the 1979 revision of the Yosemite National Park Trail Map. The Resources Management Division has surveyed and recorded unofficial trails or cross-country routes for condition and impact as well. The Wilderness Committee will review the Park Trail Map periodically for additions or deletions.

9. Trail Bridges are inspected biannually by the Trails Office which maintains a file of photographs and information on the construction and condition of each bridge. No new additional bridges will be built. The Wilderness Committee will review all proposals for wilderness bridge replacement and design for recommendation to the Superintendent. Bridges currently located in wilderness in Yosemite are listed by drainage descending order from the uppermost bridge:

<u>Bridge location</u>	<u>Construction material</u>
Merced River and its tributaries:	
Merced Peak Fork	wood
Lyell Fork	wood
Lewis Creek past Highwater trail junction	wood
Lewis Creek by Merced Lake Ranger Station, east	wood
" " " " " " " " , middle	wood
" " " " " " " " , west	wood
Echo Valley above Echo Creek	wood
Echo Valley, Echo Creek, east	steel
" " " " " " " " , middle	wood
" " " " " " " " , west	wood
Echo Creek on Sunrise Trail, north	steel
" " " " " " " " , south	steel
Echo Valley, Merced River	wood
Twin Bridges, south	wood
" " " " " " " " , north, 2 bridges	wood
	steel
Little Yosemite Valley, Sunrise Creek, east	wood
" " " " " " " " , west	wood
Murphy Creek near Tenaya Lake	wood with steel beams

Tenaya Lake, west end	wood with steel beams
Illilouette Creek	steel
Yosemite Creek at the top of the falls	wood truss
Ostrander Lake Trail	wood with steel beams
McGurk Meadows	wood with steel beams
Bridalveil Creek on the Pohono Trail	wood with steel beams
Cascade Creek on the old Big Oak Flat Road	wood with steel beams
Tuolumne River and its tributaries:	
Lyell Fork at Base Camp	wood
Rafferty Creek, Tuolumne Meadows	wood with steel beams
Lyell Fork, Tuolumne Meadows, 2 bridges	wood with steel beams
Unicorn Creek, Tuolumne Meadows	wood
Tuolumne River above Glen Aulin, 2 bridges	wood with steel beams
Tuolumne River at Glen Aulin	steel
Conness Creek at Glen Aulin	prefabricated wood truss
Return Creek	wood
Rodgers Creek	wood
Tuolumne River, Pate Valley, main channel	wood
" " " " , secondary channel	wood
Pate Valley trail at Morrison Creek	wood
Rancheria Creek at City Camp	prefabricated wood truss
Tiltill Creek, east	steel
" " , west	wood with steel beams
Falls Creek at Wilmer Lake	wood
Falls Creek at Lake Vernon	wood
" " at Hetch Hetchy, 4 bridges	steel
Tueeulala Falls at Hetch Hetchy	wood with steel beams
Old Hetch Hetchy-Lake Eleanor Road below	
Behive junction	wood with steel beams
South Fork of the Tuolumne below Harden Lake	wood with steel beams

10. A Radio Repeater is established in wilderness on the top of Mt. Hoffmann.

11. Under a special use permit with the National Park Service the California Department of Water Resources operates a cooperative Snow Data Collection Network in the park consisting of fourteen snow courses, seven aerial snow depth markers, six storage precipitation gauges, and three shelter cabins. The Department of Water Resources has installed five automated snow sensors. A network of ten automated sites was located and approved by the Superintendent in July, 1979. Automated sensor sites are Dana Meadows, Tuolumne Meadows, Paradise, Slide Canyon, and Gin Flat. The following conventional snow courses continue to be measured up to four times per year: Snow Flat, Tenaya Lake, Rafferty Meadow, Peregoy Meadow, Ostrander Lake, Tuolumne Meadow, Dana Meadows, and Gin Flat. Park staff monitor all snow courses by ski or snowshoe and/or oversnow vehicle, while the Department of Water Resources monitors all aerial markers except one which the City and County of San Francisco monitors by fixed-wing aircraft. Current plans call for a return to conventional snow survey methods for some snow courses.

12. Signs in wilderness ordinarily occur at trailheads, trail junctions and at points at which trails cross the park boundary. There are a place name signs. An inventory of wilderness trail signs is maintained by the Trails Office. An inventory of trailhead and boundary signs is maintained by the Wilderness Office. Trail signs are laid out by the Sign Shop and fabricated in the Trails Shop. Boundary and information signs are made by the Sign Shop. Except for trail junction signs, existing place name signs, temporary emergency and resource signs, all signs for wilderness will be concentrated at trailheads and boundaries.

