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Eldorado National
Forest and
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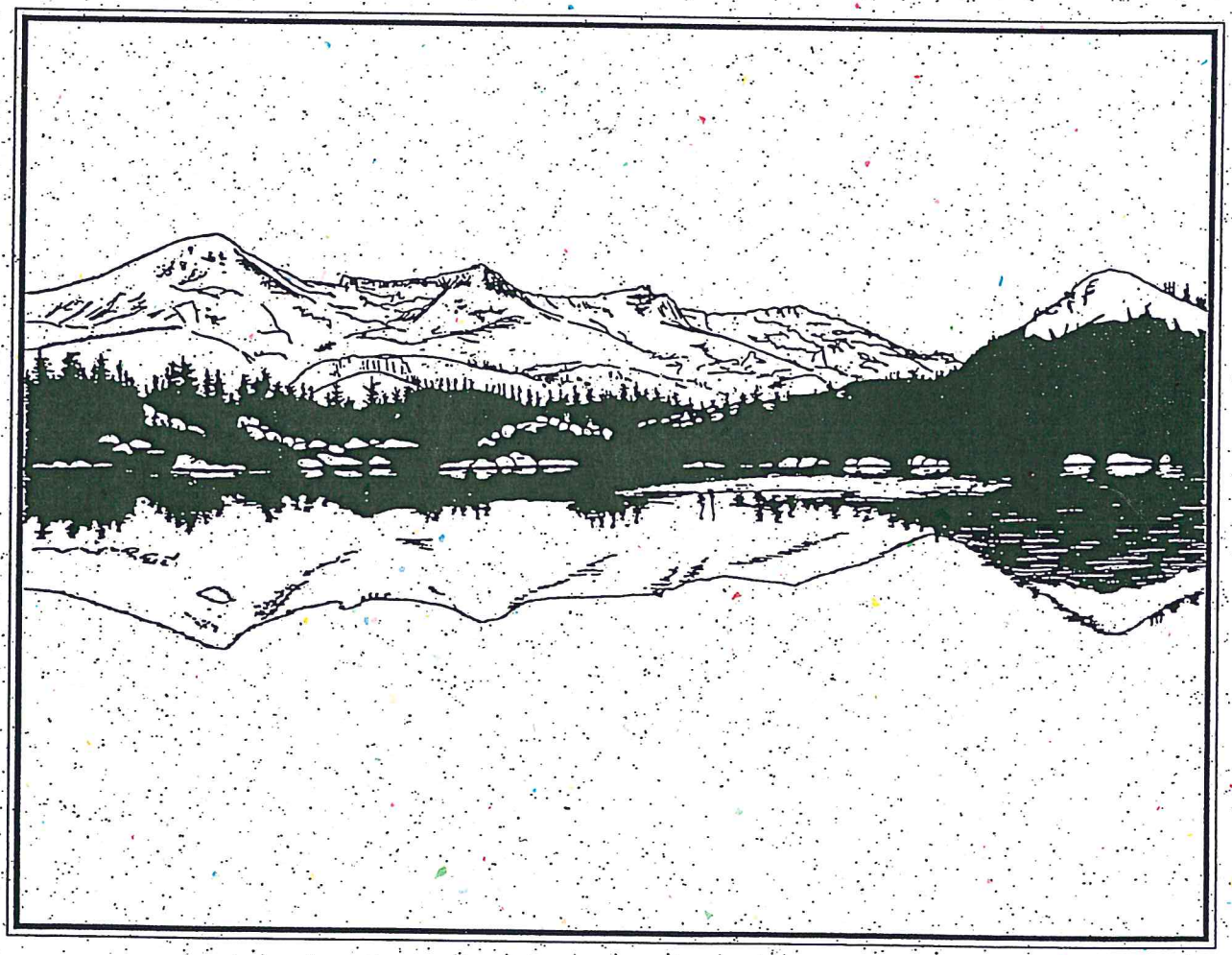
Management Unit

November, 1998

Desolation Wilderness Management Guidelines

Land Management Plan Amendment



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Land Management Plan Amendment

November, 1998

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FOREST PLAN CONSISTENCY

This decision will amend the Land and Resource Management Plans on both the Eldorado National Forest and the Lake Tahoe Basin Management Unit to provide more specific, updated and consistent direction for management of the Desolation Wilderness. It supersedes the 1978 Desolation Wilderness Management Plan.

On the Eldorado National Forest, the Goals, Desired Future Conditions - Opportunity Classes, and Opportunity Class Allocations including the Management Zone and Opportunity Class Map contained in the Desolation Wilderness Guidelines Land Management Plan Amendment replaces the following sections of the Eldorado National Forest Land and Resource Management Plan as they apply to the Desolation Wilderness: Wilderness Goals (Chapter 4, section B) and Desired Future Conditions (Chapter 4, section C). The new Standards and Guidelines in the Land Management Plan Amendment replace those contained in the Eldorado National Forest LRMP as they apply to the Desolation Wilderness (pages 4-122 through 4-129). The requirements in the Land Management Plan Amendment Monitoring Schedule replace those listed the Land and Resource Management Plan for B - Wilderness for the Desolation Wilderness (page 5-8).

On the Lake Tahoe Basin Management Unit, the Goals, Desired Future Conditions- Opportunity Classes, and Opportunity Class Allocations including the Management Zone and Opportunity Class Map contained in the Desolation Wilderness Guidelines Land Management Plan Amendment replaces the Wilderness Goal and Predicted Condition (page IV-11) section of the Lake Tahoe Basin Land and Resource Management Plan as it applies to the Desolation Wilderness. The new Standards and Guidelines in the Desolation Wilderness Guidelines Land Management Plan Amendment replace language specific to the Desolation Wilderness in the following sections of Lake Tahoe Basin Management Unit LRMP: Management Practices and Forest Wide Standards and Guidelines (page IV-25); and Management Area Direction for the Desolation Wilderness: V. Management Area Standards and Guidelines, VI. Proposed Resolution of Issues and Concerns, and VII. Specific Monitoring and Evaluation Requirements (pages IV-63- V-65). The requirements in the Desolation Wilderness Guidelines Land Management Plan Amendment Monitoring Schedule are added to Chapter V. Monitoring and Evaluation.

MANAGEMENT EMPHASIS

The Desolation Wilderness will be managed according to the Wilderness Act of 1964 to ensure an enduring resource of wilderness for present and future generations. The wilderness character of the Desolation and its specific values of solitude, physical and mental challenge, scientific study, inspiration and primitive recreation will be protected and, where necessary, restored. The wilderness will be managed for public use and enjoyment as wilderness, consistent with primitive conditions and wilderness character, in such a manner that leaves the area unimpaired for future use and enjoyment as wilderness. Natural ecological conditions will be preserved. The area will be managed under a concept of non-degradation, to prevent further loss of naturalness or solitude, and to restore substandard settings and conditions.

Management will recognize and maintain the unique scenic qualities and primitive conditions within the Desolation. Management will minimize impacts to (and as needed, restore conditions in) high use areas, such as the Eagle Lake Special Management Area and Opportunity Class 4 areas. As feasible, management actions will be taken to develop and enhance primitive backcountry recreation opportunities outside the wilderness to help reduce recreation pressure and impacts within the wilderness, and to meet the needs of non-wilderness dependent recreational use.

Management will be consistent with the Wilderness Act of 1964, direction provided in 36 CFR 261 and 293, the Forest Service Manual 2320, and the Wilderness Management Handbook (FSH 2309.19).

AREA DESCRIPTION AND CURRENT MANAGEMENT SITUATION

The 63,960 acre[1] Desolation Wilderness is located immediately west of Lake Tahoe along the crest of the Sierra Nevada. The wilderness is located entirely within El Dorado County and is bordered by US. Highway 50 on the south and Highway 89 on the east. The glaciated peaks and numerous glaciated lake basins provide a variety of outstanding scenery and highly attractive mountain landscapes. There are many small streams and about 130 lakes, with some lakes as large as 900 acres in size. The wilderness includes the headwaters of the Rubicon River and the South Fork of the American River, and numerous shorter drainages that flow into Lake Tahoe. Some portions of the Wilderness provide summer range for deer and bear, while many smaller animals live in the Wilderness year round.

Included within the Wilderness boundary are two Federal Regulatory Energy Commission (FERC) licensed dams. The Desolation also contains the following structures: 22 small streamflow maintenance dams, a snow pillow (water content measuring device) at Lake Lois, snow survey courses at Echo Peak and Lake Lucille, one cabin (China Flat), and several allotment fences. There are no valid mining claims or private inholdings in the wilderness.

Hiking, camping, viewing nature, fishing, horseback riding, and cross country skiing are all popular activities within the Desolation. The scenery, the area's many lakes, and the easy accessibility from major urban areas attract thousands of people to the Desolation annually, making this wilderness one of the most heavily used wilderness areas of its size. In 1996

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1 Acreage is the same as in 1978; however, the additional 500 acres shown are due to computerized mapping of the wilderness boundaries.

recreation use was estimated to be 311,000 Recreational Visitor Days (RVDs), based on wilderness permit issuance. An RVD equates to 12 hours of visitor use.

Both day and overnight use within the Desolation is concentrated at the lake basins closest to the perimeter of the wilderness. The high use in these areas presents a challenge for management as wilderness. Those areas serviced by the Eagle Falls, Twin Bridges, and Echo Lakes trailheads have particularly high levels of day use, with hundreds of visitors per day using the areas on peak season weekends.

Watersheds within the Wilderness which drain into Lake Tahoe are administered by the Lake Tahoe Basin Management Unit (LTBMU). The remaining portion of the wilderness, approximately two-thirds of the acreage, is administered by the Eldorado National Forest. The Eldorado portion of the Wilderness lies mainly within the Pacific Ranger District. A small portion lies within the Placerville Ranger District boundary. The acreage within the Desolation is divided between the administrative units as follows:

- Eldorado NF, Pacific Ranger District 39,007
- Eldorado NF, Placerville Ranger District 2,951
- Lake Tahoe Basin Management Unit 21,998

Rapidly growing populations of the foothill communities and regional urban areas are anticipated to cause increased demand for recreational opportunities on the National Forest units that administer the Desolation Wilderness. Dispersed recreation use (including wilderness) on the Eldorado NF is expected to increase from an estimated 2 million RVDs in 1994, to 2.5 million RVDs in the year 2000, and 2.75 million RVDs in the year 2010. Based on the projected trend for the forest, demand for use of the Desolation is expected to increase in the future.

GOALS

Wilderness Management Goals

To provide for the long term protection and preservation of the area's wilderness character under a principle of nondegradation. Ecosystems will be unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces. The area's natural condition, opportunities for solitude, opportunities for primitive and unconfined types of recreation, and any ecological, geological, or other features of scientific, educational, scenic, or historical value present will be managed so that they will remain unimpaired.

To manage the wilderness area for the use and enjoyment of visitors in a manner that will leave the area unimpaired for future use and enjoyment as wilderness.

The wilderness resource will be dominant in all management decisions where a choice must be made between preservation of wilderness character and visitor use. Other resources in wilderness will be managed in a manner compatible with wilderness resource management objectives. Where necessary, restore those values dependent on a wilderness setting.

To manage the area using the minimum tool, equipment, or structure necessary to successfully and safely accomplish the objective. The chosen tool, equipment, or structure should be the one that least degrades wilderness values temporarily or permanently. Economy, convenience, commercial value, and comfort are not standards of management or use. Direct controls and restrictions will be applied only as essential for the protection of the wilderness resource.

To manage nonconforming uses permitted by the Wilderness Act and subsequent laws in a manner that will prevent unnecessary or undue degradation of the area's wilderness character. Nonconforming uses are the exception rather than the rule; therefore, emphasis is placed on maintaining wilderness character.

To manage the wilderness as a total unit and to coordinate management direction across administrative boundaries. Interdisciplinary skills will be used in planning for wilderness use and administration. Because wilderness does not exist in a vacuum, activities on both sides of the wilderness boundary will be considered during planning.

Specific Wilderness Resource Management Goals

Air Resources

To prevent significant adverse effects of air pollutants and atmospheric deposition on wilderness resources, including visibility.

To cooperate with local, state and federal air regulatory agencies to protect wilderness resources from adverse air pollution effects.

Facilities (Trails, Trailheads and Signing)

To minimize the establishment of impromptu footpaths created by excessive use of certain cross-country routes.

To maintain a designated system of trails as needed to protect resources.

To provide adequate portal facilities for planned levels and types of users consistent with wilderness objectives.

To limit provision of regulatory and informational signs to trailheads and locations where their placement is absolutely necessary to protect specific wilderness resource values.

Fire Management

To allow lightning caused fire to play, as nearly as possible, its natural ecological role in the wilderness ecosystem.

Fish and Wildlife

To provide an environment where the forces of natural selection and survival rather than human actions determine distribution, number and interactions of indigenous wildlife species.

To limit habitat alteration resulting from human activity and authorized uses to a rate commensurate with the resource descriptors for each Opportunity Class.

To provide protection for known populations and aid recovery in areas of previous habitation, of federally listed threatened or endangered species and their habitats, so long as the action is for correcting an undesirable condition resulting from human activity or authorized uses.

