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United States  
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Forest Service

Pacific  
Southwest  
Region

April 2001

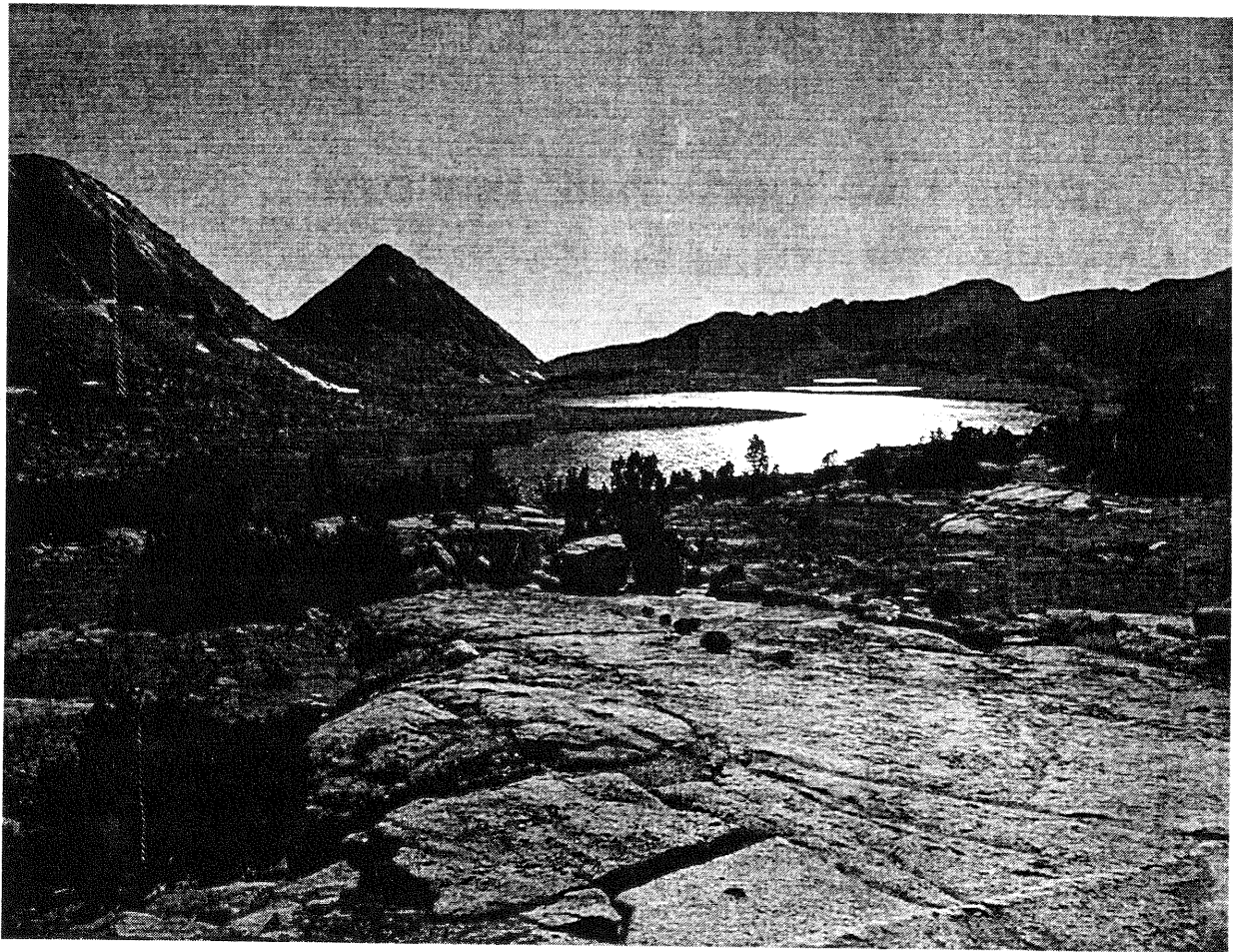


# Wilderness Management Plan

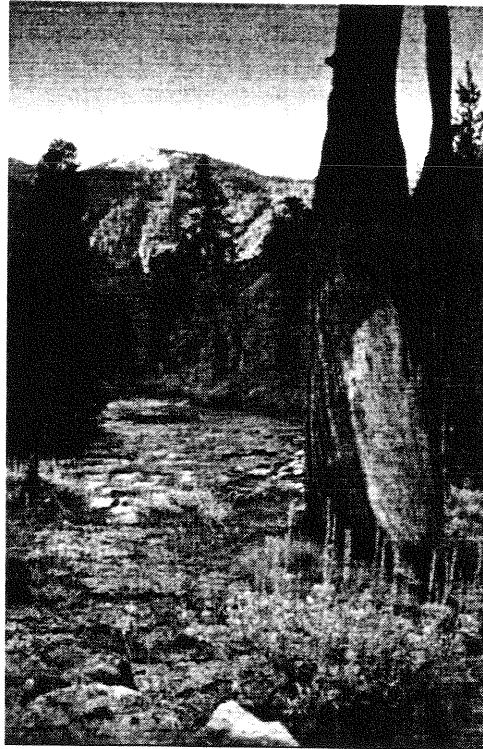
for the

## Ansel Adams, John Muir and Dinkey Lakes Wildernesses

### Inyo and Sierra National Forests



Y900 YH19210



South Fork, San Joaquin River  
*Photo by Daniel Perrot*

*Cover Photo of Puppet Lake, by Mary Beth Hennessy*

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Silver Pass, John Muir Wilderness

*Photo by Daniel Perrot*



## Area Description

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The Ansel Adams, John Muir, and Dinkey Lakes Wildernesses are located in the central and southern Sierra Nevada. The entire planning area covers 840,581 acres both east and west of the Sierra Crest. It is contiguous with Yosemite National Park to the north and Sequoia and Kings Canyon National Park to the south.

### John Muir Wilderness

This wilderness is located in the central Sierra Nevada. From Mammoth Lakes, California, in the north, it extends some 100 miles to the south, wrapping around the Sequoia and Kings Canyon Wilderness. The southern end is just west of Lone Pine, California. Elevations range from 4,000 feet to the summit of Mt. Whitney (14,497 feet) with numerous peaks over 12,000 feet. Deep canyons, lofty peaks, and meadows along the many lakes and streams characterize the John Muir. The South and Middle Forks of the San Joaquin River, the North Fork of the Kings River and significant drainages of the Owens River originate within this wilderness. Stands of Jeffrey and lodgepole pine, incense cedar, and red and white fir are found on the lower western slopes. The lower eastern slopes have white fir, Jeffrey, and lodgepole pine. Higher elevations are home to hemlock, red fir, and lodgepole, whitebark, foxtail, and western white pines. The highest elevations are composed of exposed granite.

Established in 1964 by the original Wilderness Act and enlarged by 81,000 acres by the California Wilderness Act of 1984, the John Muir is one of the most heavily visited wildernesses in the National Wilderness Preservation System. There are 351,957 acres administered by the Sierra and 228,366 acres by the Inyo National Forests (NF). There are 820 acres of private land within the wilderness boundary.

### Ansel Adams Wilderness

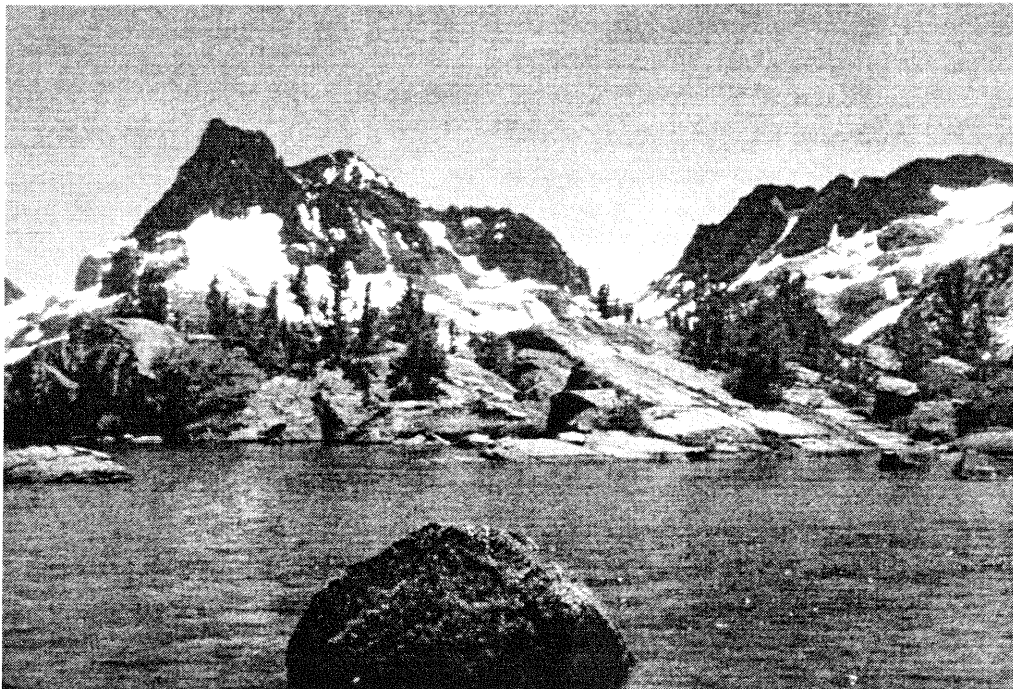
The Ansel Adams extends from Highway 120 in the north to Lake Thomas Edison to the south. Elevations range from 3,500 feet to 13,157 feet at Mt. Ritter. Within the Ansel Adams are a numerous streams and lakes that form the headwaters of the North and Middle Forks of the San Joaquin River. Vegetation is typical of high elevations of the Sierra Nevada. Stands of red fir and some Jeffrey pine grow along the upper reaches of the San Joaquin. Other areas are alpine in character with scattered stands of lodgepole pine, mountain hemlock, and quaking aspen. There are numerous outcroppings of barren granite.

Originally established as the Minarets Wilderness in 1964 and enlarged by 119,000 acres in 1984 by the California Wilderness Act, the Ansel Adams is administered by the Inyo and Sierra NFs. It also encompasses 808 acres of Devils Postpile National Monument, but that area is not included in this analysis. There are 78,775 acres administered by the Inyo and 151,483 acres on the Sierra NFs. There are two acres of private land within the boundary.

## Dinkey Lakes Wilderness

The Dinkey Lakes lies immediately west of the John Muir and is separated from it by the Dusy/Ershim Off-Highway Vehicle Route. Elevations range from 8,200 feet adjacent to Courtright Reservoir to 10,619 feet at Three Sisters Peak. Most of the area consists of timbered rolling terrain. Sixteen lakes are clustered in the west central portion with large meadows in the north central region and along Helms Creek.

Established by the California Wilderness Act of 1984, this 30,000-acre wilderness is located entirely within the Sierra NF. There are no private lands within the wilderness boundary. Cattle grazing occurred under permit for many years before the wilderness was established and continues today.