13. Underground Utilities include telephone lines from Yosemite Valley to Tuolumne Meadows and White Wolf, Yosemite Valley to Wawona, Chinquapin to Glacier Point, and Wawona to the Mariposa Grove. Power transmission lines run from Chinquapin to Badger Pass Ski Area and from South Entrance to Mariposa Grove. A water line runs from Biledo Meadow to South Entrance. Hydroelectric water tunnels run from Hetch Hetchy Reservoir to Early Intake and from Lake Eleanor to Cherry Lake.

14. Frontcountry Bases for Wilderness Maintenance Operations will help reduce administrative and public impacts on wilderness in Yosemite and will also bring one potential wilderness addition into wilderness. The Wilderness Maintenance Office is dependent on frontcountry bases of operations to support work in wilderness. To service the entire Yosemite wilderness, frontcountry bases must be provided in Wawona, Chinquapin, Hetch Hetchy, White Wolf, Lake Eleanor, Tuolumne Meadows, and Yosemite Valley. At minimum these bases need to include corral and tack facilities with water, tent cabins, and showers for overnight stays in out of wilderness. Provision of frontcountry housing for seasonal trail crews is essential for routine trail work on the edge of wilderness as well as for emergencies and overnight stops occurring with seasonal movements of trail and other crews through the park. Construction of a base of operations at White Wolf will permit elimination of the Hardin Lake corral and tackroom and addition of that area to wilderness.



## APPENDIX E: ABANDONED ROADS IN WILDERNESS

A number of abandoned roads exist in Yosemite wilderness. Wilderness designation for Yosemite converted a few of these roads to trails by including them in wilderness: the Old Big Oak Flat Road from Crane Flat to Gin Flat and from Tamarack Flat to Yosemite Valley, the Lake Eleanor-Hetch Hetchy Road, the North Mountain Road, the Deer Camp Road, and parts of the Old Tioga Road. These and other abandoned roads can develop potentially greater erosion problems than trails if unmaintained.

Most of Yosemite's old roads have a wide surface of 10 to 15 feet. Because water cannot run across a road as easily as it can a trail, roads have been built with inside drainages and culverts. If the inside drainage and culverts are not maintained, they fill in and gullying starts in the evenly graded roadbed, parts of which can rapidly turn into a creekbed. Though roads cannot be used as roads in wilderness, their use as trails will depend on minimizing erosion through the maintenance of existing road drainage structures and walls.

Roads designated as National Historic Structures can develop the same problems, but there are also special guidelines governing the historic structures of the Old Tioga and Old Big Oak Flat Roads. NPS 28 specifies that efforts shall be made to use an historic structure for at least one of its historically intended purposes, that distinguishing qualities or character of a structure and its environment shall not be destroyed, and that "protection shall safeguard the physical condition or environment of the structure from further deterioration, damage, or loss caused by weather or other natural, animal, or human intrusions." NPS 28 also requires Historic Structure Preservation Guides tailored to the needs of each specific structure, guides that have yet to be produced for these two roads.

To prevent erosion and to continue the use of old roads as trails within wilderness, road drainage structures, treads, and walls should be maintained; however, washouts should be replaced with trail and culverts with fords rather than rebuilding the earlier roadbed.

In dealing with abandoned and historic roads in wilderness, therefore, it is most important to use those techniques which minimize long term environmental impacts from the roads' establishment while stabilizing road structures for trail use, historic preservation, or even for abandonment.

The disposition of roads in wilderness is as follows:

1. Sections of the original Mariposa Grove Road in the grove are used now as a trail to the upper grove and as a ski trail in winter.
2. Much of the road from Wawona to the vicinity of Stud Horse Flat is used now as part of the trail from Wawona to the Mariposa Grove.
3. The Old Wawona Road has been abandoned except for parts of the road used as trail from Tunnel View to Inspiration Point. Sections of the old road

carry the telephone lines to the Valley.

4. The Deer Camp Road, a logging railroad grade from the 1920's, is used as a trail to Deer Camp. Spurs from that grade extending past Camp and down into the Alder Creek drainage are abandoned except for a 1.5 mile section used as part of the Alder Creek Trail.