Heritage Resources

To identify, preserve, and protect significant cultural resource sites pursuant to Federal laws and in a manner consistent with protection of the wilderness resource.

Range

To manage wilderness range in a manner that utilizes the forage resource in accordance with established wilderness objectives.

Recreation, Information and Education, and Emergency Services

To provide outstanding opportunities for visitors to experience solitude and to participate in primitive and unconfined types of recreation activities that are consistent with preservation of wilderness character and that depend upon a wilderness setting.

To maintain physical separation between camping areas appropriate for the social objectives for each area.

To increase awareness and understanding of wilderness values, wilderness management principles, and management situations and issues specific to the Desolation Wilderness.

To make information about the wilderness available to the public on request, but without advertising or promoting use of the Desolation.

To encourage visitor compliance with established use regulations and recommended ethics thrcugh the provision of positively worded information about the unique resource and "Leave No Trace" visitation ethics.

To divert use not dependent on wilderness to alternative areas.

To provide emergency visitor assistance, including the administration of first aid and initiation of search and rescue operations, whenever visitor safety or life-threatening situations warrant remedial action

Soils

To limit soil displacement and erosion resulting from human activity and authorized uses to a rate similar to that which occurs naturally.

To prevent soil compaction resulting from human activity and authorized uses from progressing to a point where natural plant establishment is precluded (trailheads, trail treads, and desired traditionally used camp areas excepted).

Special Use Management

To authorize only those activities and uses which are wilderness dependent and are not expected to diminish the wilderness character of the area of the experience expectation of visitors.

To permit visitation and use for purposes other than recreation, including monitoring, research and scientific study, so long as planned activities are compatible with other Wilderness management objectives and leave the area unimpaired for future use and enjoyment as wilderness.

Vegetation, Sensitive Plants, Noxious Weeds, Forest Pests

To limit the interruption of natural plant succession processes resulting from human activity and authorized uses to a rate which is consistent with the Opportunity Class Description for each area.

To prevent the loss of trees and excessive loss of ground cover at traditionally used camp areas and other heavily used locations.

To prevent the introduction or spread of noxious weeds.

To allow indigenous insects, forest diseases and plants to play, as nearly as possible, their natural ecological role in the wilderness ecosystem.

Watershed/Water Quality

To maintain riparian habitats of streams, springs, ponds and wetlands in their natural state.

To manage human activity and authorized uses so that the integrity of surface water resources is maintained.

DESIRED FUTURE CONDITIONS - OPPORTUNITY CLASSES

Opportunity Classes describe the range of desired conditions to be maintained or restored in the wilderness area. Opportunity Class designations are similar to the Recreational Opportunity Spectrum (ROS) used in the National Forest System. Within the ROS system, only two classes, Primitive and Semi-primitive Non-motorized, apply to wilderness areas. Opportunity Classes allow managers to develop a range of desired conditions that are specific and acceptable within wilderness. Appropriate management activities can then be determined. Four Opportunity Classes, I, II, III, and IV, and one special management area (Eagle Lake Special Management Area) have been developed for the Desolation Wilderness.

Of the four Opportunity Classes, Opportunity Class I is the most pristine, while Class IV is the least pristine and would be typically found in portal areas of the wilderness. The Eagle Lake Special Management Area (ELSMA) will be managed to provide introductory wilderness access to Lake Tahoe area visitors, while taking active measures to protect biophysical resources. In choosing these classes, both the existing range of conditions and achievable desired future conditions were considered. These narrative descriptions represent the desired future conditions for specific portions of the Desolation Wilderness. The conditions described in the Opportunity Classes primarily relate to the recreation experience and recreation impacts. Some resources and uses within the Desolation are not effectively described and differentiated by Opportunity Classes. For these resources, such as Air and Watershed Condition/Water Quality, the desired conditions are incorporated in the General Direction for the specific resource area in the Management Area Direction, Standards and Guidelines section of this Land Management Plan Amendment.

These descriptions and their associated indicator standards are applied to zones as shown under Opportunity Class Allocations.

OPPORTUNITY CLASSES:

CLASS I

SOCIAL

The area in this Opportunity Class provides outstanding opportunities for isolation and solitude free from evidence of human activities. Encounters with other users are very infrequent. The visitor has outstanding opportunities to travel cross-country utilizing a maximum degree of outdoor skills. This environment offers a very high degree of challenge, self-reliance, and risk. Inter-party contacts are very few while traveling and rare to none at the campsite.

RESOURCE

The area is characterized by an unmodified natural environment. Ecological and natural processes are not measurably affected by the actions of users. Environmental impacts are minimal, restricted to temporary loss of vegetation where camping. These areas typically recover on an annual basis, and are subtle in nature and not apparent to most visitors.

Range: Ecological Conditions meets highest site potential. There is no degradation of physical or cultural resources.

Wildlife: Wildlife behavior and habitat use patterns show no noticeable alteration. Habitat diversity is maintained entirely through natural forces, such as fire, insects, and forest disease, etc. (as opposed to unnatural methods, such as use of pesticides, thinning of timber stands, etc.).

Water Quality: Water quality shows no measurable degradation as measured by standard tests.

Campsites: Minor temporary impacts from campsites may be evident, however permanent impacts such as bare soil or loss of vegetation would be few to non-existent. No fire rings are present.

Riparian areas: Riparian, lake shore and stream channel conditions show no measurable degradation due to human uses.

Vegetation/Soil Condition: There is no noticeable vegetation loss, noxious weeds, or alteration of the duff and litter layer on campsites and livestock areas. Very few campsites exist. There is no evidence of recreational stock use, such as: dishing, root exposure, scars and broken branches, or damage to vegetation and soils from trampling.

Trails: There are few or no constructed trails. Existing user-created trails are minimal; the formation of new user-created trails is not permitted. No special accommodations are made for pack stock. The Pacific Crest Trail will be maintained to National Scenic Trail standards.

MANAGERIAL

Management strongly emphasizes sustaining and enhancing the natural ecosystem. Signs may be present for resource protection only. New trails will not be constructed; others may be abandoned. Trail maintenance levels retain a primitive condition requiring a high degree of skill and challenge to travel. Trails are maintained only for resource protection and protection of the trail investment. No administrative structures, or user facilities are provided or permitted.

Direct on-site management of visitors seldom occurs. Necessary rules and regulations are communicated to visitors outside the area, usually at trailheads, Visitor Information Centers, or Ranger Stations. Formal and informal user education programs inform users about what to expect and how to use the area for optimum benefits to all; these programs are conducted outside the wilderness. Visitor contact by Wilderness Rangers is primarily to check wilderness permits and in reaction to unacceptable impacts. Patrols and monitoring of conditions by appropriate State and Federal agency personnel is conducted only as necessary to achieve management objectives. All scientific and ecological monitoring actions meet social setting criteria. Formal rules and regulations, and permit quotas are necessary to achieve management objectives.

CLASS II

SOCIAL

A high probability exists for experiencing isolation from the sights and sounds of human activities. Encounters with other users are low. The user has good opportunities for experiencing independence, closeness to nature, tranquillity, and self-reliance through the application of primitive recreation skills. These opportunities occur in an environment that offers a high degree of challenge and risk. Inter party contacts are low on the trail and at campsites.

RESOURCE

The area is characterized by an essentially unmodified natural environment. 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 most travel routes. Most impacts recover on an annual basis and are apparent to a low number of visitors.

Range: Ecological Conditions meets highest site potential. There is no degradation of physical or cultural resources.

Wildlife: No displacement of wildlife occurs during critical periods (nesting, birthing, fawning) and only temporary displacement occurs during non-critical periods. Habitat diversity is maintained entirely through natural forces, such as fire, insects, and forest disease.

Water Quality: There is no cumulative degradation of water quality as measured by standard tests.

Riparian Areas: Riparian, lake shore and stream channel conditions show temporary changes at very localized sites which could be expected to recover annually.

Campsites: There is a low concentration of campsites, most having a small barren core allowed for 1 or 2 tent pads. Core areas are expected to persist from year to year.

Vegetation/Soil Condition: Localized, site-specific soil compaction, loss of duff and litter, and erosion are minimal on campsites, social trails and livestock areas. No noxious weeds are present. Evidence of recreational stock use is not apparent to the casual user. Impacts do not generally persist more than one year. Recreational pack stock impacts occur on no more than 5% of total campsites.

Trails: There are few constructed trails. Existing user-created trails are limited; the formation of new user-created trails is not permitted. No special accommodations are made for pack stock.

MANAGERIAL

Management emphasizes sustaining and enhancing the natural ecosystem. Signing is minimal: it is provided only for resource protection and direction at major trail intersections. Trails are typically reconstructed, maintained and managed to accommodate light and infrequent travel. Trail routes provide the user with an opportunity for testing skills and experiencing a sensation of physical exertion and a feeling of accomplishment. Trails are maintained only for resource protection, protection of the trail investment, and minimal user safety. New trails will not be constructed; others may be abandoned. No administrative structures, or user facilities are provided or permitted.

Direct on-site management involves minimum visitor contact. Necessary rules and regulations are communicated to visitors outside the area, such as at trailheads, Visitor Information Centers, or Ranger Stations. Visitor contact by Wilderness Rangers is primarily to check wilderness permits, and in reaction to unacceptable impacts. Formal and informal user education programs inform users about what to expect and how to use the area for optimum benefit to all; these programs occur outside the wilderness area. Formal rules, regulations, and permit quotas are necessary to achieve management objectives.

CLASS III

SOCIAL

Moderate opportunities for exploring and experiencing isolation from the sights and sounds of human activities are found in this area. The probability of encountering other users is moderately frequent, both along trails and at the campsite. The visitor has moderate opportunities for experiencing independence, closeness to nature, and tranquillity through the application of primitive recreation skills. These opportunities occur in an environment that normally offers a moderate degree of challenge and risk.

RESOURCE

The area is characterized by an essentially unmodified natural environment. In a few areas, ecological and natural processes are moderately affected by the actions of users. Environmental impacts are moderate, with most areas along travel routes and near campsites showing vegetation loss. Impacts in some areas often persist from year to year and are apparent to a moderate number of visitors.

Range: Ecological Conditions meets highest site potential. There is no degradation of physical or cultural resources.

Wildlife: No species listed as threatened, endangered, or sensitive are displaced during critical breeding periods. Non-listed wildlife experience temporary displacement. Habitat diversity is maintained entirely through natural forces (fire, insects, disease, etc.).

Water Quality: Temporary changes in water quality may occur, but there is no cumulative degradation over a 3 year period, as measured by standardized tests.

Riparian Areas: Riparian, lake shore and stream channel conditions show temporary changes which could be expected to persist from year to year at some sites. The measurable effects of changes would be expected to persist from 1 to 5 years.

Campsites: Most sites have a barren area around the campsite center and tent pads. This unvegetated area persists from year to year. There is a moderate concentration of campsites, with the total number of sites high enough to accommodate peak use in order to prevent the creation of new sites. Some campsites are within sight and/or sound of each other.

Vegetation/Soil Condition: There is moderate soil compaction and minimal erosion on some campsites, social trails, and areas used by recreational livestock. No noxious weeds are present. Evidence of recreational livestock use is expected to persist from year to year, and occurs on no more than 5% of the total number of campsites.

Trails: The system trail network is moderately developed. Social trails are visible around popular lakes destinations; however, the formation of new user-created trails is not permitted.

MANAGERIAL

Management emphasizes maintaining and enhancing the natural ecosystem. Trails are typically reconstructed, maintained, and managed to accommodate moderate use for the majority of the use season. Trails modify natural conditions only to the extent necessary to protect the resource, protect the trail investment, and to provide for moderately safe use by visitors with average physical ability. Trail routes provide the user with an opportunity for testing skills and experiencing a sensation of physical exertion and a feeling of accomplishment. New trails will not be constructed. Signing is minimal: it is provided only for resource protection and minimal direction at major trail intersections. No administrative structures, or user facilities are provided or permitted.

On-site management involves moderate visitor contact. Contact is initiated by Forest Service personnel during routine duties. Necessary rules and regulations are communicated to visitors outside the area, such as at trailheads, Visitor Information Centers, and Ranger Stations. In addition to checking wilderness permits and addressing unacceptable impacts, field personnel may also provide information concerning protection of site-specific wilderness resources. Formal and informal user education programs inform visitors about what to expect and how to use the area for optimum benefit to all. These programs are conducted outside the wilderness area. Formal rules and regulations, and permit quotas are necessary to achieve management objectives.

CLASS IV

SOCIAL

Opportunities for exploring and experiencing isolation from the sights and sounds of human activities are moderate to low. The probability of encountering other users is moderate to high. The user has some opportunity for interaction with the natural environment, often with low to moderate challenge and risk. Contact with other users is relatively high much of the time, both on the trail and at campsites. Some parties may camp out of sight and sound of other parties, but this is not a common experience during the high use season.

RESOURCE

This area is characterized by a predominantly unmodified natural environment. Natural conditions in some areas may be substantially affected by the actions of users. Environmental impacts are relatively high, especially at entry points, along travel routes, and at campsites. Most impacts, such as vegetation loss and soil compaction, persist from year to year and are apparent to most visitors.

Range: Ecological Conditions meets highest site potential. There is no degradation of physical or cultural resources.