Island Pass, Ansel Adams Wilderness

*Photo by Daniel Perrot*

Figure 1.1. Vicinity Map

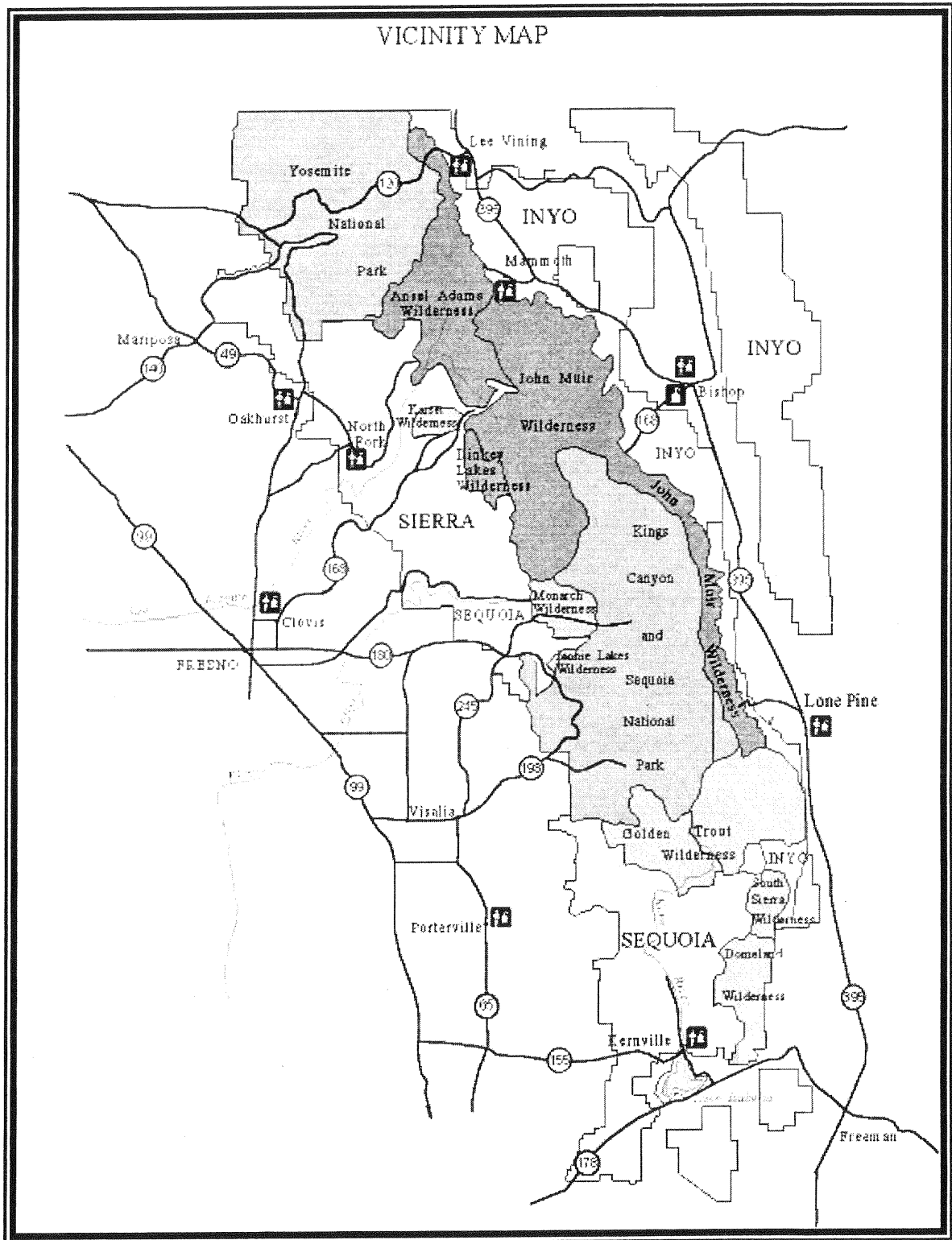
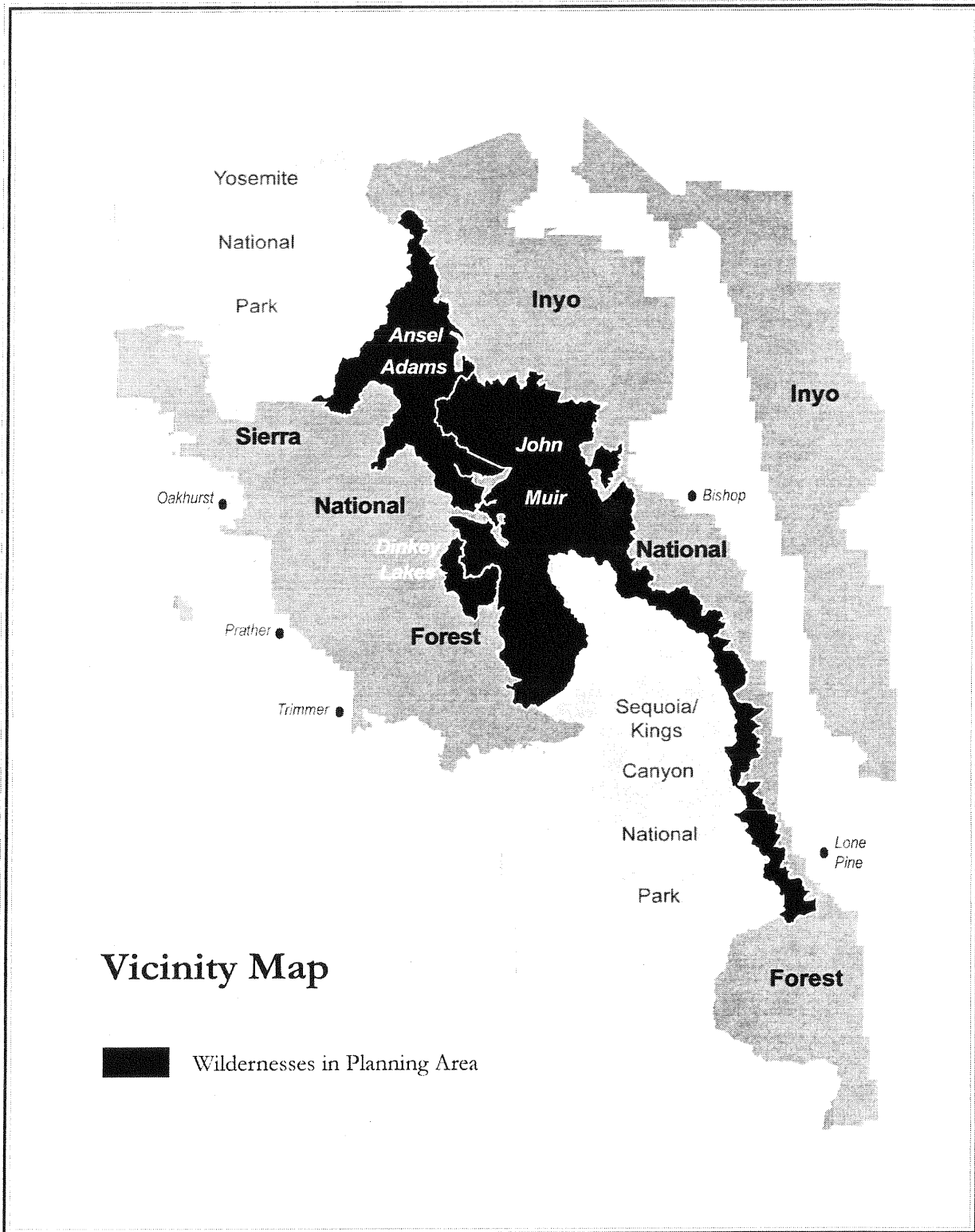


Figure 1.2. Wilderness Planning Area





## **Relationship to Land & Resource Management Plans (Forest Plans)**

Forest Service planning is accomplished at two levels: programmatic and project specific. This Plan contains programmatic direction that will amend and supplements the wilderness management direction in the Sierra and Inyo's Forest Plans. Project specific planning will be initiated to implement this direction. Specific projects will undergo the appropriate analysis before being implemented.

All three wildernesses fall under the jurisdiction of individual Forest Plans -- Sierra (1991), Inyo (1988). Each Forest Plan currently contains general management direction applicable to all respective wildernesses within each Forest. This direction includes multiple use goals and objectives, forest-wide standards and guidelines, management area direction (prescriptions), and monitoring and evaluation requirements.

This decision amends the Land and Resource Management Plans (LRMPs) on both the Sierra and Inyo National Forests to provide more specific, updated and consistent direction for management of the Ansel Adams, John Muir, and Dinkey Lakes Wildernesses. It supercedes the 1979 wilderness plans for the John Muir and Minarets (Ansel Adams) Wildernesses.

### **Inyo National Forest Land and Resource Management Plan Non-Significant Amendment Number 7.**

For the Ansel Adams and John Muir Wildernesses only, the Goals and Objectives, Desired Future Condition, Management Direction and the Inventory and Monitoring Strategy contained in this plan amendment supplement the management direction contained in the LRMP on pages 107 through 112, and the Monitoring Plan on page 257.

Also:

1. The following Management Direction on page 111 in the Inyo LRMP is removed:
  - Establish capacity limits for each wilderness and implement entry limits on specific trailheads to regulate use when use exceeds capacity.
  - Apply trailhead entry quotas to both commercial and noncommercial users.
2. The following Management Direction is added to the Inyo LRMP on page 111:
  - Through analysis determine if use limitations are necessary to protect wilderness resources. If determined necessary, apply appropriate methods to control commercial and non-commercial users.

3. The following is removed from Appendix A page 300 in the Inyo LRMP:

- Under the section titled, “EXISTING PLANS INCORPORATED WITH DIRECTION TO REVISE OR UPDATE
  - John Muir Wilderness Plan (1979)
  - Minarets Wilderness Management Plan (1979)  
(revise to include 1984 wilderness additions)

### **Sierra National Forest Land and Resource Management Plan Amendment Number 3**

On the Sierra National Forest, for the Ansel Adams, John Muir and Dinkey Lakes Wildernesses only the Goals and Objectives, Desired Future Condition, Management Direction and the Inventory and Monitoring Strategy contained in this plan amendment supplement the Standards and Guidelines contained in the Sierra LRMP on pages 4-30 through 4-31.

Also:

The following Standard and Guideline is deleted from the Sierra NF LRMP:

- S&G #339. Develop wilderness management plans utilizing limits of acceptable change.

### **Future Decisions Not Subject To NEPA Compliance**

Future decisions for items regarding management of the wilderness permit process, administration of Special Use Permits and wilderness education are not subject to NEPA compliance.