5. The Old Glacier Point Road from Badger to Chinquapin carries utility lines, a water system, is used on occasion as a winter ski trail, and has been denoted a potential wilderness addition. The section between Badger and Bridalveil Campground carries a telephone cable and is used as a trail both summer and winter. A quarter mile stretch from Bridalveil Campground east to the new Glacier Point Road is also used as a trail. The rest of the old roadbed has been abandoned, although the telephone cable runs in it.

6. The McGurk Meadow Road is used as the trail to McGurk Meadow, though the upper part of it from the Glacier Point Road to its junction with the trail has been abandoned for about 20 years.

7. The Ostrander Road is used as the trail to Ostrander Lake and as a winter ski trail as well.

8. The Mono Meadows Road from the Old Glacier Point Road to Mono Meadows was built in 1904 but has long been abandoned.

9. The Old Big Oak Flat Road has been nominated to the National Register as a National Historic Structure. From Crane Flat to Gin Flat the old road is used as a winter ski trail. The section from Tamarack Flat to Yosemite Valley, over 80% intact despite the rockslides of the 1940's, is used as an unofficial trail often called "The Rockslides Trail." Plans to reestablish the roadbed as a trail have yet to reach fruition.

10. The old road from Tuolumne Grove toward Aspen Valley has been logged and used as a trail for many years. Part of it served as a fire road.

11. The Old Tioga Road has been designated a National Historic Structure. Between Aspen Valley and the Hardin Lake turnoff the road is used as a trail. The section between the Yosemite Creek Campground and Porcupine Flat Campground has been abandoned but opened and used as a trail by visitors. The section between the May Lake parking area and Tenaya Lake is used as a trail both summer and winter. Other sections of the old road in wilderness have been abandoned. Some sections of the old road carry underground utility lines to Tuolumne Meadows.

12. The road across Tuolumne Meadows from Pothole Dome pullout to the old campground east of Pothole Dome has been abandoned.

13. The Mono Pass Road running perhaps half a mile from the Mono Pass trailhead is used as the beginning leg of that trail.

14. The Lake Eleanor-Hetch Hetchy Road is used now as a trail as is the spur road to Gravel Pit Lake.

15. The North Mountain Road to the abandoned North Mountain Lookout has been logged as a trail since the road was closed to vehicles. The road was also reopened briefly during the 1987 Jarrell fire.

Other facilities associated with old roads have also been abandoned in wilderness:

1. Spurs off logging roads and railroad grades exist in the Crane Flat, Aspen Valley, and Deer Camp areas.
2. Garbage dumps and their access roads exist in the White Wolf and Harden Lake areas as well as around Tuolumne Meadows.
3. Several spur roads off the Old Big Oak Flat Road exist around Gentry as part of the community once planned there and early logging operations.
4. Though the large quarry off the present Tioga Road above the May Lake junction was excluded from wilderness, other large quarries or borrow pits with their access roads were not. Quarries and their roads, used as dumps in several cases, lie above Crane Flat past the Old Big Oak Flat Road junction with the present Tioga Road, across from the Yosemite Creek Road junction in Dark Hole, near the base of the May Lake Hill on the present Tioga Road, and past the Cathedral Lakes foot trail on the present Tioga Road around the Gaylor Pit, and at Badger Pass, to mention a few of the more prominent.

ENTRY/EXIT  
POINT NO.

TRAILHEAD

NO. PEOPLE  
PER DAY

WAWONA

601	Chiquito Pass	35
*431	Mariposa Grove	--
611	Chilnualna Falls	40
621	Alder Creek	
622	Alder Creek from Wawona Road	25

GLACIER POINT ROAD

*581	Badger Pass	--
631	Deer Camp Road	25
651	Westfall Meadow	10
652	Bridalveil Campground	25
653	McGurk Meadow	15
661	Lost Bear Meadow	25
671	Mono Meadow	25
681	Pohono Tr. from Glacier Pt.	15
691	Pohono Trail from Taft Pt. Trail	10
692	Glacier Point to Illilouette	30
693	Glacier Point to Little Yosemite	25

YOSEMITE VALLEY

411	Rockslides Trail (x-c only)	10
421	Foresta Road junction	10
641	Wawona Tunnel or Bridalveil	
	Fall Parking Area	10
694	Four Mile Trail	10
701	Happy Isles to Illilouette	10
702	Happy Isles to Little Yosemite (first or only campsite used)	50
703	Happy Isles to Sunrise Creek or Merced Lake (pass through Little Yosemite Valley)	10
711	Mirror Lake	25
721	Yosemite Falls	25