Wildlife: Threatened and endangered species are not displaced during critical breeding periods. Displacement of non-listed wildlife or alteration of behavior is expected to occur within 200 yards of trail systems and camping areas during the high-use season. Habitat diversity is maintained entirely through natural forces, such as fire, insects, and forest disease.

Water Quality: There are temporary changes in water quality, but degradation is not cumulative over 5 years, as measured by standard tests.

Riparian Areas: Riparian, lake shore and stream channel conditions show temporary changes which could be expected to persist from year to year at some sites. The measurable effects of changes would be expected to persist up to 10 years.

Campsites: Concentration of campsites is moderately high. The number of sites accommodates peak use in order to prevent the formation of new sites. Many sites are within sight and sound of others. A barren core exists on most sites and persists from year to year.

Vegetation/Soil Condition: Moderate soil compaction and loss of vegetation, litter and duff is expected on many visitor-created trails, camp areas, and areas used by livestock. No noxious weeds are present. Impacts from recreational stock users are apparent to most users and could be expected to persist from year to year on some sites. Minimal erosion occurs on the disturbed sites.

Trails: The system trails are well developed. There are numerous existing user-created trails; new user-created trails are not permitted.

MANAGERIAL

Management emphasizes sustaining and protecting natural ecosystems. Trails are typically reconstructed, maintained, and managed to accommodate heavy traffic for the majority of the use season. Trails are managed to modify natural conditions only to the extent necessary to protect the resource, protect the trail investment, and provide for reasonably safe use by a user with average physical ability. Trail routes provide the user with an opportunity for testing skills and experiencing a sensation of physical exertion and a feeling of accomplishment. New trails are not constructed. Signing is minimal. Signing is provided only for resource protection, and minimal directional signing is provided at major intersections. No administrative structures, or user facilities are provided or permitted.

On-site management involves frequent visitor contacts. Special efforts are taken by Forest Service personnel to contact visitors. Necessary rules and regulations will be communicated to visitors outside the area, such as at trailheads, Visitor Information Centers, and Ranger Stations. Information concerning protection of site-specific wilderness resources and regulations is presented by field personnel inside the area. Formal and informal user education programs inform visitors about what to expect and how to use the area for optimum benefit to all; these programs are conducted outside the wilderness area. Formal rules and regulations, and permit quotas may be necessary to achieve management objectives.

EAGLE LAKE SPECIAL MANAGEMENT AREA (ELSMA)

SOCIAL

The emphasis in this Opportunity Class is on providing an introduction to wilderness in an area that has high demand and easy access. Opportunities for exploring and experiencing isolation from the sights and sounds of human activities are low. The probability of encountering other users is high. The user has some opportunity for interaction with the natural environment, often with low to moderate challenge and risk. Contact with other users is high most of the time, both on the trail and at campsites. Some parties may camp out of sight and sound of other parties, but this is not a common experience during the high use season.

RESOURCE

This area is characterized by a predominantly unmodified natural environment. Natural conditions in some areas may be substantially affected by the actions of users. Environmental impacts are relatively high, especially at entry points, along travel routes, and at campsites. Most impacts, such as vegetation loss and soil compaction, persist from year to year and are apparent to most visitors.

Range: Ecological Conditions meets highest site potential. There is no degradation of physical or cultural resources.

Wildlife: Threatened and endangered species are not displaced during critical breeding periods. Displacement of non-listed wildlife or alteration of behavior is expected to occur within 200 yards of trail systems and camping areas during the high-use season. Habitat diversity is maintained entirely through natural forces, such as fire, insects, and forest disease.

Water Quality: There are temporary changes in water quality, but degradation is not cumulative over 5 years, as measured by standard tests.

Riparian Areas: Riparian, lake shore and stream channel conditions show temporary changes which could be expected to persist from year to year at some sites. The measurable effects of changes would be expected to persist up to 10 years.

Campsites: Camping will be in designated sites only, with the number of sites accommodating peak use in order to prevent the formation of new sites. Some sites are within sight and sound of others. A barren core exists on most sites and persists from year to year.

Vegetation/Soil Condition: Moderate soil compaction and loss of vegetation, forest litter and duff is expected in heavy use areas, especially around lake shores. Impacts from recreational use are apparent to most users and are expected to persist from year to year at most sites. Active steps may be taken to minimize erosion by establishing appropriate lake shore access, stabilizing areas along the lake shore that receive heavy day use, and restoring undesignated campsites. No noxious weeds are present.

Trails: The existing system trail is well developed and will be stabilized with native rock surface and rock steps to accommodate high use levels. Selected user created routes will be improved and added to the designated trail system. This will be considered where high use levels are contributing to accelerated erosion, loss of vegetation, and deterioration of water quality. Unwanted user created routes will be obliterated and the areas restored to natural condition.

MANAGERIAL

Management emphasizes sustaining and protecting natural ecosystems. Trails are typically reconstructed, maintained, and managed to accommodate very high traffic levels for the majority of the use season. Trails are managed to modify natural conditions only to the extent necessary to protect the resource, protect the trail investment, and provide for reasonably safe use by a user with average physical ability. Trail routes provide the user with an opportunity for testing skills and experiencing a sensation of physical exertion and a feeling of accomplishment. Signing is minimal. Signing is provided only for resource protection, and minimal directional signing is provided at major intersections. No administrative structures, or user facilities are provided or permitted.

On-site management involves consistent regular presence. There is a high emphasis on visitor contacts in this zone. Necessary rules and regulations are communicated to visitors outside the area, such as at trailheads, Visitor Information Centers, and Ranger Stations. Area regulations and information concerning protection of site-specific wilderness resources is also presented by field personnel inside the area. Formal and informal user education programs inform visitors about what to expect and how to use the area for optimum benefit to all. Opportunities for wilderness education will be highlighted, as will education about restoration activities. On-site education activities may occur. Formal rules and regulations, and permit quotas may be necessary to achieve management objectives.

OPPORTUNITY CLASS ALLOCATIONS

The Desolation was subdivided into forty-five zones. The new zone boundaries correspond generally to topographic features such as ridge lines and lake basins, and to different levels of use. One of four Opportunity Class descriptions is allocated to each of the identified zones except zone 18, Eagle Lake, which will be managed to meet high demands for access (See the table showing Management Zones - Desired Future Conditions and the Management Zones and Opportunity Classes map). The "indicators" that measure the desired social and resource conditions for each Opportunity Class constitute management objectives for each area. While Opportunity Class descriptions provide qualitative information on the desired future conditions for each area, indicators provide the means by which to determine if those conditions are being met. Measurable limits, or "standards", are set for each indicator. These standards appear in the Direction, Standards and Guidelines for the Desolation Wilderness. The range of actions which may be implemented if a standard is exceeded is included in Appendix A.

ACRES BY OPPORTUNITY CLASS

Opportunity Class 1 (most primitive)	= 37,107 acres
Opportunity Class 2	= 12,978 acres
Opportunity Class 3	= 9,763 acres
Opportunity Class 4 (least primitive)	= 3,983 acres
Eagle Lake Special Management Area	= 130 acres

Management Zones - Desired Future Conditions

Zone #	Management Zone	Acres	Opportunity Classes	
			Present Condition	Desired Condition
1.	Rockbound Lake	460.73	5	3
2.	General Creek (PCT)	8421.80	2	1
3.	Genevieve Lake	868.32	4	3
4.	Grouse Lakes	3696.19	2	1
5.	Brown Mountain	4251.89	2	1
6.	Rubicon Reservoir	891.49	3	2
7.	Stony Ridge	630.79	4	3
8.	Tells	4294.84	2	1
9.	Highland	530.56	2	2
10.	The Lelands	2220.98	2	2
11.	Camper Flat	1383.77	3	2
12.	Phipps	1146.34	2	2
13.	Lakes 3 + 5	237.22	3	2
14.	Schmidell	231.08	3	3
15.	Dicks Peak	3782.64	2	1
16.	Middle Velma	212.70	4	3
17.	Lower Velmas	2257.50	4	3
18.	Eagle Lake	130.01	5	ELSMA*
19	Lake Lawrence	306.48	3	3
20	Red Peak	2088.22	3	1
21.	Lois	292.69	3	3
22.	China Flat	1394.06	3	2
23.	Dicks	723.48	4	3
24.	Kalmia	2693.43	2	2
25.	Maude	396.45	4	3
26.	Rockbound Pass	208.97	3	3
27.	Mt. Price	7281.68	2	1
28.	Half Moon	683.46	4	2
29.	Gilmore	1879.51	4	4
30.	Cathedral	220.92	4	4
31.	Tyler	841.18	3	3
32.	Twin	551.73	4	4
33.	Aloha	1394.03	4	3
34.	Susie	421.20	4	3
35.	Grass	546.99	4	3
36.	Hemlock	251.42	5	4
37.	Smith	175.45	3	2
38.	Waca	320.58	3	2
39.	American	458.99	4	2
40.	Lake of the Woods	281.05	5	3
41.	Tamarack	449.58	5	4
42.	Triangle	1088.17	4	1
43.	Lyons	530.61	4	3
44.	Avalanche	629.47	5	4
45.	Ralston	2201.88	3	1

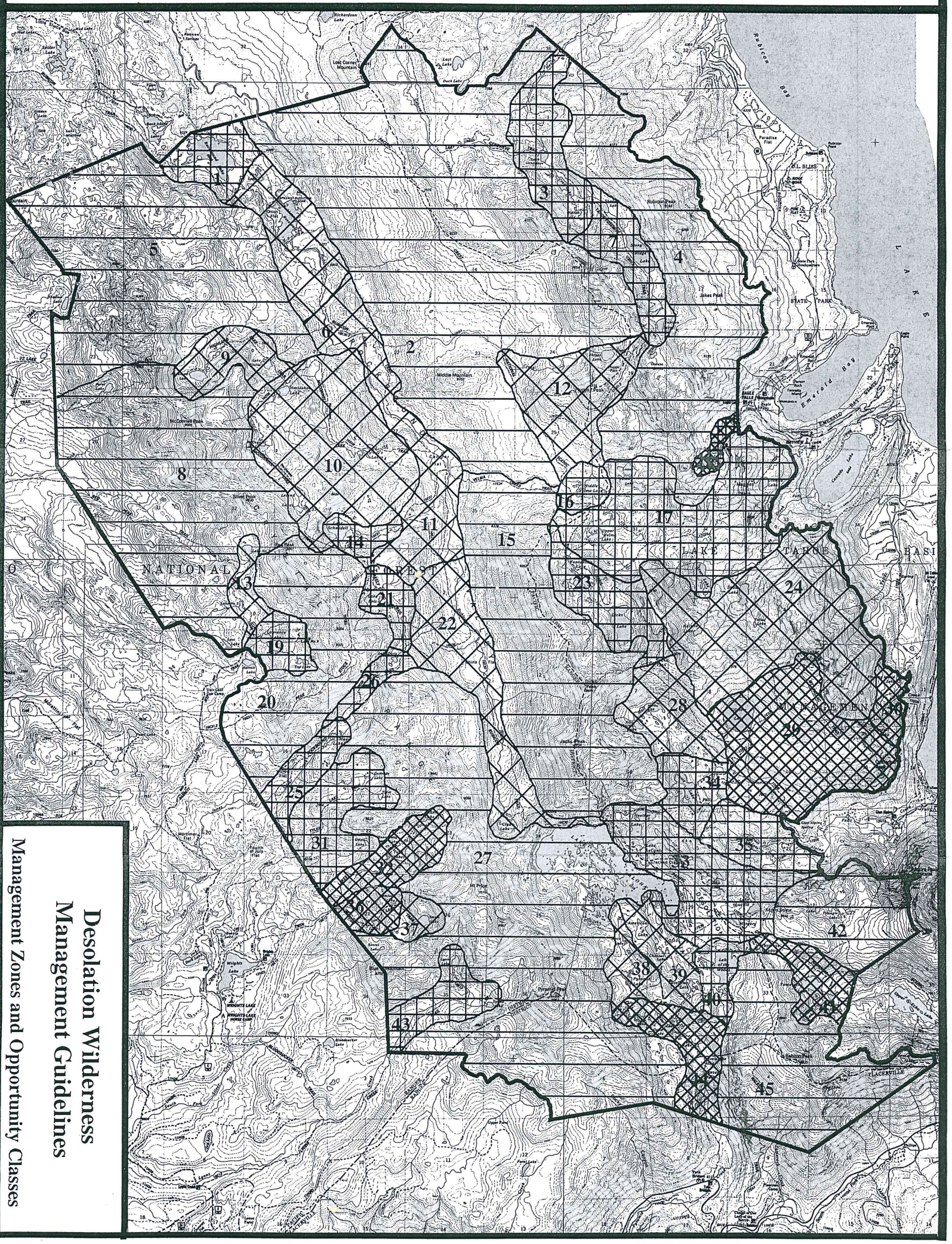
***ELSMA: Eagle Lake Special Management Area - See Opportunity Class Descriptions**

LEGEND - Management Zones in each Opportunity Class

Class 1 | Class 2 | Class 3 | Class 4

Eagle Lake Special Management Area

NORTH | Scale: 1:72,411 | 0 .5 1 Mile | 1998



Desolation Wilderness Management Guidelines

Management Zones and Opportunity Classes

RESOURCE AREA DIRECTION, STANDARDS AND GUIDELINES

The resource area direction, standards and guidelines for the Desolation Wilderness are formatted as follows:

RESOURCE AREA

Management Practice

Sub-heading under Management Practice

Specific Management Element

General Direction

Standards and Guidelines

- Specific standard or guideline

The standards and guidelines for some of the resource areas include Indicator Standards. Indicators are selected as a means to assess the desired conditions in each zone within the Desolation. Indicators are selected based on a number of criteria: 1) They must be quantifiable (they should be reliably and feasibly measured). 2) Indicators are reflective of more than one condition. For example, changes in campsite barren core areas would be a measure of more than loss of plant cover at campsites; they would also reflect changes in the number of social trails, changes in recreation damage to lake shores, and changes in levels of recreational use. 3) Indicators should be responsive to management conditions, and 4) they should be traceable to a causal agent. They may function as an early warning of long-term disturbance to ecosystem conditions. Indicators selected by the team have been used successfully in other wilderness areas.