**Table 1.1.** Desired Condition of Wilderness resource

	<b>Category 1</b>	<b>Category 2</b>	<b>Category 3</b>
<b>Social</b>	These areas provide for the highest opportunities for solitude and are predominately free from evidence of human activities. Encounters with other visitors while traveling or camping are very infrequent. This environment offers the highest degree of challenge, self-reliance, and risk.	High occasions of solitude while traveling and camping outside the primary trail corridors will be likely. Along primary trail corridors encounters with other visitors while traveling or camping will be higher than category 1 areas but far less than category 3 areas. Trail junctions and scenic points will be likely for camping encounters and campsites may be within site or sound of each other. This environment offers the high degree of challenge, self-reliance, and risk.	In these areas, recreation use levels will be maintained to provide less levels of solitude than other two categories, yet high opportunities for solitude will exist during the non-peak use season. During peak use season, opportunities for experiencing isolation from the sights and sounds and impacts of human activities will be less than other categories. The probability of encountering other visitors on the trail and at campsites is more than other areas.
<b>Resource-general</b>	An unmodified natural environment characterizes the area. Ecological and natural processes are minimally affected by the action of users. Environmental impacts are low and restricted to minor losses of vegetation where camping occurs and along travel routes. Most impacts recover on an annual basis and are apparent to few visitors.	A highly unmodified natural environment characterizes the area. In a few areas, where moderate levels of use will concentrate, natural conditions may be more affected by the actions of users. These impacts are mitigated with a higher level of management presence. Impacts may persist from year to year and may be apparent to some visitors. Most visitors will not discern impacts.	A mostly unmodified natural environment characterizes this area. Site-specific impacts to vegetation and soil around campsites often persist from year to year and are apparent to most visitors. Resource impacts are not allowed to degrade and management presence will be more necessary to insure continual improvement to the conditions and non-degradation of the natural resources.
<b>Campsites</b>	Campsites are at low-density levels and show minor impacts that will rarely persist year to year.	Concentration of campsites exists at trail junctions and popular destination points. The number of sites accommodates moderate use with no new sites forming over time. Campsites may occasionally be within sight and sound of others. Bare mineral soil may exist on some sites and may persist from year to year. Outside these areas campsites and impacts associated with camping will be light.	Concentration of campsites is moderately high at destinations and along travel corridor. The number of sites accommodates peak use in order to prevent the formation of new sites. Bare mineral soil may exist on some sites and may persist from year to year.

	<b>Category 1</b>	<b>Category 2</b>	<b>Category 3</b>
<b>Vegetation/ Soil Conditions</b>	There is very little vegetation loss or alteration of duff and litter layer by human use.	Moderate soil compaction and loss of vegetation. Minimal erosion occurs on the disturbed sites.	Moderate soil compaction and loss of vegetation, litter, and duff is expected on many visitor created trails, camp areas, and areas used by livestock. Minimal erosion occurs on the disturbed sites and is mitigated to insure long-term impacts do not occur.
<b>Riparian Areas</b>	Riparian, lakeshore and stream channel conditions show no measurable degradation due to human uses.	Riparian, lakeshore and stream channel conditions show a temporary change within standards, which could be expected to persist from year to year at a few sites. These impacts should be mitigated and prevented from occurring if evidence of potential long-term impacts occurs.	Riparian, lakeshore and stream channel conditions show temporary changes within standards, which could be expected to persist from year to year at some sites. Mitigation measures will be implemented to accommodate moderate levels of human recreation impacts.
<b>Managerial</b>	Management focuses on sustaining and enhancing the natural ecosystem. Signs may be present in very rare cases, for resource protection only, and at system trail junctions. Management actions may occasionally include direct, on-site actions and site-specific regulations may be used in unusual cases where resources require higher levels of protection. Indirect methods of accomplishing management objectives will predominate with exceptions for insuring visitor use be maintained at low levels to insure impacts are contained and do not persist. Managerial influences on trail system will be minimal to accomplish objectives of resource protection.	Management emphasizes sustaining and enhancing the natural ecosystem. Signing is minimal, providing for resource protection and direction at major trail intersections. Management action may frequently include direct, on-site actions and site-specific regulations may be used to meet management objectives for resource protection. Primary trail corridors will have highly maintained and constructed trails that will support access to popular destinations and travel routes. Secondary trails will allow for moderate dispersal of use but will be maintained in a manner that will be consistent with a more pristine and primitive experience than primary trail corridors.	Management emphasizes sustaining and protecting natural conditions. Management actions will often be direct and management presence to mitigate visitor use impacts on the resource will be more noticeable. Campsites may need to be identified and delineated. Site-specific closures to camping, campfires, and site-specific regulations may be implemented. Signs used for resource protection will be acceptable in these areas. A moderate density of social trails will be present in destination camping areas. Maintain Forest Service presence to provide education contact and manage high levels of use.



## Management Direction

### Air Resources

#### Goals and Objectives

Prevent significant adverse effects of air pollutants and atmospheric deposition on wilderness resources, including visibility, while allowing for natural forces and processes (e.g., fire) to assume their natural role. Through cooperation with local, state and federal air regulatory agencies protect wilderness resources from adverse effects and achieve: 1) the air quality goals established in the Clean Air Act, 2) Federal and State air quality standards for Class I Airsheds.

#### Management Direction

Identify and inventory air quality related values. Monitor the effects of air pollution on sensitive receptors to the air quality related values.

Protect current conditions of air quality related values.

Evaluate proposed major emission sources that might adversely affect the Class I Airshed, including sources not on Federal Land.

### Aircraft Overflights

#### Management Direction

Notify the appropriate military authority of low-level flights over wilderness until flights cease. Coordinate with the Federal Aviation Administration to update wilderness boundaries on flight charts.

### Facilities

#### Goals and Objectives

Manage recreation facilities and transportation facilities in accordance with Forest Service policies found in FSM 2323.13, FSH 2321.21, and FSH 23.22.

### Facilities - Administrative Sites and Structures

#### Goals and Objectives

Limit structures and improvements for administrative purposes or under special use permit to those actually needed for management, protection, and use of the wilderness for the purposes for which the wilderness was established (FSM 2324.31).

## **Management Direction**

Maintain sites and structures for administration of the wilderness only for the protection of resources, where temporary or other management actions are not providing adequate protection (FSM 2323.13).

Allow drift fences only where the protection of resources or safety of visitors is of concern; not solely for the convenience of the visitor, outfitter or guide.

Maintain the Mt. Whitney toilet facilities at a level commensurate with allowable visitor use and resource protection; not solely for the convenience of the visitor. Materials will be in keeping with the surrounding environment. Support activities will be minimized by efficient and suitable backcountry human waste management techniques. Permission for mechanical and motorized transport of hazardous waste, building materials etc. will be approved annually.

Encourage the placement of automated snow measurement sites (sensors) outside of wilderness.

Evaluate all structures with the following criteria for decisions on retention and use as an administrative site. This does not include historically significant structures.

- Does the structure conflict with stated wilderness goals, objectives, and desired condition of legislations, policy and management plans?
- Are there less intrusive methods of achieving the purpose of the structure?
- Can the activity associated with the site or structure be accomplished outside wilderness and still achieve its objectives?
- Is the activity associated with a site or structure tied to a valid existing right such as a mining claim or right-of-way easement?
- Is there a special provision in legislation that allows this activity?
- How does the site or structure or associated activities benefit the wilderness as a whole as opposed to maximizing one resource?
- Does the structure ensure that human presence is kept to a minimum and the area is affected primarily by forces of nature rather than being manipulated by humans?
- Determine if the structure is the minimum tool necessary to accomplish the activity considering, where relevant, the use of mechanized transport as an alternative.

## Facilities - System Trails

### Goals and Objectives

Provide a transportation system that ensures suitable access for the types and numbers of trail users, protection of resources, and is consistent with management objectives for the areas accessed.

### Management Direction

Maintain an inventory of system trails.

Maintain system trails to assigned service levels.

Review trail service levels at five-year intervals, or when driven by other management actions, to ensure that trail management objectives are consistent with area management objectives. When adding or removing trails from the Forest Trail inventory, NEPA analysis, including public involvement, will be conducted.

Appropriate levels of NEPA analysis, including public involvement, will be conducted for trail reconstruction projects prior to each project initiation.

When making decisions on trail maintenance, reconstruction, and relocation projects, give priority consideration to riparian and aquatic resources and overall watershed condition.

Maintain system trails to meet management objectives for visitor use and resource protection. Also, consider the recreation categories for the areas that a trail accesses and adjust trail maintenance levels to match the three recreation categories.

Do not upgrade any trails from maintenance level 1 and 2 solely for the purpose of facilitating stock use.

When conducting routine trail condition surveys, identify and document resource impacts and locations.

Emphasize trail relocation away from sensitive areas, such as meadows, riparian environs, known TES populations or habitat, heritage resources or other limiting factors when mitigating resource impacts.

Actively restore and/or stabilize trails that have been abandoned (due to realignment or closure) that will not heal naturally. Some examples include abandoned trails that alter local hydrology, deeply compacted soils, and sites with continued inappropriate traffic, increased entrenchment or widening.

Do not construct new trails.

Add user-created trails, or conduct major reconstruction to trails on the Forest Trail System solely for the purpose of providing improved or easier access to an area. Add user-created trails to the system only when there is an overriding benefit to the protection of the wilderness resource.

Consider removing trails from the system (with appropriate public involvement) when concerns are identified, such as limited or no use, catastrophic natural event, unmitigatable resource impacts, changed from original need (ie: unneeded mining road/trail), or others. Evaluate the need for physical closure or allow natural recovery, depending on expected resource impacts.

## **Heritage Resources**

### **Goals and Objectives**

Heritage resources within the study area will be managed through programmatic measures adopted in a formal Programmatic Agreement (PA) between the State Historic Preservation Office, Advisory Council on Historic Preservation, the Forest Service and Indian tribes. This PA, entitled Programmatic Agreement: Controlling Impacts on Historic Properties: Management of Ansel Adams, John Muir and Dinkey Lakes Wildernesses, Sierra and Inyo National Forests - will fulfill the Forests Section 106 requirements as well as involve collaboration with tribes and PA parties. Appropriate management practices to eliminate or reduce adverse effects to specific historic and prehistoric sites and places will be developed.

### **Management Direction**

Implement the PA in order to 1) identify, monitor, and manage significant heritage resources; 2) continue consultation with affected tribes; and 3) coordinate heritage resource management activities with other interested parties.

Allow scientific use consistent with FSM 2323.8 and Forest Plan direction. Permits will be required for any ground disturbing archaeological study under the Archaeological Resources Protection Act (ARPA, 1979)

Interpret heritage resources and cultural history outside of wilderness.

## **Minerals**

### **Goals and Objectives**

The Forest Service Manual (FSM 2800 and 2320) and the Code of Federal Regulation (36 CFR 228, 292, and 293) provide direction for the management of mineral activities in wilderness where there are valid existing rights. Mineral collecting outside of valid existing claims with approved operating plans is restricted for scientific purposes by special permit only. Prohibit all hazardous materials.