TIOGA ROAD CORRIDOR

*591	Crane Flat	--
*592	Merced Grove	--
731	Tamarack Creek	25
743	Tamarack Creek	
732	South Fork Tuolumne River	25
741	South Fork Tuolumne River	
761	White Wolf to Aspen Valley	25
762	White Wolf to Smith Meadow including Harden Lake	25
763	White Wolf to Pate Valley	30
771	White Wolf Campground	10
781	Lukens to Yosemite Creek	10
782	Lukens to Lukens Lake	10
791	Yosemite Creek Campground	25
801	Ten Lakes	40

ENTRY/EXIT POINT NO.	TRAILHEAD	NO. OF PEOPLE PER DAY
<b>TIOGA ROAD (cont.)</b>		
811	Porcupine Creek	25
821	May Lake	25
822	May Lake	
831	Snow Creek	10
841	Olmsted Point	10
851	Sunrise Lakes/Clouds Rest	25
852	Sunrise Lakes/Clouds Rest	
861	Murphy Creek	15
<b>TUOLUMNE MEADOWS</b>		
871	Cathedral Lakes	25
872	Budd Creek (x-c only)	5
881	Nelson Lake	15
882	Rafferty Creek	35
883	Lower Lyell Canyon/Ireland Creek junction	40
884	Upper Lyell Canyon/Evelyn and Ireland Lakes (pass through Lower Lyell Canyon)	10
895	Glen Aulin	25
836	Cold Canyon/Waterwheel Fall (pass through Glen Aulin)	15
887	Young Lakes via Dog Lake	20
888	Young Lakes via Glen Aulin Tr.	10
891	Gaylor Creek (no camping)	--
901	Mono and Parker Passes	10
911	Gaylor Lakes (no camping)	--
912	Mt. Dana (no camping)	--
*913	Tioga Pass	--
<b>MATHER AND HETCH HETCHY</b>		
731	Aspen Valley Road	10
921	Base Line Camp Road	25
922	Trail from Mather	25
931	Mather Ranger Station	25
941	Cottonwood Creek	15
942	Poopenaut Valley	25
951	Rancheria Falls	35
952	Beehive Meadows	35
953	Miguel Meadow	15
<b>CHERRY LAKE</b>		
961	Lake Eleanor	25
971	Kibbie Creek	
981	Kibbie Ridge	25
<b>WALKER DRAINAGE</b>		
117	Dorothy Lake Pass	50
118	Dorothy Lake Pass	

\*winter only

## Appendix G: Exceptions to Group Size Limits

Exceptions for day use groups of 50 persons or less are authorized for

- Yosemite Falls Trail
- Nevada-Vernal Falls Trails
- Soda Springs Road
- John Muir Trail from Tuolumne Meadows Lodge
- Lyell Fork Trail
- Sentinel Dome
- Harden Lake via the historic road

Exceptions for cross-country routes are as follows

Authorized cross-country routes for a maximum group size of 12 people are

- Little Devil's Postpile
- Mt. Dana
- Mt. Hoffmann
- Pywiack Cascade
- Siesta Cirque

Authorized cross-country routes for maximum group size of 12 people and/or 12 head of stock are

- Horse Thief Canyon
- Givens Lake
- Lyell Fork of the Merced River
- Mattie Lake
- Miwok Lake
- Avonelle Lake

Authorized cross-country routes limited to 25 people are

- Tuolumne Cascades
- Pothole Dome
- Tuolumne Ponds
- Lower Mt. Dana route

Authorized cross-country routes limited to 35 people are

- Lembert Dome
- Puppy Dome
- Juniper Ridge
- Olmsted Point
- Tuolumne Grove

These routes will be monitored to assess resource damage and removed from this authorized list should resource damage or deterioration occur. Amendments or additions to the authorized list will be made by the Wilderness Committee of Yosemite National Park. It is Service policy in Yosemite that neither the Park Service nor Park Service sponsored organizations shall conduct trips or hikes involving cross-country travel on other than authorized routes with numbers greater than those specifically permitted.