The indicator standards are the thresholds for acceptable conditions in each Opportunity Class. They establish a basis for identifying needed management actions in areas where actual conditions are in conflict with those selected as the desired conditions. For the two social indicators, group encounters and campsites within sight or sound of each other, if a trend is observed as defined in the monitoring schedule that exceeds the indicator standards for a given area, then appropriate management actions will be taken. The Monitoring Schedule is included in this Land Management Plan Amendment. Management actions will be taken for other indicators whenever the standards are exceeded.

AIR RESOURCES

Air Quality Management

General Direction

Prevent significant adverse effects of air pollutants and atmospheric deposition on wilderness resources, including visibility, while allowing natural forces, such as fire, to assume their natural ecological role. Through cooperation with local, state, and federal air regulatory agencies, achieve the air quality goals established in the Clean Air Act, meet Federal and State air quality standards for a Class I airshed, and protect wilderness resources from adverse air pollution effects

Standards and Guidelines

- Evaluate proposed major emission sources which might adversely affect the Class I airshed, including sources not on Federal Land. The Forest Officer will make appropriate recommendations in the permitting process, following established Prevention of Significant Deterioration application review procedures.
- Cooperate with federal, state, and local air regulatory agencies by assessing air quality monitoring needs and developing or revising air quality standards and regulations as needed to protect wilderness resource values.
- Manage smoke from prescribed natural fires and management ignited prescribed fires occurring in or adjacent to the Desolation will be managed in a manner that causes the least impact to the natural range of wilderness air quality related values.
- To fulfill the intent of the Clean Air Act, adequate information regarding the condition of air quality related values in the Desolation Wilderness is needed. Monitor air quality as identified in the Desolation Wilderness Monitoring Schedule to ensure adequate information is available to fulfill the intent of the Clean Air Act.
- Identify and inventory AQRVs. Monitor the effects of air pollution on sensitive receptors to these AQRVs.
- Protect current conditions of air quality related values (AQRVs) within the Desolation Wilderness.

FACILITIES

Trails and Trailheads

Trail Construction and Reconstruction

General Direction

No new trails will be added to the trail system within the wilderness.

Target areas adjacent to, but outside wilderness for additional trails to relieve pressure on the wilderness. Locations to be targeted for additional use of existing trails or development of non-wilderness trails include the Two Peaks Trail and other established trails in the Van Vleck area; several loop trails in the Wrights Lake area, the Windmiller trail, and non-wilderness loop trails at Pyramid Canyon, the Echo Lakes area, Lily Lake, Bloodsucker Lake, and Eagle Falls.

Standards and Guidelines

- Re-route trails to avoid areas with sensitive biophysical or cultural resources. Trails will be relocated away from wet meadow and riparian areas as much as possible. Trails that cannot be relocated will be re-engineered when damage becomes visible.

Transportation Management - Trails

General Direction

The trail system will be managed to meet Opportunity Class objectives and maintained, as needed, to protect resources. A list of system trails is included in Appendix C.

Standards and Guidelines

- Manage trails to meet objectives for either hiker or equestrian/hiker use:

  Hiker(H)

  Reconstruct trail tread to an 18 inch standard.

  Use fords in preference to structures.

  Equestrian/hiker (E,H)

  Reconstruct trail tread to a 24 inch standard.

  The following trails and routes are not recommended for horses, mules and burros, based on safety considerations for stock: Eagle Falls trail (17E03), Twin Lakes trail (16E12.2), McConnell Lake trail (16E06), Tyler/Gertrude Lake trail (16E09), the Highland Lake (Highland Spur) trail (16E06.A), and the Highland trail (15E21.2).

- Construction materials used in trail re-construction and maintenance will harmonize with the natural environment. Such materials will be native materials if at all possible. Filter cloth may be used to correct drainage problems.
- Maintain the minimal tread needed for the designated trail experience level and types of use. Maximum trail tread will not exceed 24" in width.
- The **Pacific Crest Trail** will be maintained to National Scenic Trail Standards (Easiest) standards in all Opportunity Classes within the Desolation.
- Trail re-construction/re-routing and maintenance will follow guidelines in the Trails Management Handbook (Sec. 2.24, FSH 2309.18-WO Amendment, FSM 2323). Trail re-construction and maintenance will be performed to meet Opportunity Class objectives for each management area. Trails will be assigned one of three difficulty standards, Easiest, More Difficult, or Most Difficult. Difficulty is a function of both trail condition and route location factors such as steepness of grades, gain and loss of elevation, and amount and kind of natural trail barriers that must be crossed. Scheduled trail

STANDARDS

Opportunity Class	User Created Trails
1-4	Not to exceed the existing (baseline) number and location of user created trails in any area of concern.
ELSMA	All existing trails will be either designated and managed or eliminated. No new user created trails will be allowed to develop.

Trailheads

Standards and Guidelines

- Do not build new trailheads.
- Provide adequate portal facilities at existing trailheads for planned levels and types of users consistent with wilderness objectives.
- Maintain the current wilderness trailheads for planned levels and types of users. Modify or relocate if needed to protect resources or improve health and safety or accessibility.
- Do not increase net parking at Lyons Creek, Van Vleck trailhead, and Twin Bridges. Parking at other trailheads often accommodates both wilderness and non-wilderness uses; parking may increase at those trailheads.
- Improve trailhead access and signing at non-wilderness trailheads to encourage their use.

Signing

General Direction

Signing at trailheads will be sufficient to provide all important wilderness education, regulation, and restriction information. Provide minimal signing within the Desolation; directional signing at required trail junctions and for resource protection as needed. All signing within the wilderness will be of a durable wood species. Substantial portions of the western boundary of the Desolation have been surveyed and posted. As needed and feasible, wilderness boundary surveys and posting will be continued.

Wilderness Boundary Survey and Signing

Standards and Guidelines

- Prioritize remaining boundary survey and signing needs. Identify areas where motorized or mechanical vehicle trespass has been a problem. Coordinate with engineering staff on each forest to accomplish survey and signing. Replace boundary signing that has been destroyed as needed.

Trailhead Signing

General Direction

Trailhead signs may serve as the location of day use permit boxes.Standards and Guidelines

- Provide a trailhead sign at every Desolation Wilderness trailhead.
- Provide users with information on wilderness regulations, ethics, and the inherent risk involved in wilderness travel at each trailhead.

Wilderness Portal Signing

General Direction

Wilderness portal signs indicate entrance into the Wilderness along main travel routes.

Standards and Guidelines

- Construct Wilderness portal signs of natural oak according to national standards in FSH 7109.11 (5-46, 47).
- Locate portal signs at or near the wilderness boundary along main travel routes.

Interior Trail Junction Signing

General Direction

Trail junction signs provide destination direction at major trail system junctions within the Wilderness.

Standards and Guidelines

- Maintain signs that currently exist at interior trail junctions. Complete inventory of trail junction signs.
- Replace existing signs, as needed, with 6 inch by 6 inch wood posts. Letters will be routed on the posts and will not be painted. Signs will be directional only; they will not include mileage.

Other Facilities

There are two FERC regulated reservoirs (Lake Aloha and Rubicon Reservoir), one snow pillow (an electronic device for measuring water content of snow) at Lake Lois, two snow survey courses (Echo Peak and Lake Lucille), and 22 streamflow maintenance dams located within the Desolation. Streamflow maintenance dams on the LTBMU are managed by the Forest Service, while the streamflow maintenance dams on the Eldorado are managed by the California Department of Fish and Game under Special Use Permit. Special authorizations for maintenance of these facilities are covered in the direction for Special Uses, with the exception of streamflow maintenance dams. The maintenance of streamflow maintenance dams is covered under Fish and Wildlife.

Standards and Guidelines

- Manage facilities in a manner that prevents unnecessary or undue degradation of the Desolation's wilderness character.

FIRE

Fire Management

General Direction

Allow lightning fires to assume their natural ecological role in wilderness, while reducing to an acceptable level, the risks and consequences of wildfire within wilderness or escaping from wilderness (FSM 2324.2). All wildland fires that are not within management prescriptions will be suppressed in accordance with FSM 5130 and FSM 2320. Suppression activities will protect the integrity of the wilderness resource. Control methods will be compatible with wilderness management objectives.

In order to return fire to its natural role in the ecosystem, a Fire Management Action Plan will be developed to manage prescribed natural fire and management ignited fire within the wilderness. Consideration will be given to public safety in planning and implementation.

Standards and Guidelines

- Complete a Desolation Wilderness Fire Management Action Plan and Appropriate Management Strategy within one year that will guide wildland fire management actions intended to meet fire use objectives.

Wildland Fire Suppression

General Direction

Suppress all wildland fires that are not within management prescriptions using confine, contain or control strategies, in accordance with FSM 5130. Surveillance can be an appropriate suppression action when a wildfire is expected to be self-contained within a defined area. It is the responsibility of the assigned line officer, or designated incident commander to ensure that each wildland fire is out before it is abandoned.

Standards and Guidelines

- Appoint a resource advisor for all project wildland fires in the wilderness to ensure that suppression activities are compatible with wilderness management objectives.
- When possible, suppress unplanned ignitions that are not within prescriptions using confine, contain and control strategies.
- Develop and use minimum impact suppression tactics and guidelines (such as the MIST guidelines developed in Region 1 and the Light Hand Tactics developed in Region 6) for wilderness fires. Appropriate fire personnel will be trained in these fire management concepts and strategies.

Prescribed Fire Management

General Direction

The objectives for prescribed fire are to 1) Permit lightning fires to play, as nearly as possible, their natural ecological role within wilderness; 2) Reduce, to an acceptable level, the risks and consequences of wildfire within wilderness or escaping from wilderness; 3) Carry out prescribed fire within the natural range of acceptable air quality.

Permit planned ignitions only if necessary to achieve at least one of the first two objectives listed above. In addition, planned ignitions will be permitted only if the use of prescribed fire or other fuel treatment outside of wilderness is not sufficient to achieve fire management objectives within wilderness, and if lightning-caused fires can not be allowed to burn because they pose serious threats to life and/or property inside wilderness or to life, property, or natural resources outside of wilderness.

Two types of prescribed fires may be approved for use within wilderness: those ignited by lightning and allowed to burn under prescribed conditions (Prescribed Natural Fire Program-PNF) and those ignited by qualified Forest Service officers (management ignited prescribed burns). It is the responsibility of the line officer to ensure that both an approved Fire Management Action Plan and an approved burn plan are in place before implementing either type of wilderness prescribed fire.

Standards and Guidelines

- Complete a Fire Management Action Plan to implement LRMP direction for prescribed fire and PNF in Desolation. This plan will specify conditions and areas under which natural and/or planned ignitions will be allowed within the Desolation. Unplanned and planned ignitions will be considered in all areas of the Desolation as needed to meet the above objectives for wilderness prescribed fire.
- Identify the required skills, qualifications and organization to implement a PNF program in accordance with FSM 5143 and R5 Supplement 5100-92-4 (5140).
- Monitor in order to ensure that: wilderness management objectives are being met; that the fire is within the prescription established in the approved burn plan; and that the fire size is within the maximum fire size objective established by the Fire Management Action Plan. The monitoring crew will consist of a minimum of 2 persons.
- Immediately begin suppression action once an escaped prescribed fire has been declared an escape. Once escaped, the fire cannot be redesignated as a prescribed fire.
- Conduct annual joint planning and review by both Forests. Continuous interagency and intra-agency coordination of suppression strategies taken; implementation of a PNF program; and any management ignited prescribed fires will occur between the LTBMU, the ENF, and their combined dispatch center. The dispatch center will keep cooperating and affected agencies, and parties involved and informed from the onset, through the use of a Go-No-Go notification checklist. This checklist will be developed as an attachment to the Fire Management Action Plan.

FISH AND WILDLIFE

General Direction

The Forest Service goal within wilderness is to provide an environment where the forces of natural selection and survival, rather than human actions determine distribution, number and interactions of indigenous wildlife species. Habitat alteration resulting from human activity and authorized uses will be limited to a rate commensurate with the resource descriptors for each Opportunity Class.

Wilderness management will be designed to conserve the natural biodiversity of the wilderness at population, species, and community levels. To ensure viability, management will protect sensitive species at current population levels or better.