## Management Direction

Conduct validity exams on all un-patented mining claims within the wilderness.

## Recreation

### Goals and Objectives

Manage the wilderness to allow for recreation use at levels that are ecologically sustainable. Provide a range of opportunities for use and solitude across the wilderness landscape. Allow for recreation use in popular destinations areas and assure reasonable access to the public. Assure that in areas of concentrated use, that use does not expand or enlarge spatially. Manage the majority of the wilderness at a low density of recreational use insuring the highest quality of pristine wilderness. Assure no degradation in resources or experiential quality.

### Management Direction

Establish three recreation use categories that will be used to manage recreational visitor use impacts. These three categories will define the acceptable levels of social and ecological conditions affected by visitor use (Table 1.2).

Monitor total use levels. If total use in any area increases by 50% or more, assess impacts associated with the use and make determinations if further management actions are needed to maintain desired characteristics.

Identify limiting factors that may lead to site-specific restrictions, mitigations, or reductions in use.



Campsite at Thousand Island Lake, Ansel Adams Wilderness

*Photo by Daniel Perrot*

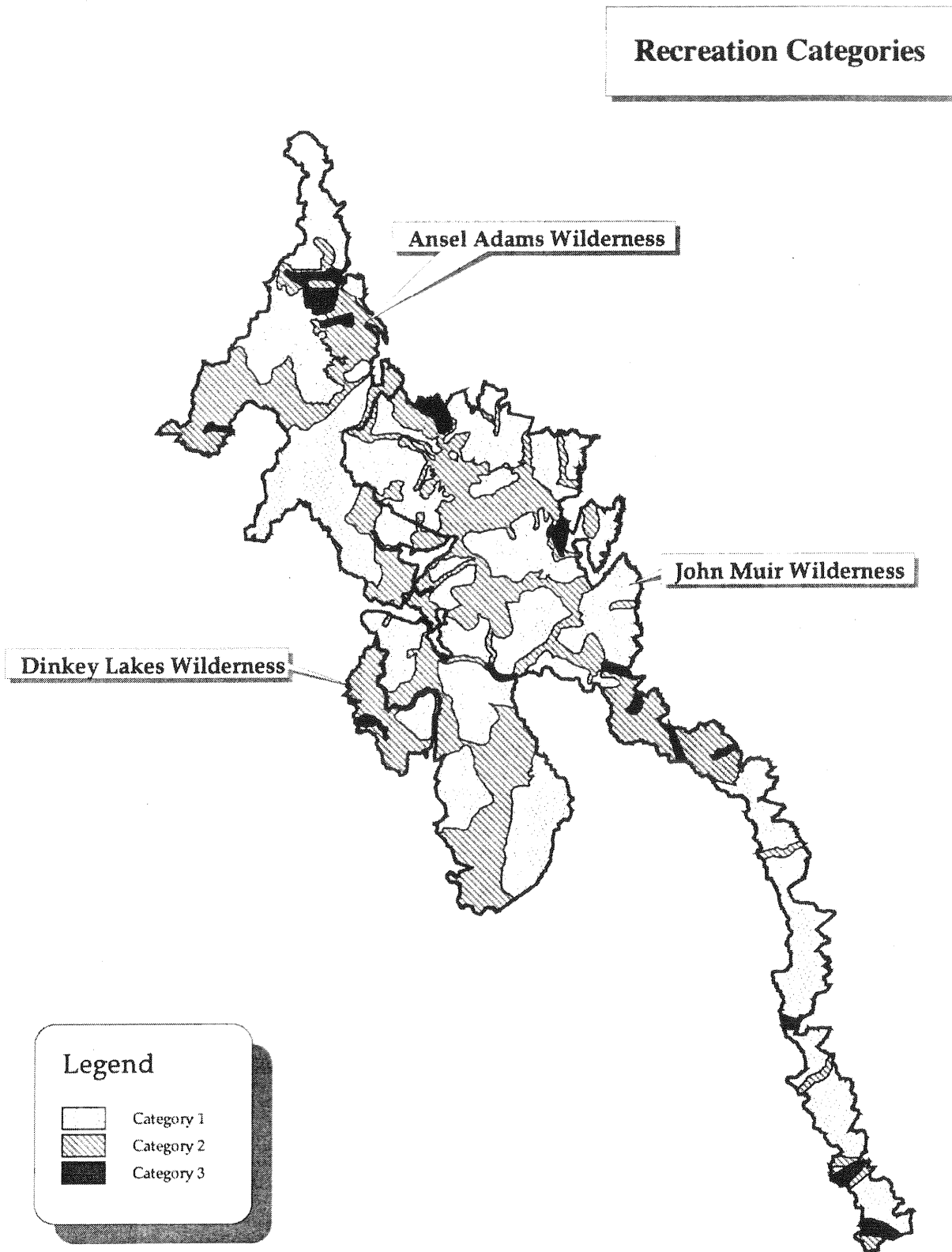


Figure 1.3. Recreation Categories

**Table 1.2.** Recreation Categories by Acreage and Percentage of Land base

Category	Units	Total Acres	Percent
1	33	485,568	58
2	22	327,489	39
3	13	29,847	3

### Winter Use

#### Management Direction

To maintain low levels of winter use, apply the following Recreation Categories. When the snow depth averages 2 feet in the majority the planning area or from approximately November 1 to May 1, manage as Recreation Category 1. Manage as Recreation Category 2 the following exceptions: the entire drainages of Shepherd Pass, Rock Creek, Lakes Basin, Piute Pass, and Bishop Creek; and from Agnew Meadow to Donahue Pass

### Day Use

#### Management Direction

Conduct day use studies as appropriate. Acquire baseline data on day use levels across the Wildernesses.

Consider and assess if day use levels are causing unacceptable social or ecological impacts or user conflicts.

Consider evaluation of day use levels when changes of more than 20% occur. Conduct public involvement to help determine alternative approaches for accommodating or managing day use levels.

Continue to manage Mt. Whitney day use through a limited entry quota.

### Campfires

#### Management Direction

Prohibit wood campfires in areas above 10,000-foot elevation in the northern portion of the planning area and 10,400 feet in the southern portion. The line dividing the two elevation zones runs generally east to west following the northern boundary of the Middle Owens Valley Watershed to where it meets the northern boundary of the Upper South Fork San Joaquin Watershed known as Glacier Divide; then north boundary of Sequoia Kings Canyon National Park and continues west along the southern boundary of the Middle South Fork San Joaquin Watershed (see FEIS map).

Continue existing closures to wood campfires (see FEIS map for reference), however, in Cottonwood basin, the elevational restriction will change from 10,300 to 10,400.

Close other areas to wood campfires, as needed using the following criteria. (The rating system referred to is described in the campsite monitoring protocol, FEIS, Appendix H).

Monitor impacted areas biannually for change. When 50 percent of campsites change by a factor of one for firewood availability rating, consider for closure to campfires.

To meet the intent of the regional soil quality standards for nutrient cycling, consider campfire closures in areas where more than half of the duff, litter, and fine woody material is removed

Permit gas, propane, and multi-fuel stoves and heaters in areas closed to wood campfires.

Prohibit wood burning stoves (including "Zip" stoves), charcoal fires, packed in firewood, or fire pans within areas closed to wood campfires.

## **Campsite Conditions**

### **Management Direction**

Campsites will be located 100 feet from water. In areas where terrain does not permit a campsite to be 100 feet from water, sites will be no closer than 50 feet from water.

Consider designating campsites in popular destination areas.

Inform and educate visitors on proper campsite selection and camp behavior including "Leave No Trace" principles.

When occupied campsite, campsite condition, or campsite density standards are exceeded, consider establishing destination quotas, designating campsites or reducing use

Manage Trail Camp and Outpost Camp in the Mt. Whitney Zone as exceptions to the occupied campsite standards.

Close and rehabilitate campsites when not in compliance with management direction for site density or resource objectives, such as proximity to water or trails.

Maintain data records and monitor success of closures, rehabilitation, containment of the site, and other management actions.

Monitor for trends and changes in conditions and conduct periodic assessments. If campsite condition class deteriorates more than one class, contain the site, mitigate impacts and maintain site character.



Monitor campsites for density and condition class ratings using the protocol identified in the Monitoring Plan. Rate the following factors: density of vegetation, total area of campsite, bare mineral soil, camp development, social trails, and mutilations, distance to water, distance to water and available firewood (FEIS, Appendix H).

Manage campsite density in accordance with the following standards.

**Table 1.3. Campsite Density Standards**

<b>Recreation Use Category</b>	<b>Campsite Density Standards</b>
<b>Category 3</b>	Density of campsites will be moderate to high at some destinations. Density of sites will not exceed 4 sites per acre. Most sites will be managed as condition class 3 and 4 sites, with signs of moderate impacts that will be mitigated with direct techniques. Some class 5 sites will be appropriate and monitored frequently and contained when changes are detected.
<b>Category 2</b>	Density of sites will be moderate, not to exceed 3 sites per acre. Many sites at destination locations will be condition class 3 with occasionally condition class 4. Most sites will be condition class 2.
<b>Category 1</b>	Density of sites will be low, not to exceed 1 site /acre. Most sites will be condition class 2 and 1. Very few class 3 sites will exist.

**Occupied Campsites**

**Management Direction**

Use the measurement of “occupied campsites” within sight or sound of each other as the indicator for crowding and opportunities for solitude.

Identify benchmark points for monitoring occupied campsites. Do not exceed standards on more than 20% of the sample or 3 times a season. See Management Direction under Permit and Rationing System.

**Table 1.4. Standards for Occupied Campsites**

<b>Recreation Use Category</b>	<b>Number of occupied campsites within sight or sound</b>
<b>Category 1</b>	0
<b>Category 2</b>	2
<b>Category 3</b>	4

## Permit and Rationing System

### Goals and Objectives

The permit system provides equity in access for all authorized and legitimate uses.

Manage permit system using the simplest method to maximize both ecological resource protection and visitor freedom.

### Management Direction

Wilderness permits are required year-round for all overnight use and for Mt. Whitney day use.

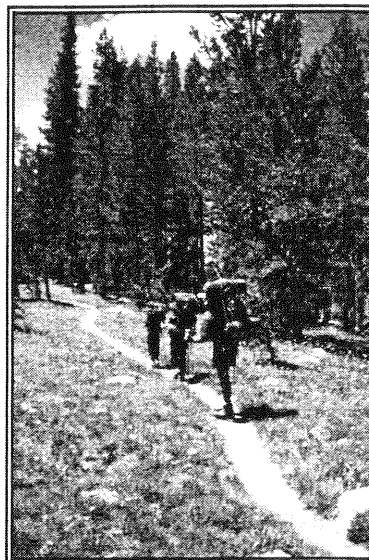
The quota season will be from May 1 to November 1. Advanced reservations for permits are recommended for large parties.

Consider implementing destination quotas when standards are exceeded for crowding or when trailhead quotas do not satisfactorily control campsite conditions at interior destinations.