## APPENDIX H: WILDERNESS PERMIT INFORMATION

### GENERAL INSTRUCTIONS TO CODE YOSEMITE WILDERNESS PERMITS (Form 10-404A)

- \*1. Address--Have party leader print information on lines provided. One name is sufficient.
- \*2. Zip Code--Enter postal zip code of user. If entire zip is not known, enter the first three numbers (see chart) followed by two zeros.  
99998 should be used for FOREIGN addresses.  
99999 should be used for CANADIAN addresses.
- \*3. To Visit--Enter code for the point of origin of hike.  
8800 for trips starting in YOSEMITE.  
16 for trips starting in EMIGRANT  
18 for trips starting in HOOVER  
21 for trips starting in ANSEL ADAMS  
00 for trips involving non-bordering wilderness areas
- \*4. Starting Date--Enter numerically the month and day of user's first night in the backcountry (i.e. July 5 = 0705). Include all zeros.
- \*5. Finish Day--As above, enter numerically the month and day user will depart from the backcountry.
- \*6/7. Entry and Exit Points--Use circled trailhead numbers from the map or the list that follows. For trips involving other wilderness areas, use the following Wilderness Identification Numbers:
  - 13 Desolation
  - 16 Emigrant
  - 18 Hoover
  - 96 Yosemite
  - 21 Ansel Adams
  - 87 John Muir
  - 97 Sequoia Kings
- \*8. Method of Travel--
  - 01 Hiking
  - 02 Horseback riding
  - 15 Use of pack stock
  - 16 Spot pack
  - 07 Skiing
  - 08 Snowshoeing
  - 13 Other (non-power)
- \*9. Number in Group--Enter total number in party. Maximum on designated trails is 25, and 25 head of stock. Maximum for cross country travel is 8.
- \*10. Pack and Saddle Stock--Enter number of horses, mules, or burros. Leave blank is none.

\*11. Leave blank is none.

\*12. Enter "196" (Yosemite Identification Number) in the first zone. Enter the number of nights spent in Yosemite backcountry in the next box (marked NT/\*13). If the number of nights exceeds 9, enter 196 again, with the additional nights in the next set of boxes.

If the trip includes nights spent in other wilderness areas, use the Wilderness Identification Numbers listed in these instructions, \*6/7, or on the list on the following pages. Enter the number of nights spent in each wilderness.

\*14. Remarks--Enter any remarks, warnings or special conditions.

\*15. Leave blank.

\*16. Have user read statement and sign and date permit.

\*17. Issuing officer should sign and date permit.

\*18. Enter code for issuing station:

- 01 Yosemite Valley Visitor Center
- 02 Happy Isles Trail Center
- 03 Tuolumne Meadows Permit Kiosk
- 05 Wawona Ranger Station
- 06 Badger Pass
- 07 Glacier Point
- 08 White Wolf
- 09 Big Oak Flat
- 10 Mather Ranger Station
- 11 Backcountry Office/Permits issued by mail
- 12 Forest Service agencies
- 13 Lee Vining Ranger Station
- 14 Groveland Ranger Station

Staple a copy of Backcountry Use Regulations (including Forest Service if applicable) to the green copy and give this to the user. This is a good time to emphasize minimum impact, proper food storage, and park regulations. Instruct user to keep this copy with him/her.

Retain original and pink copies, and send them to the Backcountry Office weekly. Pink copies of any permit with Forest Service use should be sent directly to them.



## WILDERNESS PERMITS

### General Information

A Wilderness Permit is required of all overnight visitors to the proposed Yosemite Wilderness Area and to Little Yosemite Valley.

A separate permit is required for each trip, but one trip may include several wilderness areas.

Permits may be issued for: 1) Any trip within Yosemite and bordering wilderness areas, or 2) any trip originating in Yosemite, but terminating in a wilderness not contiguous or bordering Yosemite.

Group size limit is 25 people and 25 head of stock on designated trails. Cross country group size maximum is 8.

Permits can be issued the day the trip begins or the day before it begins. Reservations for summer trips may be made through the Backcountry Office by mail only between Feb. 1 and May 31.

A quota has been determined for the number of persons permitted to enter each trailhead each day. When this quota has been reached, no more permits may be issued for the trailhead, and alternate trailheads will be suggested.

Wood fires are permitted below 9,600'. The use of chemical fuel stoves is encouraged.

Wilderness Permits are not required for High Sierra Camp trips or for day use in Yosemite backcountry. Users do not need to check back in after their trip.

Always issue permits in pencil.