Standards and Guidelines

- Take action to correct undesirable habitat conditions that result from human activity or authorized uses.
- Re-locate campsites as needed to protect sensitive species.

Fish and Wildlife Habitat Coordination

General Direction

The management of fish and wildlife within the Desolation Wilderness is guided by two agreements. The first agreement, "Policies and Guidelines for Fish and Wildlife Management in National Forest and Bureau of Land Management Wilderness" (FSH 2309.19 was developed by the International Association of Fish and Wildlife Agencies (IAFWA), in cooperation with the Forest Service and the Bureau of Land Management. The second agreement is a Memorandum of Understanding (MOU) between Region 5 of the Forest Service and the California Department of Fish and Game (CDFG) (USDA FSM R-5 Supplement 2610-96-1). To meet this direction, agreements on fisheries management within the Desolation will be reached jointly by the Eldorado National Forest, the Lake Tahoe Basin Management Unit, and CDFG, Region 2.

Standards and Guidelines

- Complete development of a Memorandum of Understanding between the Eldorado National Forest, the Lake Tahoe Basin Management Unit, and CDFG, Region 2. The MOU will provide specific decisions on fish stocking and fisheries management within the Desolation Wilderness.

Fisheries Habitat Improvement - Non-structural

General Direction

Natural forces will be allowed to determine species survival and distribution. On waters previously stocked, fish-stocking is permitted in order to maintain an indigenous species adversely affected by human influences (species of fish traditionally stocked before wilderness designation may be considered indigenous if the species is likely to survive), or to aid in the recovery of an indigenous threatened or endangered species.

Standards and Guidelines

- Initiate fisheries habitat improvement activities only to restore habitat altered due to human activities.

Fisheries Habitat Improvements - Structural

General Direction

Existing streamflow maintenance dams will be managed according to FSM 2323.35b and the MOU for fisheries management being developed with Region 2 of the California Department of Fish and Game regarding the management of fisheries in the Desolation Wilderness.

Streamflow maintenance dams that no longer meet CDFG and Forest Service management objectives will be allowed to disintegrate over time. Dams on the Lake Tahoe Basin Management Unit are managed by the USFS, while the dams on the Eldorado NF are managed by CDFG under a Special Use Authorization.

A decision to repair a dam or allow a dam to disintegrate may require further site-specific analysis, including evaluation for cultural impacts (see Heritage Resources).

Standards and Guidelines

- Complete evaluation and management decisions for the streamflow maintenance dams.
- Those dams which are retained will continue to be operated by the appropriate agency to meet management objectives.
- Allow the following dams to continue to disintegrate by natural processes: Heather Lake and Upper Twin Lakes. Both dams are in advanced stages of decay. The Heather Lake dam has been removed from the dam inventory.
- Remove or repair safety hazards, such as sharp pieces of steel or concrete.
- Complete repair work using non-motorized means and using native rock where possible.

HERITAGE RESOURCES

General Direction

Heritage resources will be identified and protected pursuant to Federal laws and regulations and managed in a manner consistent with wilderness management objectives.

Standards and Guidelines

- Conduct surveys as needed prior to site specific projects.
- Establish a survey strategy to expand the data base on high elevation sites. This strategy will prioritize surveys in areas of high visitor use such as lake basins, stream courses, and travel corridors.
- Mitigate impacts to significant heritage resource sites through monitoring and other appropriate actions that are consistent with protection of the wilderness resource.
- Allow the cabin at China Flat to deteriorate naturally. Remove materials that will not naturally decompose and transport them outside the wilderness. The implementation and mitigation of this action will be accomplished in consultation with the California State Office of Historic Preservation and the Advisory Council on Historic Preservation, who has recommended that the Forest Service undertake pictorial recordation of the cabin prior to its demolition (California Office of Historic Preservation 1994).
- Conduct all interpretation of heritage resources outside the wilderness (FSM 2323.83).

MINERALS

Standards and Guidelines

- Issue permits for mineral information-gathering activity, including prospecting, only for scientific and educational purposes. The gathering of mineral information, including prospecting, is not permitted for recreational purposes, for commercial exploration, or for non-commercial purposes.

RANGE

General Direction

Grazing allotments will be administered to minimize conflicts with other resource objectives and to promote a harmonious relationship between livestock grazing activities and the wilderness resource. Grazing is managed to meet Opportunity Class description goals for resource and social conditions.

Range Planning and Analysis

General Direction

Forage utilization levels and range carrying capacity will be determined in Allotment Management Plans (AMPs) and will be based on physical, biological, and social objectives for the wilderness area (FSH 2309.19, 22.22). Environmental analysis for new permits will determine the appropriate levels of grazing in the portions of those allotments where impacts are occurring on wilderness values such as plant communities, primitive recreation, and wildlife populations or habitat. Analysis will consider the costs and benefits of the amount of forage available, recreational values of the area, improvement or decline in wilderness quality and natural conditions, and other concerns.

Allotment Management Plans and new grazing permits will be completed as appropriate. Any required changes to allotment management will be implemented in accordance with permit terms and regulations. Vacant allotments will remain vacant until environmental analysis for those allotment plans is completed.

Standards and Guidelines

- Adjust grazing permits as needed to include specific Indicator Standards and LRMP amendment direction to guide range management (see range of options in Appendix A).
- Complete AMP analysis for the Wrights Lake Allotment, the Pyramid Allotment, the Tells Peak Allotment, and the Pearl Lake Allotment, as scheduled.
- Close the Rockbound Allotment, which has been vacant since 1988.

Range Management

General Direction

Livestock management is accomplished through Grazing Permits and Allotment Management Plans (AMP's) to fulfill LRMP direction and management area direction.

Standards and Guidelines

- Monitor indicators on each allotment as specified in the monitoring schedule to assure that Indicator Standards are being met.
- Require the following herding strategies to reduce conflicts between recreation use and grazing in areas with high recreation use. In the Wrights Lake Allotment, do not herd cattle into the Maude Lake, Gertrude Lake, or Tyler Lake basins. Continue to avoid herding cattle into the Sylvia, Lyons, Twin, and Grouse Lakes areas. (Cattle do currently drift into the Sylvia and Lyons Lake areas and may drift into the other lake basins.) In the Pearl Lake Allotment, do not herd cattle into Lawrence Lake basin.

Indicator Standards

Manage to meet the applicable Indicator standards listed here and under the resource section for Water Quality. These standards apply to all Opportunity Classes. Monitoring for each indicator is included in the Monitoring Schedule. If, through monitoring, it is determined that a standard is not being met, actions will be taken to bring conditions into compliance with that standard. See Appendix A, Range of Management Actions to be Taken if Standards are Exceeded.

INDICATOR: Lake Shore Conditions

The Lake Shore Conditions Indicator and Standard affects multiple resources including range. It is described in the section on Water Quality.

INDICATOR: Ecological Condition and Trend

The indicator for Ecological Condition and Trend measures conditions that may be affected by cattle and/or recreational livestock. Any future forest-wide direction adopted by the Eldorado National Forest and the Lake Tahoe Basin Management Unit that addresses Ecological Condition and Trend and provides measurable standards and guidelines for utilization of herbaceous species and woody riparian species will supersede the direction.

The existing Ecological Condition will be determined on a site specific basis by an interdisciplinary team in preparing the Allotment Management Plan for each allotment. Ecological condition and trend of the areas within an allotment can be measured by using the following factors: channel morphology, stream bank stability, degree of undercut streambanks, stream substrate particle size, herbaceous plant species composition, herbaceous plant distribution and vigor, deciduous woody-riparian plant vigor and age-class distribution, erosion hazard rating, rill and gully formation, and pedestalling

Desired Condition will be determined by evaluating the Existing Condition, the potential for the site, and the objectives for the area.

Trend is established through measurement of the same factors over time. If the site is changing toward the natural potential of the site, the trend is upward. Lack of change indicates a stable condition, while a change away from the site's natural potential is a downward trend. Trend will be measured using standard range monitoring procedures described in the Region 5 Rangeland Analysis and Planning Guide (USDA Forest Service, May 1997). Trend will be used to modify grazing systems and utilization.

STANDARDS

Herbaceous Species Utilization:

Utilization is the amount of the current year's forage production that is allowed to be removed by livestock grazing. The acceptable utilization rate will vary by rangeland vegetation type and ecological condition and trend. In any vegetation type found to be in an unhealthy ecological condition, grazing could continue if it is determined that grazing does not prevent the area from moving toward desired conditions, or is part of a recovery strategy for the area. Utilization would need to be determined on a site-specific basis for unhealthy areas or areas with a downward trend.

Range Vegetation Type	Ecological Condition	Utilization of Herbaceous Species
Alpine	At Desired Condition	45% of current year's growth
	Less than Desired Condition & trend is stable or upward	35% of current year's growth
Wet Meadows	At Desired Condition	50% of current year's growth
	Less than Desired Condition	40% of current year's growth

Woody Riparian Species Utilization

Woody riparian species are often important components of riparian areas, where grazing primarily takes place within the Desolation Wilderness. Grazing areas containing willow or other woody riparian plant populations will be monitored to determine the percentage of woody riparian species browsed by livestock and deer to measure changes to habitat for riparian dependent species and changes to aquatic ecosystem health.

STANDARD

Woody Riparian Species	Utilization by Wildlife and Livestock
Willow	≤20% of current years growth
Aspen	≤20% of current years growth

Range Improvements - Structural

Standards and Guidelines

- Consider construction of additional fencing or other structural range improvements only when necessary for resource protection and where other non-structural management practices are not effective or feasible. Fencing materials that harmonize with the environment will be used.

RECREATION

Recreation Opportunity Spectrum - Primitive

General Direction

Areas designated as Opportunity Classes 1 and 2 are to be managed to meet ROS Class objectives for Primitive. The area is characterized by a natural environment predominantly unmodified by human activity.

Recreation Opportunity Spectrum - Semi-Primitive Non-motorized

General Direction

Areas designated as Opportunity Classes 3 and 4 will be managed to meet ROS Class objectives for Semi-Primitive Non-motorized. The area is characterized by a predominantly natural or natural appearing environment. Evidence of other visitors and visitor use is apparent.

Visual Quality Objective - Preservation

General Direction

Allow ecological changes only. Trails, trail bridges, and other trail related improvements will be designed and located to be as obscure as possible.

Standards and Guidelines

- Manage to maintain a Visual Quality Objective of Preservation.

Closed OHV, OSV and Mountain Bike Management

General Direction

Unless specifically authorized, motorized or mechanical vehicles are prohibited in Wilderness, including over snow vehicles (OSV), off highway vehicles (OHV), mountain bikes and hang gliders (36 CFR 261.16). The use of wheelchairs in wilderness is allowed for individuals whose disability requires use of a wheelchair. Prevent trespass of motorized or mechanized vehicles (including off-road vehicles, snowmobiles and mountain bikes) into the wilderness.

Standards and Guidelines

- Actively prosecute motorized and mechanized vehicle use in the Wilderness.

Recreation Management - Wilderness

General Direction

The Desolation Wilderness will be managed for public use, enjoyment and understanding in a way that maintains the wilderness character and prevents degradation of wilderness resources and values.

Human use will be managed.

Limit and monitor impacts at high use areas; regulate or control use at specified areas where damage to vegetation is significant.

Regulate horse use to prevent damage to vegetation and soil.

Permit and Quota System

General Direction

Both overnight and day users must obtain a wilderness permit for each trip into the wilderness. Wilderness permits will be issued by the Forest Service or one of its cooperators.

The length of stay limit for the Desolation is 14 days.

All quotas will be allocated on a daily basis.

Standards and Guidelines

- Restrict party size to a maximum of 12 persons. Exceptions may be made, on a case by case basis under special circumstances (i.e. educational, scientific purposes).
- Administer the overnight quota by zones. The initial quota for the wilderness as a whole is 564 persons per day. The quota represents the number of people camping in the Desolation Wilderness on the first night of their trip. Additional people may be camped in the Wilderness who entered on previous days. Tables displaying the initial quota for each area are included in Appendix B.
- Monitor resource conditions and encounter levels to determine the maximum use levels that will meet opportunity class standards for physical and social conditions. A monitoring schedule is included in this Land Management Plan Amendment. If monitoring indicates a need, take action to manage recreation use as necessary to achieve or maintain desired conditions in each area (See Appendix A.). The quota (numbers and season) may be adjusted annually as needed to achieve or maintain desired conditions. Upward adjustments in quotas, if any, will be in minimal increments.
- The quota will be in effect from Memorial Day weekend (Friday) through September 30 of each year. Changes to the quota system may be phased in over a one year period. If monitoring indicates a need, the quota season may be extended in heavily used management zones.
- Monitor for compliance with permit requirements during wilderness ranger patrols. During the first year of implementation, normal response to permit non-compliance (due to permit requirement changes) will be issuance of a warning. In subsequent years, non-compliance will be handled through normal procedures for issuing violation notices.
- Emphasize indirect methods of managing day use. Utilize site specific measures listed below and indirect measures in Appendix A to meet Opportunity Class standards. If these indirect methods are not successful in achieving indicator standards, a day use quota will be implemented as needed in areas where standards are being exceeded.