On occasions where commercial outfitters contract out for packing services, one wilderness permit is required for the party; however, both operations will count as service days.

Establish procedures for a system of split quotas whereby visitors can be accommodated through the next day's quota. The integrity of the quota must not be diminished in this process.

Consider allowing quotas to limit party size if use patterns change in low use areas due to accommodation of party size.



John Muir Trail South of Selden  
Pass, John Muir Wilderness  
*Photo by Laurie Perrot*

The rationing system will include 3 types of quotas:

**Single Quotas** - A single quota will be used in areas where there is low commercial use and/or the desired condition for the area prescribes low levels of use. Monitor these trails to assure that commercial use is not precluding non-commercial public access to these areas, and that recreational use does not increase significantly over time.

**Case-by-Case Itinerary Approvals** - Entry points with currently low levels of commercial use, no commercial use or that the Forest Service has not identified a compelling reason for commercial services to be provided, use will be approved only on a case-by-case basis using the following criteria:

- Use must meet a need identified in the needs assessment.
- Trips in these areas will not be advertised in brochures or other media.
- Service is occasional in nature and not part of a yearly, repeated operation.
- Use must fit within the quota system.
- In areas where limiting factors have been identified; the appropriate resource specialists must review the proposed use to assure it is consistent with resource objectives.

**Multiple Quotas** - In areas where there is high demand for visitor use, including commercial service providers, set up multiple quotas. This is especially important where authorized commercial facilities are located adjacent to an entry location.



South Fork San Joaquin River, John Muir Wilderness  
*Photo by Daniel Perrot*

**Table 1.5. Quotas**

(All quotas are a measure of numbers of people per day)

**Single Quotas**

Inyo NF Entry	Quota	Sierra NF Entry	Quota
Beck	15	Badger	10
Big Pine SF	12	Bear Creek	10
Deer Lake	10	Bear Ridge	10
Fern Lake	10	Cassidy	10
Fern/Yost	8	Chiquito	35
George Lake	10	Cliff Lake	20
Gibbs	8	Crown/Rancheria	10
Glacier Canyon	8	Hells Half Acre	10
Horton Lakes	10	Logan Meadow	10
JMT/PCT South	10	Mammoth	25
Mammoth	20	Miller	10
Meysan	10	Mono Creek	30
Parker Creek	10	Onion Springs	10
Red Cones	15	South Fork	10
Sawmill	10	Squaw Dome	10
Shepherd	15	Woodchuck	20
Taboose	10		
Upper Buttermilk	8		

**Entry Points for Case-by-case Approval for Commercial Operations**

INF Entry	Quota	INF Entry	Quota
Baker/Green	8	Italy Pass	8
Baxter Pass	8	Trail Crest	25
Birch	8	Tyee	10
Bloody Canyon	8		
Convict	10		
Gable Lakes	8		
George/Williamson	8		
Golden Trout	10		
Laurel	8		
Mt. Whitney Day Hike	100		
Mt. Whitney Overnight	60		
Red Lake	8		
Tuttle Creek	8		
Valentine	8		

SNF Entry	Quota
Willow Mdw	30

**Multiple Quotas**

INF Entry	N/C	Comm.	Packer	O/G
Big Pine NF	25		15	8
Bishop Pass	36	15		
Cottonwood Lakes	60	15		
Duck Lake	30	15		
Fish Creek	15	15		
High Trail	20	15		
Hilton Lakes/Creek	15	15		
John Muir Trail, North	10	10		
Kearsarge	60	15		
Lamarck	10	8		
Little Lakes	25	10		
McGee	15	15		
Minaret	10	10		
Mono Pass	20	15		
NF Lone Pine	10	8		
Pine Creek	15	15		
Piute Cr	30	15		
River Trail	30	8		
Rush Creek	30	15		
Sabrina Lake	25	15		
Shadow	30	15		
Tamarack	10	8		
Treasure Lakes	10	8		

SNF Entry	N/C	Comm.	Packer	O/G
Devils/Graveyard	20	10		
Fernandez	21		8	12
Florence	35	15		
Isberg	22		8	8
Jackass/Norris	10	8		
Maxon	25		8	5
Walton	9	8		

**User-Created Trails**

A user-created trail is any non-constructed path created by the passage of visitors, which is discernible and would not likely recover naturally within one year. User-created trails are not part of the Forest Service Trail inventory, and do not receive funding for maintenance.

**Goals and Objectives**

Reduce or eliminate resource impacts associated with user-created trails.

Allow a low density of user-created travel routes where suitable and where it meets management objectives.

Prevent the creation of additional user-created trails and limit the impacts associated with existing user-created trails.

Emphasize managing or eliminating user-created trails in riparian, meadow, and streamside areas.

### **Management Direction**

Monitor user-created trails for resource condition using established protocol. In areas of concern, inventory and map user-created trails and associated impacts.

Evaluate the need to allow, eliminate, stabilize, or add the user-created trail to the Forest Trail System.

Consider allowing a user-trail to remain, without adding it to the Forest Trail System, under the following conditions:

- a. An existing system trail or another acceptable user-created trail does not provide similar access to a destination.
- b. The user type and level of use meets management objectives for visitation and resource protection for the area.
- c. The user-created trail is not causing identifiable impact to TES species or habitat or to heritage resources.
- d. Incidental physical treatments, including short reroutes and redirection of users, are sufficient to mitigate resource impacts.

Consider physically closing and eliminating a user-created trail under one or more of the following conditions:

- a. An existing system trail or more appropriate user-created trail provides similar access
- b. The user-created trail facilitates levels and types of access that do not meet management objectives for the area
- c. The user-created trail is causing direct, identifiable impacts to TES species or habitat or to heritage resources
- d. Incidental physical treatments, including rerouting and redirection of users, cannot mitigate identified resource impacts
- e. It is likely that closure will be effective at preventing further impacts or establishment of another user-created trail.

Consider adding a user-created trail to the Forest Transportation System (Trail Inventory) and maintain at a determined Service level, after completion of the appropriate analysis and public involvement process, using one or more of the following criteria:

- a. No other existing trail provides access to the destination
- b. The trail provides access consistent with management objectives for visitation and resource protection for the area
- c. The user-created trail is causing extensive resource impacts, which cannot be mitigated with incidental treatments, would likely be controlled through the use of standard trail treatments and basic trail maintenance

- d. Mitigation of the resource impacts caused by the user-trail would likely result in significant or recurring efforts
- e. Closure would likely be ineffective, or would result in the creation of another user-created trail.

## Recreation Stock Forage

### Goals and Objectives

All lands used by recreation stock will be properly functioning and in satisfactory rangeland condition. Properly functioning riparian lands and meadows are defined as having adequate vegetation, landform, or large woody debris present to:

- Dissipate energies associated with wind & water,
- Filter sediments and aid floodplain development,
- Improve floodwater retention and ground water recharge,
- Develop root masses that stabilize geomorphic features,
- Develop diverse pond and channel characteristics, and
- Support greater biodiversity.

Properly functioning uplands are defined as having adequate integrity of the soil and ecological processes to sustain the capacity of rangelands to satisfy values and produce commodities by the National Research Council 1994 (NRC). Soil and biotic indicators are observed as being stable and resilient at the watershed level.

**Satisfactory Condition** is defined as having stable soils with continuous, vegetative cover and rooting throughout available profile. Under each action alternative, satisfactory condition is further defined by (1) ecological state and similarity to Potential Natural Community, or (2) forage value ratings for packstock.

**Potential Natural Community** is defined as the biotic community that would become established if all successional sequences were completed without interferences by humans under the present environmental conditions, and may include naturalized, non-native plant species.

All rangelands are properly functioning and in satisfactory condition. Satisfactory condition is defined as being in a high seral ecological state, greater than or equal to fifty percent ( $\geq 50\%$ ) similarity to Potential Natural Community and having stable soils with continuous, vegetative cover and rooting throughout available profile.

Proposed grazing standards allow sufficient herbaceous forage biomass to provide for high plant vigor, stream bank protection, and sediment entrapment on all meadow and riparian areas.

## Management Direction

This direction is specific to recreational packstock management with an intended effort to make distinction from management of production livestock (e.g. cattle and sheep).

Assess the hydrologic function of meadow habitats and other special aquatic features during range management analysis. Ensure that characteristics of special features are, at a minimum, at Proper Functioning Condition. Prohibit or mitigate ground-disturbing activities that adversely affect hydrologic processes that maintain water flow, water quality, or water temperature critical to sustaining bog and fen ecosystems and plant species that depend on these ecosystems. During project analysis, survey, map, and develop measures to protect bogs and fens from such activities as trampling by packstock and humans. Criteria for defining bogs and fens include, but are not limited to, presence of: (1) sphagnum moss (*Spagnum spp.*), (2) mosses belonging to the genus *Meessia*, and (3) sundew (*Drosera spp.*). Complete initial plant inventories of bogs and fens within active grazing allotments prior to re-issuing permits.

Prevent disturbance to meadow-associated streambanks and natural lake and pond shorelines caused by resource activities (for example, packstock grazing and dispersed recreation) from exceeding 20 percent of stream reach or 20 percent of natural lake and pond shorelines. Disturbance includes bank sloughing, chiseling, trampling, and other means of exposing bare soil or cutting plant roots.

In stream reaches occupied by, or identified as “essential habitat” in the conservation assessment for, the Lahonton and Paiute cutthroat trout, limit streambank disturbance from livestock to 10 percent of the occupied or “essential habitat” stream reach. Cooperate with State and Federal agencies to develop streambank disturbance standards for threatened, endangered, and sensitive species. Use the regional streambank assessment protocol. Implement corrective action where disturbance limits have been exceeded.

Use Grazing Response Index methods and forage utilization standards in conjunction with rangeland suitability criteria, range readiness, and recreation strategy objectives, to maintain or reach desired conditions. Expediently determine rangeland suitability for specific sites after completion of resource inventories or completion of NEPA analysis. A Packstock Management Guide would be used to reflect this current management direction.

Conduct monitoring of these packstock management guides by wilderness managers. The primary need for utilization standards is to adjust or establish recreational stock grazing allocations.

Determine ecological status on all key areas monitored for grazing utilization prior to establishing utilization levels. Use regional ecological scorecards and range plant list in regional range handbooks to determine ecological status. Analyze meadow ecological status every 3 to 5 years. If meadow ecological status is determined to be moving in a downward trend, modify or suspend grazing. Include ecological status data in a spatially explicit Geographical Information System database.



Apply the utilization standards according to vegetation types described in the *R5 Rangeland Plant List (1998)* using the key species and key area concept. These standards are based on relative utilization or that percent of use of current production, which is measured at the time packstock leave the area. They are also based on the height/weight relationship of the plant and include all herbivory by livestock, wildlife, and insects. Where practical and beneficial, use stubble height standards for key species based on the selected utilization standard at a given key area.