U.S. DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

Form 10-404A  
Approved Through  
OMB No. 1024

### BACKCOUNTRY USE PERMIT

When signed, this single-visit permit authorizes:

NAME JOE AND MARY HIKER

ADDRESS 100 Downtown

CITY Anywhere STATE CA ZIP 

9	5	3	8
1	2	3	4

To Visit Rafferty Crk to Happy Isle

8	8	0
6	7	8

and to build campfires in accordance with regulations.

Give best estimate of start and finish dates 

FROM MO/DAY	0	7	0
10	11	12	
THROUGH MO/DAY	0	7	0
14	15	16	

Location of entry 

8	8	2
18	19	2

Location of exit 

7	0	2
21	22	2

Primary method of travel 

0	1
24	2

Number of people in group 

0	2
26	2

Number of pack or saddle stock 

28	2
----	---

Number of motorcraft or other craft 

30	3
----	---

### \*13 USE MAP

List all zones to be traversed, in sequence of travel, and the number of nights to be spent in each zone.

ZONE	NT	ZONE	NT	ZONE	NT	ZONE	NT	ZONE	NT
1	9	6	2						
32	33	34	35	36	37	38	39	40	41
42	43	44	45	46	47	48	49	50	
52	53	54	55	56	57	58	59	60	61
62	63	64	65	66	67	68	69	70	