- Site specific measures will be taken in portal areas with high day use:

  Eagle Lake: Perform analysis to provide hiking options that will reduce encounter levels within the Wilderness, including development of trails outside the wilderness boundary to give visitors hiking options from the Eagle Falls Trailhead without entering the wilderness (a possible loop trail would separate from the existing trail near the Eagle Falls Bridge, loop up to the 90 foot wall, and return back to the existing trail; another possible trail would provide a short hike to an overlook).

  Designate campsites at Eagle Lake and restore damaged areas around the lake shore. Develop and implement a restoration plan to restore damaged areas around the lake shore. Stabilize trails and provide rock steps to accommodate high use levels. Where high use levels are contributing to accelerated erosion, loss of vegetation, and deterioration of water quality, improve selected user created routes and add to the trail system. Eliminate and revegetate other user created routes. Minimize erosion in impacted areas by stabilizing areas along the lake shore that receive heavy day use and by restoring campsites.

  Twin Bridges: Relocate trailhead parking to the old Twin Bridges site and reduce capacity in order to limit the amount of use into the Desolation and minimize the attractiveness of the parking area to motorists on Highway 50. Complete construction of the loop trail in the Pyramid Creek area outside the wilderness boundary in order to provide a non-wilderness short hike option.

  Echo Lake: Perform analysis to provide hiking options outside the Wilderness from the Echo Lake Trailhead including a loop trail around Echo Lake, a trail to Flag Pole Peak, and a trail to Becker Peak.

  Monitor the parking at Echo Lake to determine the pattern of use and correlation between visitation into the Desolation Wilderness and the number of cars parked at the Echo Lake Trailhead parking area to assist in determining future strategies for parking lot management. Do not increase parking capacity or allow shuttle service between the Echo Lake Trailhead parking area and the Sno-Park lot or other parking lots if it would result in an increase in Wilderness use.

  Wrights Lake Area: All parking at Wrights Lake is restricted to designated sites. Do not allow additional people to use the Wrights Lake area when the designated sites fill up.

  Use the Wrights Lake information kiosk to provide information on non-wilderness designations.

  Expand the non-wilderness trail system in this area to include other hiking opportunities from the Wrights Lake area, such as Windmiller trail and Pearl Lake Loop Trail, and other scenic vistas in the Wrights Lake area outside the Wilderness.

  Rockbound Lake Area: Emphasize physical restoration of campsite and lake shore areas.

- Restrict camping within 500 feet of the lakes within the Eagle Lake, Grouse Lake, and Lake of the Woods zones to designated sites. In addition, restrict camping to designated sites within 500 feet of Avalanche Lake. The number of designated sites will be correlated with the quota so that users will not be assigned a specific site, but will have the freedom to choose their preferred designated site. Elsewhere within these zones, camping sites will not be subject to special restrictions (Campers will not need to select a designated site if they camp more than 500 feet from the lake shore). Designated sites will not be required for winter camping where 12 inches of snow is present.

Recreational Livestock

Standards and Guidelines

- Limit recreational livestock to 2 stock per person, with a limit of 12 stock per party.
- Prohibit tying recreational livestock to trees, except for short periods for loading and unloading, or for short rest breaks while traveling. The use of high lines, hobbles or portable fences is required for longer holding.
- Prohibit holding or confining recreational livestock within 200 feet of lakes or streams, or within 100 feet of campsites and trails. Users are to scatter manure at least 100 feet from water courses and campsites and fill in any holes created by their livestock before leaving a site.
- Encourage the use of weed-free supplemental feed.

General Recreation Items

Standards and Guidelines

- Prohibit wood campfires in all areas of the Desolation. Fully enclosed wood burning camp stoves are permitted.
- In heavily impacted areas, identify durable campsites and encourage visitors to use these sites.
- Provide educational materials that recommend that, where possible, visitors camp in appropriate sites at least 100' from water, trails and other campsites. Individual campsites will be eliminated based on biophysical and social factors.
- Allow areas where vegetation has been impacted by human use to revegetated naturally if recovery is expected to take less than ten years.
- Where recovery is expected to take longer than ten years, develop and implement site specific revegetation implementation plans to include closure to use and/or revegetation using species native to the area and techniques and protocol developed in consultation with the Aldo Leopold Institute. Monitor revegetation projects to ensure success (see Monitoring Schedule).
- Enforce CFRs that prohibit the discharge of firearms 1) within 150 yards of occupied areas, including campsites, 2) or in any manner whereby any person /property is exposed to injury as a result of the discharge. If public safety becomes compromised due to the use of firearms in heavily used areas of the Desolation Wilderness, such areas may be closed to shooting (both hunting and recreational shooting) by means of a Forest Order. Use information and education to resolve user conflicts.

- Enforce the El Dorado County leash law where dogs at large are an impediment or hazard to the safety or convenience of any person, or where dogs are harassing or molesting wildlife.
- Defer action on placement of new climbing bolts until such time as national policy regarding placement of new fixed anchors (climbing bolts) is clarified through the negotiated rule making process. Work with the climbing community and interested parties to inventory and evaluate routes with existing fixed anchors and develop a long term management strategy.
- Do not place new peak registers within the Desolation Wilderness. By the year 2000, remove peak registers that are not covered by a Memorandum of Understanding (MOU) between a responsible party and the Forest Service. The MOU must document historical use and provide a maintenance schedule that will protect the wilderness resource, define responsible parties, and provide for preservation of completed registers.

Indicator Standards

Manage to meet the applicable Indicator standards listed below and under the resource sections for Range, Water Quality and Trails. These standards apply to all Opportunity Classes. Monitoring for each indicator is included in the Monitoring Schedule. If, through monitoring, it is determined that a standard is not being met, actions will be taken to bring conditions into compliance with that standard. See Appendix A, Range of Management Actions to be Taken if Standards are Exceeded.

INDICATOR: Number of groups encountered per day while traveling

This indicator has been selected to measure the solitude available while traveling within the wilderness. The indicator will be measured through a combination of techniques including visitor surveys, observations by wilderness rangers and volunteers, informal conversations with users, and use level records.

STANDARDS

Opportunity Class	Average # groups encountered per day over the high use season	Maximum # groups encountered per day over the high use season
1 (Most Primitive)	0. 5	2
2	2	4
3	4	8
4	15	20
ELSMA	35	50

INDICATOR: Number of occupied campsites within sight or sound of a campsite

This indicator provides a measure of campsite solitude. It is also indicative of campsite density, campsite location, and use levels in specific locations. Wilderness staff and volunteers will measure the indicator through direct observation and/or informal conversations with visitors at their campsites.

STANDARDS

Opportunity Class	Number of occupied campsites within sight or sound
1 (Most Primitive)	0
2	1
3	2
4 (Less Primitive)	3
ELSMA	1

INDICATOR: Maximum square feet of devegetated area in campsites

Devegetated campsite area is an indicator of soil compaction and vegetation change, and indirectly, of possible erosion, amount and type of use, and user behavior. This indicator will be measured by staff and volunteers on the campsite inventory form.

STANDARDS

Opportunity Class	Maximum Sq. Ft. devegetated area per campsite
1 (Most primitive)	0 for 90% of sites; up to 30 square feet on up to 10% of sites at a given lake or other destination. Goal will be 0.
2	100
3	300
4 (Less primitive)	600
ELSMA	300

INDICATOR: Frissell Campsite Condition

This indicator will be added to ongoing campsite monitoring because it is particularly reliable in measuring trends in conditions over time.

Additional campsites would be inventoried by: mapping campsites; recording locations; measuring distance from water, trail and other sites; recording visibility/screening; and rating the site using the modified Frissel campsite condition classification system below:

STANDARDS

Opportunity Class	Campsite Condition Class Ratings
1	Generally only type A sites are allowed to form in this Opportunity Class. Any increase in type B sites greater than 10% of the total number of sites in the area will initiate actions.
2	Generally only type A and B sites are allowed to form. Type C sites will not exceed 25% of the total number of sites in the area.
3	Only type A, B and C sites allowed to form. Type C sites will not exceed 50% of the total number of sites. Formation of type D sites will initiate actions.
4	No type E sites are allowed to form. Type D sites will not exceed 50% of the total number of sites.

Campsite Condition Class descriptions:

A. Ground vegetation is flattened, but not permanently injured. Minimal physical change.

B. Ground vegetation is worn away around the center of activity.

C. Ground vegetation is lost on most of site, but duff and litter is present in all but a few areas.

D. Bare mineral soil is widespread. Tree roots exposed on the surface.

E. Soil erosion is obvious.

Information and Education

General Direction

Examine the feasibility of requiring wilderness visitors to view a video and pass a wilderness skills quiz yearly before obtaining wilderness permits.

Standards and Guidelines

- Provide educational materials at offices and trailheads to explain wilderness use and protection.
- Encourage "Leave No Trace" wilderness techniques through materials and ranger contacts in the wilderness.

- Do not advertise or encourage commercial or non-commercial use of the Desolation. Through the permit system, front desk, newspapers, and public education opportunities, redirect visitors seeking a non-wilderness-dependent experience to area outside of the Desolation.
- Work with independent authors and publishers to develop an understanding of the wilderness resource, improve wilderness manners, and depublicize wilderness.
- Revise the Desolation Wilderness Education Strategy and provide for its implementation in the Wilderness Implementation Schedule. The strategy is to include measurable objectives and monitoring and be flexible enough to adapt to new opportunities. It will utilize the Interagency Wilderness Education Project where practical for efficiency and consistency in accomplishing wilderness education goals.
- Interpret wilderness resource components such as native plants, cultural resources, wildlife, etc. outside of the wilderness. Interpretation of the wilderness resource will be sensitive to the fact that an important aspect of wilderness is the perceived "unknown".
- Place a high emphasis on visitor contacts in the Eagle Lake Special Management Area (ELSMA). Communicate necessary rules and regulations to visitors outside the area at trailheads, Visitor Information Centers, and Ranger Stations. Information concerning protection of site-specific wilderness resources and regulations may also be presented by field personnel inside the area. On site education about wilderness and restoration activities may occur.

Emergency Services

Standards and Guidelines

Approve the use of motorized equipment on a case by case basis when the situation involves inescapable urgency and a temporary need for speed beyond that available by primitive means. Categories include fire suppression, health and safety, law enforcement involving serious crime or fugitive pursuit, removal of deceased persons and aircraft accident investigations.

SOILS

General Direction

Limit soil displacement and erosion resulting from human activity and authorized uses to a rate similar to that which occurs naturally.

Prevent soil compaction resulting from human activity and authorized uses from progressing to a point where natural plant establishment is precluded (trailheads, trail treads, and desired traditionally used camp areas excepted).

Standards and Guidelines

- Monitor all campsite and trail conditions, as specified in the monitoring schedule. Implement corrective or maintenance procedures as needed.
- Follow guidelines for trail construction and maintenance outlined in the Forest Service Trails Handbook (FSH 2309.18) and the Best Management Practices Handbook (USDA Forest Service 1986).

SPECIAL USE MANAGEMENT

Standards and Guidelines

- Commercial operations will be authorized only with a valid special use permit. Competitive events, training events and contests are not permitted in the wilderness (FSM 2323.13h).

Recreation Outfitter/Guides

General Direction

Outfitter/guide operations will be managed to ensure compatibility with the wilderness resource and other visitors. Administration of Special Use Permits for commercial use will follow the objectives and procedures outlined in the Forest Service Special Uses Handbook (FSH 2709.11).

Commercial guide services are defined as those "providing services or assistance (such as supervision, protection, education, training, packing, touring, subsistence, interpretation, or other assistance to individuals or groups in their pursuit of a natural resource-based outdoor activity) for pecuniary remuneration or other gain. The term 'guide' includes the holder's employees, agents, and instructors". Outfitting is defined as "providing, through rental or livery, any saddle or pack animal, vehicle or boat, tents or camp gear, or similar supplies or equipment, for pecuniary remuneration or other gain. The term 'outfitter' includes the holder's employees, agents, or instructors. Outfitter or guiding operations which are part of commercial public service site operations (such as a pack station, lodge, or resort) will be administered under the site's annual operating plan" (FSH 2709.11).

Wilderness use by camps under special use permit is considered part of the use allocated to outfitter/guides. Their use of the wilderness is subject to all of the same conditions and requirements as outfitter/guides. The determination to allow the use of the wilderness; the type, number, and location of trips; and the number of service days will be defined in their operating plans.

Issuing Outfitter/Guide Permits

General Direction

Existing guided use of the Desolation will be continued under Special Use Permit, subject to general direction for outfitter/guiding. When an existing outfitter/guide permit expires, a new permit will be issued subject to the criteria for determining public need.

A prospectus will be issued, where required, to solicit bids for any new outfitter/guide services that may be allowed. Such Special Use Permits will be awarded based on the evaluation criteria listed below, and on the applicant's past experience and performance, financial capability, economic viability, ability to provide the needed service, knowledge of wilderness values, and "Leave No Trace" use ethics.

Standards and Guidelines

- New outfitter/guide permits will be issued subject to the following Evaluation Criteria for determining the need for outfitter/guide assistance in the Desolation. The decision will be coordinated between the Eldorado National Forest and the LTBMU.