Under intensive grazing strategies, where meadows are receiving a period of rest, utilization levels can be higher than the levels described above if the meadow is maintained in late seral status and meadow-associated species are not being impacted. Degraded meadows (such as those in early seral status with greater than 10 percent of the meadow area in bare soil and active erosion) require total rest from grazing until they have recovered and have moved to mid- or late seral status.

Existing special use permits will be reviewed as soon as practicable to determine whether modifications to grazing clauses are necessary to conserve willow flycatcher, Yosemite toad, great gray owl, and riparian and meadow ecosystems. When a determination is made that willow flycatcher, Yosemite toad, great gray owl or a species listed under the ESA is occupying a site, decisions modifying permits to protect those sites will be made in an expeditious manner, but no later than one year after determining that a site is occupied. Forest Service administrative grazing activities will be subject to the same reviews and mitigations. This direction is consistent with the standards and guidelines of the *Sierra Nevada Forest Plan Amendment*.

Use “range readiness” criteria as a primary technique to establish grazing start dates for the annual season of packstock use on key areas. Coordinate with wilderness managers from Yosemite and Sequoia-Kings Canyon National Parks prior to giving public notice of grazing start dates. Criteria for determining appropriate grazing include:

- Snow course measurements and spring runoff,
- Soil firmness at designated key areas at various elevations,
- Growth development of key forage species at the designated key areas,
- Overall quantity and quality of available forage for the season,
- Site-specific management objectives and limited operating periods for sensitive wildlife species

On key areas use the *Grazing Response Index* method (U.S. Forest Service, 1997) to assess overall grazing effects during the current year and aid in planning the grazing for the following year. Give primary concern for amount of photosynthetically active leaf material remaining for key plants to recover from grazing.

Revise Forest Orders if necessary to establish annual grazing start dates and grazing closure areas, as well as other packstock use regulations for packstock use by private parties.

**Table 1.6.** Maximum Allowable Utilization Standards for Key Species on Key Areas by Ecological State

<b>Landscape Zone</b>	<b>Rangeland Class</b>	<b>Vegetation Type</b>	<b>High Seral Ecological State</b>	<b>Mid to Low Seral Ecological State</b>
<b>Montane and Subalpine</b>	Meadow, Riparian & Upland	Herbaceous Perennials	40% Use By Weight	30% Use By Weight
<b>Montane and Subalpine</b>	Meadow, Riparian & Upland	Shrubs & Trees	20% Use Annual Leader Growth	10% Use Annual Leader Growth
<b>Alpine</b>	Meadow, Riparian & Upland	Herbaceous Perennials	20% Use By Weight	10% Use By Weight
<b>Alpine</b>	Meadow, Riparian & Upland	Shrubs & Trees	10% Use Annual Leader Growth	5% Use Annual Leader Growth

## Search and Rescue

### Goals and Objectives

The County Sheriff has primary responsibility for search and rescue (SAR) operations. A SAR guide will be developed that meets wilderness objectives to ensure consistency across the wildernesses. The safety of the victim and the rescuers are considered priority in emergency situations.

### Management Direction

In situations involving life and safety of people in the wilderness approval to use motorized equipment and mechanized transport, including medical evacuations by helicopter, will be determined by the Forest Supervisor.

Develop a Memorandum of Understanding with County Sheriffs for approval and uses of mechanized transport and motorized equipment.

Evaluate all search and rescue operations for compliance with guidelines.

## Special Uses Management

### Goals and Objectives

Permit special uses in accordance with agency policy, laws and regional and forest direction. Within the ceilings established in each alternative, commercial special use permits that are allowed within these wilderness areas must be shown to meet an identified public need, and to meet Agency objectives and provide benefits to the wilderness resource.

Manage Outfitter/Guide (O/G) operations in a manner consistent with the purposes of the Wilderness Act, to provide for public use and enjoyment of the wilderness areas, and to protect and enhance the wilderness resource and experience.

### **Management Direction**

Authorize commercial operations only with a valid special use permit.

Do not permit competitive events, training events, and contests. (FSM 2323.13h)

Do not permit filming for commercial purposes, guidebooks, television, or film, as instructed by Forest Service national direction.

Identify maximum numbers of stock in the special use permit and condition by site-specific needs and objectives.

Identify areas and destinations of operations in the special use permit.

The following activities can be authorized to be provided as commercial services to the public. These activities are determined to be necessary to realize the goals and purposes of the Wilderness Act (See Appendix D in the FEIS for definition of activities).

- Packstock support
- Packstock full service or all expense trips
- Mountaineering, involving technical climbing
- Credited educational
- Winter mountaineering
- Backpacking
- Non-traditional stock supported trips i.e. llama, goats
- Day rides on horseback

Use the highest two years of the past five years of actual use to re-allocate use every five years. The first allocation to take place on implementation of this plan, will be based on years 1996 to 1999 use data as identified in the Needs Assessment.

Review and adjust commercial allocations every five years.

The Forest Service will authorize visitor permits for all commercial trips commencing on National Forest System land entering wilderness.

Commercial overnight use will be regulated as described in the Permit and Rationing systems section.

All reservations for wilderness permits are subject to the same reservation fee.

All winter mountaineering and touring trips must be approved by the Forest Service by itinerary.

Equestrian day rides will be approved as a distinct allocation, and locations will be approved in the annual operating plans. Where areas of congestion or concerns occur, the Forest Service will work with the operators to identify alternative locations.

All commercial packstock must stay on designated trails, except where authorized in advance by the Forest Service for alternative routes or to access campsites and grazing areas.

Do not authorize commercial packstock use on trails not recommended for stock.

All guides and employees of operators must have an authorized wilderness permit for overnight use.

The upper limits allowed for services provided by commercial operations are identified in Table 1.8. West side entry allocations include use for the Ansel Adams, John Muir and Dinkey Lakes Wilderness. East side allocations are for the Ansel Adams and John Muir Wilderness.

**Table 1.7. Commercial Allocation of Service Days**

<b>Activity</b>	<b>West side entry Allocation (Service Days)</b>	<b>East side entry Allocation (Service Days)</b>
<b>Packstock supported</b>	3,000	13, 300
<b>Backpacking</b>	12,000	2, 100
<b>Non-traditional packstock</b>	200	500
<b>Mountaineering</b>	100	2,000
<b>Winter Mountaineering/touring</b>	500	1, 000
<b>Credited educational</b>	1,100	750
<b>Day Rides</b>	600	5,000
<b>Temporary Use Pool</b>	1,500	1,500
<b>Total</b>	19,000	26,150

Assess adequacy of needs assessment every five to ten years as demographics, use patterns or conditions change and change requires re-evaluation. Make adjustments if necessary.

Ensure that activities and itineraries that are approved are wilderness-dependent and location appropriate.

## Managing the Commercial Service Day Pool

Manage a temporary pool to be available for incidental or temporary use and for assignments not to exceed one year, with priority given to services that are not currently being met.

Provide incentives for operators that continually exceed meeting wilderness management objectives.

Base determinations of pool allocations on resource capability and needed services. Use the limiting factors worksheet outlined in the needs assessment for reference values.

Criteria for assigning temporary use:

Proposed service responds to an unmet need as identified in the needs assessment.

Itineraries for additional uses must be consistent with resource objectives for the area and approved by the Forest Service.

Proposed services must meet the highest standards for resource protection. Examples include: "Leave No Trace" Masters courses, greatly reduced party size, greatly reduced ratio of stock to clients for pack supported trips.

## Signing

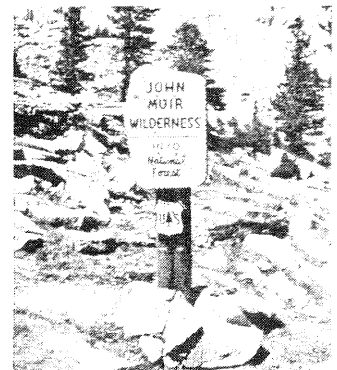
### Goals and Objectives

Signing at trailheads will be sufficient to provide all important wilderness education, regulation and restriction information. Provide minimal signing within the wilderness - directional signing at trail junctions and for resource protection in accordance with FSH 7109.11 (5-47).

### Management Direction

Ensure that all signing within the wilderness will be of durable wood species.

Identify areas where motorized or mechanical vehicle trespass is a problem. Coordinate with engineering, lands, and law enforcement staff to accomplish survey, signing and enforcement.



## Soils

### Goals and Objectives

Maintain soil quality and long-term soil productivity by maintaining soil porosity, organic matter, hydrologic function (infiltration, water table, drainage, percolation, etc.), and buffering capacity (soil filtering and chemical regulation properties).

### Management Direction

Take actions to limit soil displacement and erosion that results from human activity and authorized uses to a rate similar to natural erosion.

Maintain large woody material and forest duff and litter to provide for nutrient cycling and soil organisms.

Limit areas of detrimental compaction and practices that could interfere with water table or subsurface flow.

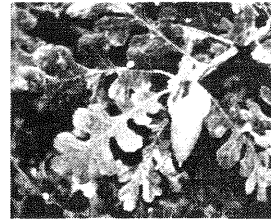
Refine threshold values for organic matter, erosion, and porosity to fit ecological communities and site-specific conditions as needed and as information becomes available.

## Tribal Relations

### Goals and Objectives

Maintain and enhance tribal relations.

Facilitate appropriate use by Native American tribes, communities and traditional practitioners.



Implement the Programmatic Agreement entitled Controlling Impacts on Historic Properties: Management of Ansel Adams, John Muir, Dinkey Lakes Wildernesses, Sierra and Inyo National Forests.

### Management Direction

Consult with Native Americans in a manner consistent with the NHPA, ARPA, the “Native American Graves Protection and Repatriation Act” (1991), Executive Order 13084, “Consultation and Coordination with Indian Tribal Governments”, dated May 14, 1998, and the “American Indian Religious Freedom Act” (PL 95-341).

Facilitate traditional Native American use practices that are not in conflict with the Wilderness Act.

Establish government-to-government protocols for the management of traditional places when appropriate.

## Vegetation

### Goals and Objectives

Natural ecological processes will be allowed to determine the composition and distribution of plant communities.

Threatened, Endangered, Proposed and Sensitive species (TEPS) will be monitored to ensure protection. Where appropriate, management actions will be developed to help ensure their protection.

Prevent or minimize the introduction and establishment of weeds as a result of pack and saddle stock and erosion control projects.

### Management Direction

Conduct surveys and monitor, as warranted based on initial surveys, all known sensitive plant occurrences where impacts from visitor use may be affecting the vigor or reproductive capacity of the populations.

Where monitoring indicates trampling impacts to sensitive plants are occurring, relocate trails or campsites as needed to prevent a loss of viability or trend to federal listing of any sensitive plant species.

Encourage use of certified weed free hay and straw. The program will be phased in as certified weed free hay and straw become available. This would apply to pack and saddle stock used by public, livestock permittees, outfitter guide permittees, and local, State, or Federal agencies.