REMARKS 

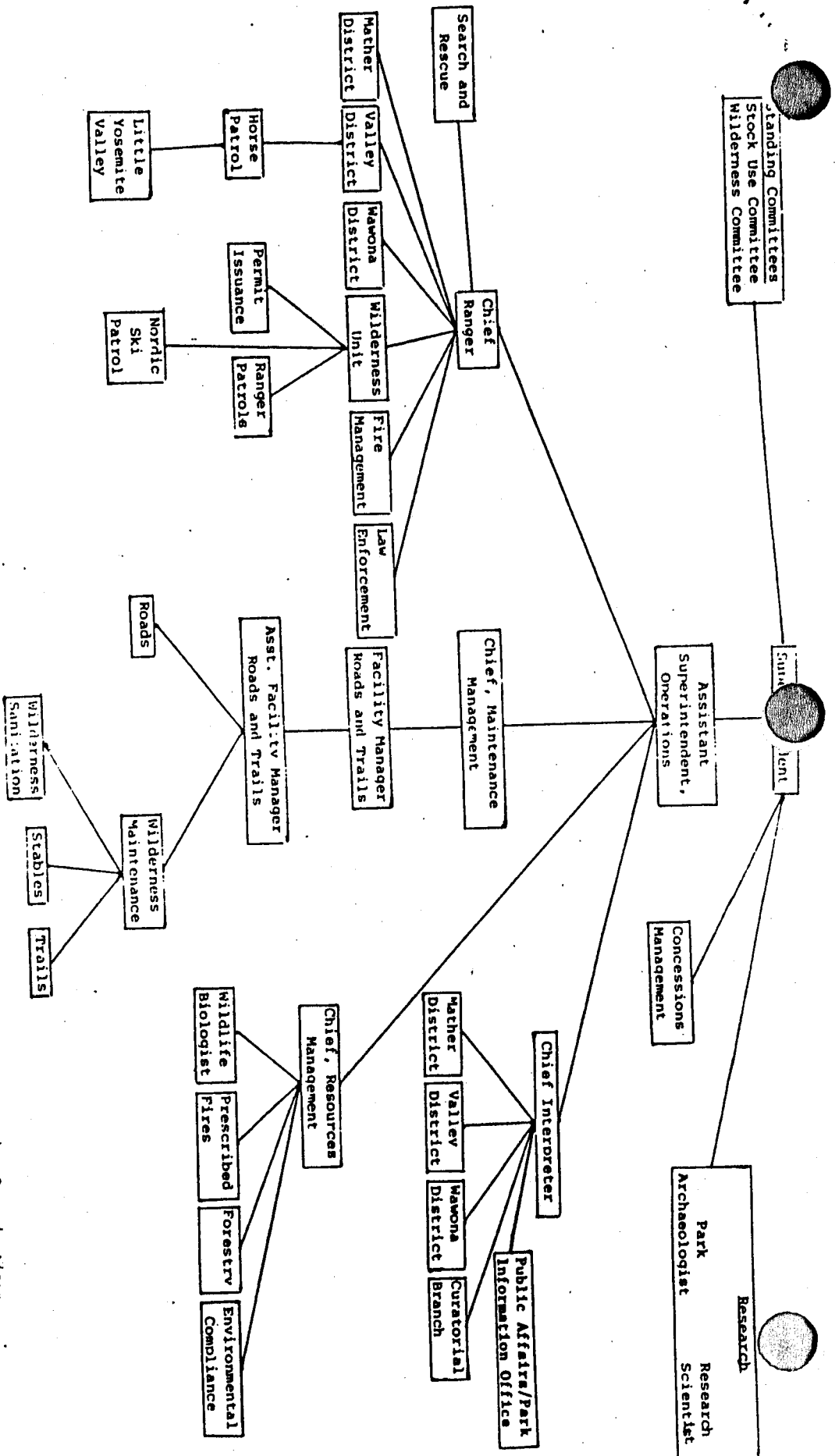
77
----

\*14 I agree to abide by all laws, rules, and regulations which apply to this area. I will do my best to see that everyone in my group does likewise.

\*17 DATE (VISITOR'S SIGNATURE) 

78
----

DATE (ISSUING OFFICER'S SIGNATURE)  
To Date Processing



APPENDIX I:  
NATIONAL PARK SERVICE, YOSEMITE NATIONAL PARK,  
ORGANIZATIONAL CHART SHOWING WILDERNESS RELATED  
OFFICES AND ACTIVITIES Nov., 1987

Cooperating Organizations:

Yosemite Park and Curry Company  
Yosemite Association  
Yosemite Institute  
California Department of Water Resources  
California Department of Fish and Game

APPENDIX J: LOCATIONS OF BEAR-PROOF FOOD STORAGE DEVICES IN WILDERNESS IN 1987

The Service goal is to remove all established food storage devices from wilderness by 1989 with the exception of those food storage devices located at designated campgrounds in wilderness or at campgrounds in potential wilderness additions. Established food storage devices will be replaced with portable bearproof food storage containers carried by wilderness users.

Bear-proof food storage devices have been installed at the following locations:

Beehive  
Boothe Lake  
Clouds Rest junction on Sunrise Creek  
Glen Aulin  
Half Dome on the shoulder  
Lake Eleanor  
Laurel Lake  
Little Yosemite Valley in all three designated campgrounds  
Lower Cathedral Lake  
Lower Glen Aulin  
Lower Sunrise Lake  
Lyell Canyon at Ireland Creek  
May Lake  
Merced Lake at the hikers' camp  
Illilouette Creek at Mono Meadow trail crossing  
Moraine Dome  
Ostrander Lake  
Pate Valley  
Rancheria Creek  
Sunrise High Sierra Camp  
Upper Cathedral Lake  
Upper Fletcher Lake  
Upper Sunrise Lake

APPENDIX K:

FISH STOCKING SCHEDULE, YOSEMITE NATIONAL PARK, 1985-1990.

<u>Lake</u>	<u>Level</u>	<u>Frequency</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Dog Lake	10,000	Annually	10,000	10,000	10,000	10,000	10,000	10,000
Harden Lake	3,000	Annually	3,000	3,000	3,000	3,000	3,000	3,000
Lower Cathedral	3,000	Annually	3,000	3,000	3,000	3,000	3,000	3,000
Lukens	7,000	Annually	7,000	7,000	7,000	7,000	7,000	7,000
Tenaya	40,000	Annually	40,000	40,000	40,000	40,000	40,000	40,000
Polly Dome	4,000	4 Year				4,000		
Ten Lakes #7	1,500	4 Year	1,500			1,500		
Ten Lakes #5	4,000	4 Year					4,000	
Ten Lakes #6	4,500	4 Year	4,500					4,500
Middle Sunrise	1,500	4 Year		1,500				1,500
Lower Grant	3,000	4 Year						
Upper Grant	2,500	4 Year		2,500				2,500
Gravel Pit	3,000	4 Year						

APPENDIX L: POLICIES, LEGISLATION, AND REGULATIONS REGARDING THE PRESERVATION AND MANAGEMENT OF CULTURAL RESOURCES IN WILDERNESS

The management of all cultural resources within Yosemite National Park, including prehistoric and historic sites, structures, features, artifacts, burials, and associated cultural deposits is guided by various laws, regulations, and policies. The intent of these documents is to provide for the most effective inventory, management, and preservation of the resources, including the protection of all cultural resources and artifacts from loss and destruction resulting from natural, visitor, and development impacts. The foremost of these statements include:

NPS-28, Cultural Resources Management Guideline, presents the definitions, standards, and general procedures for conducting preservation, planning, development, operations, and legal compliance procedures as they pertain to a park's cultural resources. NPS-28 identifies what research, plans, and treatment are needed at each stage of management to respond to specific resource preservation needs and to comply with environmental and historic preservation law, regulation, and policy.