1. Meet a demonstrated public need. The following elements will be considered in determining whether or not there is a public need for a particular service:
    a) Significant numbers of potential visitors have been making unsolicited requests for new or additional services in the area.
    b) Extent to which existing outfitter/guide permits are being utilized - existing outfitter/guide services are not able to accommodate prospective clients within their permitted service days.
    c) The service is needed to achieve the public purposes of wilderness: recreational, scenic, scientific, educational, conservation, and historic use.
    d) Non-commercial use is not achieving these purposes.
    e) Will commercial use compete with existing non-commercial use of the area? Is the particular experience, land form or condition the only one of this type in the wilderness?
2. Skills and equipment - outfitter skills and equipment are needed by a portion of the public because of one or more of the following:
    a) Specific skills required for activities appropriate for the wilderness require substantial time and/or talent to learn.
    b) Learning necessary skills and participating in the activity requires acquisition and consistent use of expensive, specialized equipment for which the public could not, or normally would not, expend the dollars or time.
    c) The skills required are so unique that use of an outfitter is almost a prerequisite if the public is to have any opportunity to participate in and enjoy the activity.
3. Knowledge - outfitter knowledge of the recreational resource and the activity area is needed by the public, and especially nonresidents, in order to enjoy recreational opportunities in a manner that reduces resource damage and user conflicts. This includes knowing where and by what method to best access and travel through an area.
4. Safety - an outfitter/guide's special skills and equipment are needed for a reasonable level of safety for the participants. Without outfitter/guide assistance, members of the public could seriously endanger their health or lives.
5. Special Management Objectives and/or Issues - outfitter/guide assistance is needed to ensure special management objectives are met and/or issues resolved.
    a) Provide access for the disabled, elderly, and families with small children.
    b) Protect fragile resources.
    c) Provide environmental education and interpretive information.
    d) Assist in reducing resource impacts and/or conflicts between users

e) Provide increased diversity of wilderness users.

6. Level of use and conflict.

   a) Extent to which non-commercial use adequately achieves the public purposes of wilderness: recreational, scenic, scientific, educational, conservation, and historic use.

   b) Compatibility with current types and levels of use.

   c) Impact on wilderness conditions and LAC standards.

7. Wilderness dependence - the service cannot be provided in a non-wilderness area. In determining wilderness dependency, the following elements will be considered.

   a) Are solitude and unconfined, primitive recreation central components of the experience?

   b) Does the trip focus on a specific resource or condition found only in the wilderness?

   c) Can the service be provided on public lands outside the wilderness? Are similar and suitable non-wilderness lands available?

- Regulate guided use by zone. The number of allocated service days permitted per year for existing outfitter/guides will be set at 100 percent of their average use for the last 5 years. The additional permits will be set at a maximum number of allocated service days comparable to those of the existing permittees.
- Outfitter/guide pack and saddle stock will not be permitted in the Desolation Valley south of the junction between the Pacific Crest Trail and 17E40 at the northeast end of Lake Aloha.

Outfitter/Guide Management

General Direction

All wilderness use regulations will apply to outfitter/guides. Permits will specify the total amount of use, in service days, to be permitted. Any specific planned trip dates, trip destinations, the season of use, and frequency of multiple trips to specific locations will be defined in operating plans. The number of service days allowed in specific areas will be compatible with Opportunity Class objectives for the areas of operation and the current level of private use.

Permitted outfitter/guides will be allowed to operate on both an allocated and a non-allocated basis. Camps leading trips into the wilderness will operate on an allocated basis only. Each outfitter/guide or camp will be permitted a set number of allocated service days each year. For allocated trips, outfitter/guides will submit proposed trip dates and locations to the Forest Service for approval. Allocated trips must be scheduled prior to the dates when reservations are available to the general public for the dates requested. Trips which the outfitter/guides request after reservations are available to the general public will be awarded on a space available basis. The Forest Service will not charge a reservation fee for scheduling allocated trips. Clients will be responsible for payment of any wilderness fees. In some cases, guides may collect the fees from clients and pay them on their clients behalf.

Non-allocated trips are trips for which the visitor obtains a wilderness permit from the Forest Service (for day or overnight use) and then arranges for guide service with a permitted outfitter/guide. Non-allocated outfitter/guide trips will be available on a space available basis. The permit will be issued for a group size that includes the guide. Applicable wilderness fees will be paid by the user.

Standards and Guidelines

- Guided use will not exceed 50% of the daily zone quota for an area.
- All outfitter/guide use will meet requirements for maximum group size, stock limits, length of stay, etc. All groups will be counted within applicable wilderness quotas.

Outfitter/Guide Performance Requirements

General Direction

Specific performance requirements will be defined in the outfitter/guide operating plans. Outfitter campsite conditions, use practices and client education will be monitored.

Standards and Guidelines

- Outfitter/guides will provide clients with information on "leave no trace" practices, wilderness values and regulations. Outfitter/guides will train all guides and trip leaders to provide the same. Districts will assist outfitters in fulfilling these requirements.
- Require outfitters and guides who use recreational stock to carry supplemental weed free feed for overnight trips.
- Require outfitters and guides to provide trail maintenance commensurate with their impact on trails.
- Allow 2 equestrian guides, 5 camps, and up to 2 winter guides to provide services under permit.
- Make an additional 500 service days available each year to applicants who wish to apply for trips meeting the definition of a guided trip. Each applicant may request up to 100 service days. Each year, applications received by March 1 will be allocated through a lottery system. Any remaining days will be allocated on a first come first serve basis for the remainder of the year. Examples include guided hikes, llama pack trips, special interest trips, etc.

Maximum Levels of Outfitter/Guided Use to be permitted in Desolation Wilderness

Outfitter/Guide or Camp Name	Allocated Service Days/Year	Unallocated Service Days/Year	Current 5 Year Avg of Service Days/Year
Existing Special Use Permits			
Camp Richardson	109 (OC 3 & 4) 7 (OC 1 & 2)	unlimited [1]	116
Cascade Stables	109 (OC 3 & 4) 7 (OC 1 & 2)	unlimited [1]	116
Deer Crossing Camp	20 (OC 3 & 4) 48 (OC 1 & 2)	0	80
Existing Use, New or Updated Special Use Permits			
Camp Sacramento	180 (OC 3 & 4)	0	180
Berkley Echo Camp	250 (OC 3 & 4)	0	250
Camp Concord	10 (OC 4)	0	10
Stanford Camp	400 (OC 3 & 4)	0	400
New Use, New Permits			
Winter Guides	128 total	unlimited [2]	0
Individual Trips	500	0	0

[1] Service days are limited by the number of available slots open under the quota at the time of application. If unallocated use exceeds 50% of the allocated service days, some action may be taken.

[2] No quota is applicable in the winter.

Special Use Management - Non-recreation

General Direction

Handle applications for conducting studies in wilderness by individuals or educational institutions on a case-by-case basis.

Standards and Guidelines

- Issue permits for research contingent upon the need to conduct a study within the wilderness for an administrative or research need. Proposals will be jointly reviewed by the Forest Supervisor, a specialist from the Pacific Southwest Experiment Station, and the sponsor to determine desirability and feasibility.
- If a radio repeater must be located within the wilderness, it will be without the use, if possible, of a permanent facility.

Power Related Licenses and Permits

General Direction

Protect wilderness values when operating and maintaining existing power projects and other related facilities, including water regulation dams and hydroelectric projects.

Standards and Guidelines

- Use foot and horseback access and require materials that harmonize with the environment to maintain existing facilities.
- When not reasonably accessible by horseback, the following flights are authorized:

  1. Natural Resources Conservation Service - Two flights per year to read snow survey courses at Lake Lucille and Rubicon Peak.

  2. U.S. Geological Survey - Six flights per year to maintain stream gauges and the Lake Lois Snow Pillow.

  3. Sacramento Municipal Utility District - Four flights per year to maintain FERC licensed facilities at Rubicon Reservoir.

  4. FERC Project 184 Licensee - one flight per year to maintain FERC licensed facilities at Lake Aloha.
- Approve on a case-by-case basis flights necessary to perform major maintenance work at FERC licensed facilities.
- This is an exclusion area for transportation-utility corridors. New development of hydroelectric facilities requires presidential approval.

VEGETATION

Biological Diversity

General Direction

Natural ecological processes will be allowed to determine the composition and distribution of plant communities. The interruption of natural plant succession processes resulting from human activity and authorized uses will be limited to a rate that is consistent with the Opportunity Class Descriptions for each area. Management action will strive to minimize the loss of trees and excessive loss of ground cover at traditionally used camp areas and other heavily used locations.

Standards and Guidelines

- Close wilderness to fuel wood cutting
- Do not allow harvest of miscellaneous forest products.
- Allow areas where vegetation has been impacted by human use to revegetated naturally if recovery is expected to take less than ten years.
- Where recovery is expected to take longer than ten years, develop and implement site specific revegetation implementation plans to include closure to use and/or revegetation using species native to the area and techniques and protocol developed in consultation with the Aldo Leopold Institute. Monitor revegetation projects to ensure success (see Monitoring Schedule).

Sensitive Plant Management

General Direction

All existing sensitive plants will receive full protection at current population levels or better.

Standards and Guidelines

- Monitor sensitive plant species by mapping known occurrences and documenting their conditions over time.
- Consider impacts to sensitive plants in relocating trails. Campsites may be closed to protect sensitive plants as needed.

Noxious Weeds

Standards and Guidelines

- Monitor vulnerable areas of the wilderness to prevent establishment of noxious weeds, and eradicate any that are found (see Monitoring Schedule).

Forest Pests

General Direction

Indigenous insect and plant diseases are to be allowed to play, as nearly as possible, their natural ecological role within the wilderness. Epidemics which threaten adjacent lands or resources may be controlled (FSM 2324.11).

WATERSHED/WATER QUALITY

Water Quality Management

General Direction

Human activity and authorized uses will be managed so that the integrity of surface water resources is maintained. Lakes and streams will meet State water quality standards for non-degradation. Lands within the Lake Tahoe Basin Management Unit will meet standards established for the Lake Tahoe Basin. Within these parameters, wilderness uses will be managed to meet Opportunity Class Description goals for water quality. (The area standards and guidelines for recreation have additional guidelines to protect water quality.)

Standards and Guidelines

- Establish baseline information and monitor bacteria levels (fecal coliform/streptococcus) and clarity of selected lakes and streams every 5 years to determine if water quality is within State standards and to provide baseline information to track any degradation in water quality over time.
- Prohibit use of soaps, detergents, foodstuffs, or any contaminants in wilderness waters.
- Restore stream beds only in areas where degradation has occurred as a result of human activity.

- Establish a mandatory setback of 200 feet from water, campsites and trails for the disposal of human waste (feces). Prohibit the development and use of latrines. Toilet paper should be buried or carried out. Recommend the use of cat-holes for disposal of human waste.

Watershed/Riparian Maintenance

General Direction

The goal of management is to maintain the riparian habitats of streams, springs, ponds, and wetlands in their natural state. Management of grazing, recreation livestock and human uses will be designed to meet Opportunity Class Description goals for riparian areas.

Standards and Guidelines

- Allow areas where vegetation has been impacted by human use to revegetated naturally if recovery is expected to take less than ten years.
- Where recovery is expected to take longer than ten years, develop and implement site specific revegetation implementation plans to include closure to use and/or revegetation using species native to the area and techniques and protocol developed in consultation with the Aldo Leopold Institute. Monitor revegetation projects to ensure success (see Monitoring Schedule).

Indicator Standards

Manage to meet the applicable Indicator standards listed below and under the resource sections for Range, Recreation and Trails. These standards apply to all Opportunity Classes. Monitoring for each indicator is included in the Monitoring Schedule. If, through monitoring, it is determined that a standard is not being met, actions will be taken to bring conditions into compliance with that standard. See Appendix A, Range of Management Actions to be Taken if Standards are Exceeded.

INDICATOR: Lake Shore Conditions

The following indicator for Lake Shore Conditions is designed to protect lake shore areas and measures conditions that may be affected by cattle and/or recreational livestock as well as recreation use. Riparian areas include all wet meadows and areas within 100 feet of perennial streams (stream class I, II, and III) and ponds, lakes or reservoirs, or within 50 feet of intermittent streams (stream class IV). Any future forest-wide direction adopted by the Eldorado National Forest and the Lake Tahoe Basin Management Unit that provides measurable standards and guidelines for riparian resources and specifically includes lake shores will supersede the direction provided here.

Lake shore areas within the Desolation will be in healthy condition with respect to their natural potential. This will be assessed by conducting Erosion Hazard Rating (EHR) assessment using the U.S. Forest Service Region-5 EHR process in lake shore riparian zones from high water mark to the outer margin of riparian vegetation. EHR is determined based on the native soil type, slope steepness, and percent cover. Ground cover consists of low growing vegetation (grasses, forbs and prostrate shrubs), plant litter and debris, and surface rock fragments larger than about ¾". Shrub and tree cover is amount of area covered by their canopies. Cover is a measure of the degree of livestock and recreation damage along a stream reach or lake shore. This indicator provides information on soil productivity, water quality changes, and changes to aquatic ecosystem health.

STANDARD

Opportunity Classes	Cover within Lake shore Riparian Zones
1 - 4 and ELSMA	Cover sufficient to maintain a "Low" erosion Hazard rating[1]

[1] Erosion Hazard Rating is determined by native soil type, slope steepness and percent ground cover using US Forest Service Region-5 process.