## Water Quality

### Goals and Objectives

Manage wilderness uses to not degrade water quality. Ensure that lakes and streams meet or exceed State and Federal water quality standards. Maintain favorable conditions of stream flow and timing of high quality water.

### Management Direction

Collect and periodically monitor baseline information on implementation of water quality protection measures.

Meet or exceed State Water Quality Standards.

Apply the following Best Management Practices (BMPs): They are further described in the Forest Service *Region 5 Soil and Water Conservation Handbook* (FSH R5 Supp 1):

- Protect water quality. This practice prohibits placing in or near a stream, lake, or other water body, substances which may degrade water quality. This includes human and animal waste. Areas may be closed in order to restrict use in problem areas (PRACTICE 4 –10).
- Locate pack and riding stock facilities (such as hitchlines, hitchposts, fenced pastures) or corrals at safe locations away from springs, streams, lakes, wet meadows, and any other surface waters (PRACTICE 4-11).
- Revegetate surface disturbed areas. This is a corrective practice to stabilize the soil surface in the disturbed area. The vegetation selected will be suited to meet the management objectives for the area, and will comply with current Forest Service policy for seeding/revegetation (PRACTICE 5-4).
- Protect Wetlands. The Forest Service does not permit activities in wetlands whenever there is a practical alternative. Evaluate proposed actions in wetlands based on its effect to the survival and quality of the wetlands (PRACTICE 7-3) .
- Control activities under special use permit. These activities must be operated to protect surface and subsurface water quality from physical, chemical, and biological pollutants. The SUP shall detail conditions that must be met to continue operating including measures necessary to protect water quality (PRACTICE 7-5).
- Protect watershed resources by closing part or all of the watershed to use (seasonal, temporary, or permanent). A watershed may have sensitive areas or be in poor condition so that any use during a given portion of the year could result in impacts to water quality. In other cases, water quality may already be impaired, and improvements are not considered feasible without substantially reducing or eliminating further use (PRACTICE 7-7).
- Control stock numbers and season of use. Determine proper stock numbers, utilization rate, and season of use to protect water quality. Ensure that adequate field checks are made to determine range readiness to assure that the soil is not too wet, that sufficient forage growth has occurred, and that soil and vegetation condition and trends are verified (PRACTICE 8-2).
- Control stock distribution within grazed areas. Areas sensitive to concentrated and/or prolonged use that will result in lost vegetation cover and soil compaction will not have concentrated use of stock permitted (PRACTICE 8-3).

## **Wildlife and Fisheries**

### **Goals and Objectives**

Protect indigenous wildlife and fish from human caused conditions that could lead to Federal and/or Regional listing as a TEPS species. Listed TEPS species and their habitats will be



protected and assisted in their recovery. Recovery Plans for all federally listed species will govern management activities that may affect those species, and restrictions on recreation and other uses may be necessary. A biological evaluation (for sensitive species) or biological assessment (for threatened or endangered species) has been conducted to determine whether any proposed forest projects or activities would affect a TEPS species.

Increase the knowledge base for TEPS and candidate species through inventorying and monitoring to determine status of habitat and populations. Monitoring will determine effects of human activities on populations and habitat, the trends of TEPS species populations, and indicate the need for protective management and mitigation measures. As funding provides, focus on the Yosemite toad, mountain yellow-legged frog, Sierra Nevada bighorn sheep, and Piute and Lahontan cutthroat trout.

### **Management Direction**

Restrict or prohibit entry of dogs into areas where monitoring indicates unacceptable impacts are occurring to any threatened, endangered, proposed or sensitive species.

Require that visitors store food properly to prevent wildlife and black bears in particular from gaining access to the food, trash, or other non-native food sources.

### **Yosemite toad**

When Yosemite toad populations are located, survey the site to assess recreational impacts, implement the following:

Exclude livestock (including pack and saddle stock) from standing water and saturated soils in wet meadows and associated streams and springs occupied by Yosemite toads during the breeding and rearing season (as determined locally). If physical exclusion of livestock, such as fencing, is impractical then exclude grazing from the entire meadow until after September 1. Wet meadows are defined as relatively open meadows with moderate to low amounts of woody vegetation that have standing water on June 1<sup>st</sup> or for more than two weeks following snow melt. Determine if the meadow has standing water and saturated soils after June 1<sup>st</sup>, if the meadows do not have these conditions for more than two weeks, grazing may be allowed only in those portions of the meadow where those conditions do not exist. Within the historic range of the species, surveys of unoccupied suitable habitat to determine presence of Yosemite toads must be completed with three years of this Record of Decision. If surveys are not completed for any meadow, occupancy will be assumed and the above restrictions apply. *(From Sierra Nevada Forest Plan Amendment, Record of Decision, RCA41, January 2001)*

Move campsites, trails, etc., away from the breeding, rearing and hibernation habitats where impacts from recreation have been analyzed and determined to be unacceptable.

Continue to monitor the site to determine if mitigation is effective or if further corrective action is necessary.

### **Sierra Nevada bighorn sheep**

Restrict dogs and goats in bighorn sheep occupied habitat.

Implement bighorn sheep recovery plan upon completion.

Monitor bighorn sheep populations to identify changes in occupied habitat and implement changes in management as necessary.

Monitor human recreational use within bighorn sheep habitat to determine if additional management measures are necessary in areas outside the California Bighorn Sheep Zoological Areas.

### **Willow Flycatcher, Northern Goshawk, Great Grey Owl, California Spotted Owl, Pacific Fisher, and American Marten**

Implement management direction and survey requirements identified in the Sierra Nevada Forest Plan Amendment Standards and Guidelines.



Willow Flycatcher



Northern Goshawk

## Monitoring Strategy

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### Goals and Objectives

- 1) Monitor key variables to understand the conditions, risks and the threats to the wilderness resource. Establish benchmark or reference monitoring. Develop reporting and documentation techniques and protocols.
- 2) Monitor for change in conditions over time. Identify unacceptable adverse impacts. Determine when, where, and why changes are occurring.
- 3) Conduct inventory and monitoring with an integrated resource approach, to the best extent possible.
- 4) Provide information to improve management decisions, policies, actions and evaluate for effectiveness. Inform decisions that have an effect on the wilderness resources.
- 5) Monitor management strategies and actions, and assess the benefits and costs, in time, money, and effectiveness and to the wilderness character.
- 6) Engage in collaboration amongst managers, scientists, public, and academic institutions. Communicate with local, regional, and national agencies and all interested publics. Describe, communicate, and demonstrate the effects of management and use on the wilderness resource.



Temple Crag, John Muir Wilderness, Inyo National Forest  
*Photo by Glen Stein*

## MONITORING FRAMEWORK

### Framework for Measuring Wilderness Quality

The Wilderness Act provides broad goals for management. In the Act and subsequent agency policy and direction, overriding themes include character, naturalness, experiential and social values and restraint. These are qualities that are difficult to define and measure. For the purposes of designing a monitoring framework, three primary attributes represent these components of wilderness quality: (1) wilderness character, (2) recreation/experiential and social, and (3) the biophysical components. Under these primary components are attributes, or variables that can be measured. This is then outlined to correlate with management direction, thus composing a framework for monitoring wilderness quality.

**Table 1.8.** Indicators and Key variables

<b>Biophysical</b>	<b>Recreation/Experiential and Social</b>	<b>Wilderness Character</b>
Water Quality*	Solitude while camping	Recreation Use Trends
Soil Quality*	Campsite Density	Resource conditions and concerns (Limiting Factors)
Firewood availability	Day Use	User Trail Density/condition
Yosemite Toad*	Use patterns	Managerial presence
Bighorn Sheep disturbance*	Visitor Experience	Campsite condition density
Presence of TES and Petitioned for listing species*		
Key Benchmark Forage Utilization	Heritage Site conditions	
Key Benchmark Meadows Ecological State		
Range Readiness		

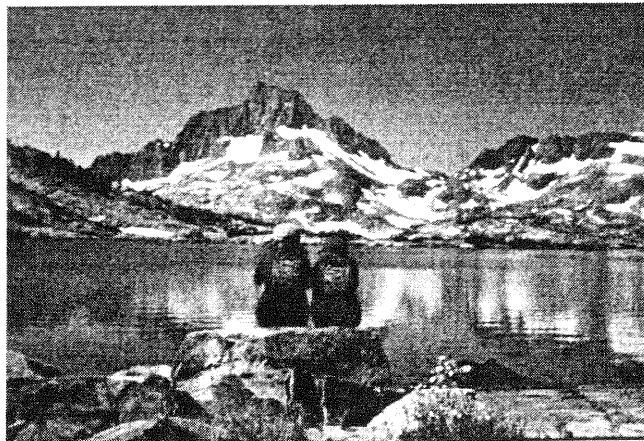
\* These attributes are not specific to wilderness, but are monitored as a part of on-going monitoring for other programs and are significant resources in these wildernesses.

**Table 1.9. Monitoring Framework**

<b>Variable</b>	<b>Management Direction</b>	<b>Monitoring Objective</b>	<b>Monitoring Technique</b>	<b>Frequency / Reporting Period</b>
<b>Campsite Condition</b>	Monitor for trends and changes in conditions and conduct periodic assessments. If condition class deteriorates more than one class, contain the site, mitigate impacts and maintain site character.	Inventory sites and detect changes in site conditions over time.	Campsite inventory and monitoring protocol.	% of sites annually, five year rotation
<b>Campsite Density</b>	Category 3: Density of sites will not exceed 4 sites per acre. Category 2 - Density of sites will be moderate, not to exceed 3 sites per acre. Category 1 - Density of sites will be low, not to exceed 1 site /acre.	Detect resource conditions and experiential conditions of campsites	GPS point data associated with campsite inventory	% of sites annually
<b>Firewood availability</b>	Monitor impacted areas biannually for change, when 50 percent of campsites change from a "1", "2", or "3" to "4" rating for firewood availability, consider for closure to campfires.  Consider campfire closure in areas where more than half of the duff, litter, and fine woody material is removed to meet the intent of the regional soil quality standards for nutrient cycling.	Determine health of soils and vegetation, detect trends.	Rating system included in campsite inventory	% of sites annually
<b>Occupied Campsite</b>	Identify benchmark points for monitoring occupied campsites. Do not exceed standards more than 20% of the sample or 3 times a season.	Monitor for compliance with standards for occupied campsites.	Counts on sites occupied either through ranger reports and/ or visitor reporting mechanisms	Annual data collection
<b>Visitor Experience</b>	Assess changes in visitor use patterns over time to insure that permitting mechanisms do not influence patterns and that low use areas remain low use. If total use in any area increases by 50%, assess impacts associated with the use and make determination if further management actions may be needed to maintain desired characteristics.	Determine trends in visitor acceptance wilderness conditions and character	Visitor trip report	Periodic
<b>User Trail Density</b>	Allow a low density of user-created travel routes where suitable and where it meets management objectives.	Inventory for baseline conditions and for assessment	Forest Protocols	
<b>User Trail Condition</b>	Evaluate the need to allow, eliminate, stabilize, or add the user-created trail to the Forest Trail System.	Determine if adverse impacts to soil and/or water quality are occurring.	Forest Protocols	% of trails every 5 years
<b>Limiting Factors/ Threats</b>	Identify limiting factors that may lead to site-specific restrictions, mitigations, or reductions in use.	Detect trends in resource concerns	Specialist field data and documentation of observations	On-going