The Antiquities Act of 1906 provides for the protection of historic and prehistoric archaeological sites, "or any antiquity," on federal lands and establishes criminal penalties for unauthorized destruction or appropriation of such antiquities. The Act allows for authorized scientific investigation of archaeological sites on federal land, subject to permit and regulations.

The National Historic Preservation Act of 1966 (1970) formally declares a national policy of historic preservation for both historic and archaeological sites including the authority to expand the program for the National Register of Historic Places. The Act also provides procedures for federal agencies to include sites on the register or to deal with proposals that might affect National Register properties.

Executive Order 11593, "Protection and Enhancement of the Cultural Environment", instructs all federal agencies to provide national leadership in historic preservation, to assure the preservation of cultural properties in federal ownership. The order specifically directs all federal agencies to "locate, inventory, and nominate to the Secretary of Interior all sites, buildings, districts, and objects under their jurisdiction or control that appear to qualify for listing on the National Register of Historic Places."

The American Indian Religious Freedom Act, 1978, mandates the United States to protect and preserve the inherent and constitutional right of the American Indian, Eskimo, Aleut, and Native Hawaiian peoples to believe, express, and exercise their traditional religions. This Act affects management of cultural resources by providing for consultation and coordination of archaeological investigations and cultural resource preservation with Native Americans of an area.

The Archaeological Resources Protection Act of 1979 supplements the Antiquities Act of 1906 by providing for the protection of archaeological

resources located on public lands and Indian lands, defining archaeological resources to be any material remains of past human life or activities which are of archaeological interest and are at least 100 years old, establishing permit requirements for the excavation and removal of archaeological resources from public lands, providing that information regarding the nature and location of archaeological resources may remain confidential and establishing civil and criminal penalties for the unauthorized appropriation, alteration, exchange, or other handling of archaeological resources.

Policy Direction, Natural Fires and Historic Properties (November 8, 1985), directs the preservation of historic resources in prescribed or natural fire areas. Site locations are to be registered on topographic maps at the Fire Management Office to "facilitate prompt and effective fire management action" to preserve historic resources should fire occur in these areas. The expense incurred is a management obligation appropriately charged to the same account as other fire costs.

## APPENDIX M: ARCHAEOLOGICAL SITE DISCOVERY REPORTING

It is often the case that visitors and National Park Service staff other than archaeologists discover archaeological sites and artifacts in wilderness. Such resources, if properly recorded and left in place, can be a valuable addition to Yosemite's archaeological data base. Park staff and visitors should be instructed that all cultural resources within Yosemite National Park as well as other Federal lands are protected by law. By removing or damaging an artifact or cultural site, the information that it can provide about the past is lost forever.

Visitors and park staff should use the following form to report discovery of artifacts, prehistoric, or historic sites. All completed forms should be forwarded to the office of the Park Archaeologist for processing. If the site has not been previously recorded, archaeological crews will relocate the site for full recording and mapping.

### YOSEMITE ARCHAEOLOGICAL RESEARCH PROGRAM Site Location Information

Site Location: (distance and direction from nearest stream, trail, or other distinguishable landmark; attempt reference to map locations, approx. elevation)

Map Data: UTM Zone 11 \_\_\_\_\_ E \_\_\_\_\_ N USGS Quad \_\_\_\_\_  
\_\_\_\_\_ 1/4, \_\_\_\_\_ 1/4, Sec \_\_\_\_\_, T \_\_\_\_\_, R \_\_\_\_\_

Site Features: (circle) Bedrock Mortar # \_\_\_\_\_ ; Midden Soil; Obsidian Flakes; Artifacts; Other:

Site Dimensions: (if determinable, distance north-south and east-west or diameter)

Notes/Comments: (if needed, use back for notes and sketches)(is the site being subjected to visitor or natural impact?)

Reported By:

Recorded By:

address/division:

Date:

PLEASE LEAVE SITE AND ARTIFACTS UNDISTURBED, INCLUDING CONTENTS OF BRM'S

---

Submit Form to: Yosemite Archaeology Office, El Portal; ext. 462 Thank You  
/Rec-- /Trin-- /Fld Chk /Intl