<b>Variable</b>	<b>Management Direction</b>	<b>Monitoring Objective</b>	<b>Monitoring Technique</b>	<b>Frequency / Reporting Period</b>
<b>Yosemite toad</b>	Yosemite toad populations are located, survey the site to assess recreational impacts	Monitor for compliance with standards. Gather data on population locations and detect changes and effects on use over time	Specialist field data and documentation of observations protocol	Annual, follow recovery plan if/when listed
<b>Bighorn Sheep disturbance</b>	Monitor bighorn sheep populations to identify changes in occupied habitat and implement changes in management as necessary.  Monitor human recreational use within bighorn sheep habitat to determine if additional management measures are necessary in areas outside the California Bighorn Sheep Zoological Areas.	Documentation of human caused effects and predation by cougar		Follow Recovery Plan
<b>Heritage Site conditions</b>	Implement the PA in order to 1) identify, monitor, and manage significant heritage resources; 2) continue consultation with affected tribes; and 3) coordinate heritage resource management activities with other interested parties.	Inventory of sites and condition of site. Detect change over time.	Monitoring protocol will be developed in consultation with affected Native American tribes	
<b>TES and Petitioned for listing aquatic species</b>	Determine effects of human activities on populations and habitat, the trends of TEPS species populations, and indicate the need for protective management and mitigation measures.	Gather data on population locations and detect changes and effects on use over time	MYLF, Lahonton and Paiute CTT	Annual, follow recovery plan when listed
<b>Sensitive Plant species</b>	Threatened, Endangered, Proposed and Sensitive species (TEPS) will be monitored to ensure protection. Where appropriate, management actions will be developed to help ensure their protection.	Gather data on population locations; determine effects from visitor use.	Specialist field data; documentation of observations on high priority species	Every 5-10 years, depending on species.
<b>Noxious weeds</b>	Prevent or minimize the introduction and establishment of weeds as a result of pack and saddle stock and erosion control projects.	Detect new occurrences	Specialist and wilderness ranger data; documentation of population locations.	On-going
<b>Key Benchmark Meadows Ecological State and Function</b>	Determine ecological status on all key areas monitored for grazing utilization prior to establishing utilization levels. Use regional ecological scorecards and range plant list in regional range handbooks to determine ecological status.	Measure ecological state and transition and hydrologic function on key meadows and riparian areas.	Nested frequency, photo points, greenline, and PFC.	10% annually
<b>Key Benchmark Meadows Forage Utilization</b>	See Table under Rec Stock Forage: Maximum Allowable Utilization Standards for Key Species on Key Areas by Ecological State	Measure utilization	Percent use by weight on key forage species	30% annually

<b>Variable</b>	<b>Management Direction</b>	<b>Monitoring Objective</b>	<b>Monitoring Technique</b>	<b>Frequency / Reporting Period</b>
<b>Range Readiness</b>	Use "range readiness" criteria as a primary technique to establish grazing start dates for the annual season of packstock use on key areas.	Forecast grazing start dates	Plant phenology Soil firmness	Annually
<b>Recreation Use Trend Recreation Use Trend</b>	Monitor total use levels. If total use in any area increases by 50% or more, assess impacts associated with the use and make determinations if further management actions are needed to maintain desired characteristics.	Use levels and trends over time	Wilderness Permits	Annually
<b>Commercial use trends</b>	Review and adjust commercial allocations every five years.		Special use permittee tally sheets	Annually
<b>Day Use</b>	Consider evaluation of day use levels when changes of more than 20% occur.	Day use levels and trends	Registration and trail counters	5 years
<b>Use patterns</b>	Consider allowing quotas to limit party size if use patterns change in low use areas due to accommodation of party size.	Detect areas of crowding and congestion and trends over time	Post trip reporting	5 years
<b>Water Quality</b>	Meet or exceed State Water Quality Standards.	Compliance with Best Management Practices and evaluation of BMP effectiveness	Use regional protocols for BMP Evaluation Program	% of sites annually
<b>Soil Quality</b>	Take actions to limit soil displacement and erosion that results from human activity and authorized uses to a rate similar to natural erosion.	Compliance with R5 soil quality standards and guidelines	Compliance as proxied by Campsite condition protocol	% of sites annually



Thousand Island Lake, Ansel Adams Wilderness  
 Photo by Daniel Perrot

## **Informing Decisions**

Provide assessments for project level NEPA. Use status and trends information from indicators above.

Assess if adverse impacts are occurring to wilderness character variables for categorically excluding the extraordinary circumstance of wilderness. Mitigate all actions that may affect wilderness values.

Where possible, display and demonstrate monitoring information that is pertinent to decision making.

Insure that proposed actions demonstrate no harm to the wilderness character and other ecological and social values of wilderness.

## **Evaluation**

Annually, assess effectiveness of management activities, including monitoring accomplishments.

Every five years assess the effectiveness of trailhead quotas.

Appraise key indicators, determine costs and measure against benefits.

Evaluate administrative actions using minimum tool and minimum requirement assessments.

## **Communication**

Summarize results of monitoring and effectiveness annually.

For the next five years, provide at least one public forum a year to present findings and results from the wilderness program, including data from monitoring and management activities and state of the effectiveness assessment. After five years, determine if this vehicle for informing the public brings value to the wilderness program.



## Appendix A – Trailhead Quotas

**Table A.1.** Inyo NF Trailheads

Wilderness	Trailhead	Type of Quota	Non-Commercial Quota	Commercial Quota
JM	Baker/Green	Single, Case by Case	8	
JM	Baxter Pass	Single, Case by Case	8	
AA	Beck Lake	Single	15	
JM	Big Pine – North Fork	Non-Commercial; Packer& O/G	25	15 - 8
JM	Big Pine – South Fork	Single	12	
JM	Birch Lake	Single, Case by Case	8	
JM	Bishop Pass	Non-Commercial; Commercial	36	15
AA	Bloody Canyon	Single, Case by Case	8	
JM	Convict Lake	Single, Case by Case	10	
JM	Cottonwood Lakes	Non-Commercial; Commercial	60	15
AA	Deer Lake	Single	10	
JM	Duck Lake	Non-Commercial; Commercial	30	15
AA	Fern Lake	Single	10	
AA	Fern/Yost	Single	8	
AA	Fish Creek	Non-Commercial; Commercial	15	15
JM	Gable Lakes	Single, Case by Case	8	
JM	George Lake	Single	10	
JM	George Creek/Mt Williamson	Single, Case by Case	8	
AA	Gibbs	Single	8	
AA	Glacier Canyon	Single	8	
JM	Golden Trout Lakes	Single, Case by Case	10	
AA	High Trail (PCT)	Non-Commercial; Commercial	20	15
JM	Hilton Lakes/Creek	Non-Commercial; Commercial	15	15
JM	Horton Lakes	Single	10	
AA	John Muir Trail, North	Non-Commercial; Commercial	10	10
JM	Kearsarge Pass	Non-Commercial; Commercial	60	15

Wilderness	Trailhead	Type of Quota	Non-Commercial Quota	Commercial Quota
JM	Lamarck Lakes	Non-Commercial; Commercial	10	8
JM	Laurel Lakes	Single	8	
JM	Little Lakes	Non-Commercial; Commercial	25	10
JM	McGee Creek	Non-Commercial; Commercial	15	15
JM	Meysan Lake	Single	10	
AA	Minaret Lake	Non-Commercial; Commercial	10	10
JM	Mono Pass	Non-Commercial; Commercial	20	15
JM	Mt Whitney Day Hike	Single, Case by Case	100	
JM	Mt Whitney Overnight	Single, Case by Case	60	
JM	North Fork Lone Pine Creek	Non-Commercial; Commercial	10	5
AA	Parker Creek	Single	10	
JM	Pine Creek	Non-Commercial; Commercial	15	15
JM	Piute Pass	Non-Commercial; Commercial	30	15
AA	Red Cones	Single	15	
JM	Red Lake	Single, Case by Case	8	
AA	River Trail	Non-Commercial; Commercial	30	8
AA	Rush Creek	Non-Commercial; Commercial	30	15
JM	Sabrina Lake	Non-Commercial; Commercial	25	15
JM	Sawmill Pass	Single	10	
AA	Shadow Lake	Non-Commercial; Commercial	30	15
JM	Shepherd Pass	Single	15	
JM	Taboose Pass	Single	10	
JM	Tamarack Lakes	Non-Commercial; Commercial	10	8
JM	Treasure Lakes	Non-Commercial; Commercial	10	8
JM	Tuttle Creek	Single, Case by Case	8	
JM	Tyee	Single, Case by Case	10	
JM	Valentine Lake	Single, Case by Case	8	

**Table A.2.** Sierra NF Trailheads

<b>Wilderness</b>	<b>Trailhead</b>	<b>Type of Quota</b>	<b>Non-Commercial Quota</b>	<b>Commercial Quota</b>
<b>JM</b>	<b>Bear Creek</b>	<b>Single</b>	<b>10</b>	
<b>JM</b>	Bear Ridge	Single	10	
<b>AA</b>	Chiquito / Quartz	Single	35	
<b>DL</b>	Cliff Lake	Single	20	
<b>JM</b>	Crown / Rancheria	Single	10	
<b>JM</b>	Devils / Graveyard	Non-Commercial; Commercial	20	10
<b>AA</b>	Fernandez	Non-Commercial; Packer& O/G	21	8 – 12
<b>JM</b>	Florence	Non-Commercial; Commercial	35	15
<b>AA</b>	Isberg.	Non-Commercial; Packer& O/G	22	8 - 8
<b>AA</b>	Jackass / Norris	Non-Commercial; Commercial	10	8
<b>AA</b>	Mammoth	Single	25	
<b>JM</b>	Maxon	Non-Commercial; Packer& O/G	25	8 - 5
<b>AA</b>	Miller / Cassidy	Single	10	
<b>JM</b>	Mono	Single	30	
<b>JM</b>	Onion Springs	Single	10	
<b>AA</b>	Walton	Non-Commercial; Commercial	9	8
<b>AA</b>	Squaw Dome	Single	10	
<b>AA</b>	South Fork	Single	10	
<b>AA</b>	Hells Half Acre	Single	10	
<b>AA</b>	Logan Meadow	Single	10	
<b>DL</b>	Willow Meadow	Single, Case by Case	30	
<b>DL</b>	Badger Flat	Single	10	
<b>JM</b>	Woodchuck	Single	20	