Water Quantity Management - Water Yield and Runoff Regulation

Standards and Guidelines

- Work with appropriate agencies to develop a program of water releases to maintain scenically pleasing water levels through the heaviest use season at Aloha and Rubicon Reservoir.
- Do not approve the use of lands within the Desolation Wilderness as target areas for weather modification activities unless: 1) the proponent can provide reasonable, scientifically supportable assurance that his activities will not produce permanent, substantial changes in natural conditions, and 2) the proposal does not include any feature that might reasonably be expected to produce conditions incompatible in appearance with the wilderness environment.

WILDERNESS

Wilderness Administration and Planning

General Direction

Consider activities on both sides of the wilderness boundary during planning. Articulate management goals and the blending of diverse resources in forest plans. Do not maintain buffer strips of undeveloped wildland to provide an informal extension of wilderness. Do not maintain internal buffer zones that degrade wilderness values.

Wilderness Quality

General Direction

Any improvements for recreation use must be necessary for the protection of the wilderness resource, not for the convenience of users. They will be constructed of materials which harmonize with the wilderness resource and be subject to approval by the Regional Forester.

Standards and Guidelines

- Dismantle structures built by recreation users that do not conform to the letter or intent of the Wilderness Act.
- Complete site-specific surveys and environmental analysis where required before initiation of wilderness projects.

DESOLATION WILDERNESS MONITORING SCHEDULE

Items selected for monitoring are those activities or practices that will affect the wilderness character of Desolation, where findings could trigger a change in management for the Wilderness. Activities done for inventory or data collection only, where a change in management would not be indicated, are not included.

A guide book will be prepared to provide specific direction for monitoring each indicator in order to promote consistent monitoring across all administrative units.

DESOLATION WILDERNESS MONITORING SCHEDULE

ACTIVITY, PRACTICE, OR EFFECT	MONITORING OBJECTIVE	MONITORING TECHNIQUE	PRECISION OR VALIDITY	MINIMUM FREQUENCY	REPORTING PERIOD
Number of groups encountered per day while traveling	To measure solitude available while traveling within the Wilderness in accordance with established indicator standards	Counting encounters with other parties. This may be accomplished by Wilderness Rangers counting or by volunteers counting with checks by Wilderness Rangers.	High	Selected monitoring routes every 3 years in areas of highest concern or highest use; every 5 years in other areas. Number of sample days shall be sufficient to calculate peak and average use.	Annually at end of season
Number of occupied campsites within sight or sound of a campsite	Measure of opportunity for solitude while camping. This indicator is also indicative of campsite density, campsite location, and use levels in specific locations.	Counting occupied campsites within sight and sound. This may be done by Wilderness Rangers or volunteers.	High	10% of named lakes or other destinations each year, to include at least one primary (Holiday or weekend) day. Areas of concern or heaviest use concentration will be given highest priority. All campsites will be covered at a given destination.	Annually at end of season
Maximum square feet of devegetated area in campsites	Extent of devegetated area is an indicator of soil compaction and vegetation change and, indirectly, of erosion, amount and type of use, and user behaviors.	Field measurements recorded on campsite inventory forms	High	Selected areas in Opportunity Class 1 & 2 every 10 years; Opportunity Class 3 & 4 each year; ELSMA every other year. Areas of Highest use will receive priority. All campsites at a destination will be covered. This will be done simultaneously with Frisell Campsite Condition monitoring	Annually at end of season

ACTIVITY, PRACTICE, OR EFFECT	STANDARD OF COMPARISON	VARIABILITY INDICATING ACTION	ACTION TO BE TAKEN	RESPONSIBLE STAFF	AVERAGE ANNUAL COST
Number of groups encountered per day while traveling	Desolation Wilderness Guidelines: Opportunity Class I: avg. of .5 groups high of 2 groups Opportunity Class II: avg. of 2 groups high of 4 groups Opportunity Class III: avg. of 4 groups high of 8 groups Opportunity Class IV: avg. of 15 groups high of 20 groups ELSMA: avg. of 35 groups high of 50 groups	Any trails exceeding the encounter standards will be monitored for an additional ten days to verify that the standard is consistently exceeded before management actions are initiated.	See list of possible management actions in Appendix A	Wilderness Managers	$ 1,800 each year (part of Wilderness Ranger Salary)
Number of occupied campsites within sight or sound of a campsite	Desolation Wilderness Guidelines: Opportunity Class I: 0 campsites Opportunity Class II: 1 campsite Opportunity Class III: 2 campsites Opportunity Class IV: 3 campsites ELSMA: 1 campsite	If the standard is exceeded for any one destination, additional sampling will be done at that destination to determine management actions to be implemented	See list of possible management actions in Appendix A	Wilderness Managers	$ 800 each year part of Wilderness Ranger salary
Maximum square feet of devegetated area in campsites	Desolation Wilderness Guidelines: Opportunity Class I: 0 for 90% of sites; up to 30 square feet on up to 10% of sites at a given destination. Opportunity Class II: 100 square feet Opportunity Class III: 300 square feet Opportunity Class IV: 600 square feet ELSMA: 300 square feet	Standard is exceeded.	See list of possible management actions in Appendix A	Wilderness Managers	$ 2,000 each year part of Wilderness Ranger salary

ACTIVITY, PRACTICE, OR EFFECT	MONITORING OBJECTIVE	MONITORING TECHNIQUE	PRECISION OR VALIDITY	MINIMUM FREQUENCY	REPORTING PERIOD
Frissell campsite condition	Measure change in natural conditions (vegetation loss and soil disturbance) at camping areas. Identify need to limit impacts.	Campsite evaluation form.	High/moderate	Selected areas in Opportunity Class 1 & 2 every 10 years; Opportunity Class 3 & 4 each year; ELSMA every other year. Areas of Highest use will receive priority. All campsites at a destination will be covered. This will be done simultaneously with Campsite Vegetation monitoring	Annually at end of season
Total Number of Campsites	Measure change in number of campsites at destinations & management areas	Count and map the number of campsites for each destination or management area	High/moderate	Selected areas in Opportunity Class 1 & 2 every 10 years; Opportunity Class 3 & 4 each year; ELSMA every other year. Areas of Highest use will receive priority. All campsites at a destination will be covered. This will be done simultaneously with Campsite Vegetation and Frisell Campsite Condition monitoring	Annually at end of season
Designated Camping Restrictions	To ensure campsite closures are successful and not creating additional impacts	Observation by Wilderness Rangers	High	All areas where camping is restricted to designated sites. Annually for 5 years after implementation of restrictions	Annually at end of season

ACTIVITY, PRACTICE, OR EFFECT	STANDARD OF COMPARISON	VARIABILITY INDICATING ACTION	ACTION TO BE TAKEN	RESPONSIBLE STAFF	AVERAGE ANNUAL COST
Frissell campsite condition	Desolation Wilderness Guidelines: Opportunity Class I: Only type A sites allowed to form. Opportunity Class II: Only type A and B sites allowed to form Opportunity Class III: Only type A, B and C sites allowed to form. Opportunity Class IV: No type E sites allowed to form ELSMA: Camping in designated sites only. Sites will meet conditions for type A, B or C	Desolation Wild. Guidelines: Op. Class I: Type B sites exceeding 10% of total number of sites in an area Op. Class II: Type C sites exceeding 25% of total number of sites in an area Op. Class III: Formation of type D sites Op. Class IV: Type D sites exceeding 50% of total number of sites in an area ELSMA: No type D or E sites will be allowed to form	See list of possible management actions in Appendix A	Wilderness Managers	$2,000 each year (part of Wilderness Ranger's salary)
Total Number of Campsites	First evaluation established baseline condition. Undesireable campsites are closed. Subsequent monitoring is compared to baseline. Most campsites were inventoried and mapped in 1993.	Increase in number of campsites, either 20% or 5 additional sites, whichever is less, per destination.	See list of possible management actions in Appendix A	Wilderness Managers	$1,000 each year (part of Wilderness Ranger's salary)
Designated Camping Restrictions	Camping occurring only within designated sites	Closed campsites still being used	See list of possible management actions in Appendix A	Wilderness Managers	$ 500 each year (part of Wilderness Ranger's salary)

ACTIVITY, PRACTICE, OR EFFECT	MONITORING OBJECTIVE	MONITORING TECHNIQUE	PRECISION OR VALIDITY	MINIMUM FREQUENCY	REPORTING PERIOD
Number of User Created Trails	Measure impacts from use along travel routes	User created trails will be counted and mapped in areas of concern to establish a baseline. In future years, changes to baseline conditions will be recorded.	High	Selected trail monitoring segments in areas of concern (where use has been increasing). At least one area every year, possibly together with the campsite monitoring	Annually at end of season
Trail Conditions	Measure changes in trail condition in high use areas, particularly in environmentally sensitive areas or areas with high day use	Measure trail width and depth at established monitoring points	High	Permanently located monitoring points in high use areas Frequency is indicated in Trail Maintenance Plan for each Forest Service Unit	Annually at end of season
Day Use (Number of day users)	Measure day use levels to provide base data in the event limits on day use are considered in the future	Count total day use permits; segregate by trailhead	High	All permits to be tallied annually	Annually at end of season
Dogs	Document number of incidents where contact was made regarding dogs threatening, harassing or intimidating wildlife or visitors	Record all incidents on Incident Report forms or Violation Notices	High	All incidents as they occur	Annually
Aircraft Overflights	Assess extent of problems with low aircraft over flights and determine type of aircraft (private, government or commercial)	Count the number of aircraft over flights occurring below the 2000 ft advisory and document type of aircraft on Incident Report	moderate	When observed	Annually at end of season

ACTIVITY, PRACTICE, OR EFFECT	STANDARD OF COMPARISON	VARIABILITY INDICATING ACTION	ACTION TO BE TAKEN	RESPSONSIBLE STAFF	AVERAGE ANNUAL COST
Number of User Created Trails	Desolation Wilderness Guidelines: Opp. Classes I - IV: First evaluation establishes baseline condition. ELSMA: All trails will be either designated and managed or eliminated.	Op. Classes I - IV: Number of user created trails not to exceed the baseline in any area. ELSMA: No user created trails will be allowed to develop.	See list of possible management actions in Appendix A	Wilderness Managers	$2,000 each year (part of Wilderness Ranger's salary)
Trail Conditions	First evaluation establishes baseline condition. Subsequent monitoring is compared to this baseline.	Increase of 50% in trail cross section.	Increased maintenance or relocation	Wilderness Managers	$ 1,500 each year (part of Wilderness Ranger's salary)
Day Use (Number of day users)				Wilderness Manager/RIM coordinator	$ 4,800 each year
Dogs	Dogs are not an impediment or hazard to the safety or convenience of any person or harassing or molesting wildlife.	Incident	Law enforcement action; visitor education	Wilderness Managers	$1,000 each year (part of Wilderness Ranger's salary)
Aircraft Overflights	No aircraft flying below the 2000 foot advisory level	Aircraft flying below the 2000 foot advisory level.	Focused user group education	Wilderness Managers	$1,500 each year (part of Wilderness Ranger's salary)

ACTIVITY, PRACTICE, OR EFFECT	MONITORING OBJECTIVE	MONITORING TECHNIQUE	PRECISION OR VALIDITY	MINIMUM FREQUENCY	REPORTING PERIOD
Recreational Shooting	Assess number of incidents regarding this activity and need for further actions	All complaints regarding shooting will be documented in incident reports. Number of incidents will be reviewed annually.	high/moderate	Each District or unit will maintain file of incident reports regarding shooting incidents as they occur	Annually at end of season
Outfitter/ Guide Performance	Assess outfitter compliance with wilderness regulations, "LNT" practices and client education	Outfitter campsite visits, trail encounters, and client surveys	moderate	annually	Annually at end of season
Peak Registers	Monitor authorized peak registers to ensure compliance with agreements.	Observation; Removal of any unauthorized peak registers;	moderate	three peaks per year	annually
Restoration of closed campsites, trails or other impacted areas	To ensure closed areas are not being used and restoration techniques are effective	To be determined in site specific restoration implementation plans	High	All restored areas will be monitored annually for 3 years and then every other year for another 10 years after restoration work is completed	Compile report annually
Presence of Noxious Weeds	Monitor vulnerable areas to prevent establishment and to ensure success of eradication work	Field observation & mapping, especially in or near trails, camp-ing areas, trail-heads, & grazing allotments	Moderate	Annually	Annually

ACTIVITY, PRACTICE, OR EFFECT	STANDARD OF COMPARISON	VARIABILITY INDICATING ACTION	ACTION TO BE TAKEN	RESPONSIBLE STAFF	AVERAGE ANNUAL COST
Recreational Shooting	The Wilderness Act: protect wilderness character & provide out-standing opportunities for solitude. FSM 2320: protect wilderness values, incl. solitude & favor wilderness dependent activities. LNT Principles: respect other visitor's need for solitude. Also 36 CFR 261.10.	Number of incidents indicates diminished opportunities for solitude and/or visitor safety is impaired	Consider need for a Forest Order restricting shooting in Desolation Wilderness if situation warrants this	Wilderness Managers	$500 each year (part of Wilderness Ranger's salary)
Outfitter/ Guide Performance	Desolation Wilderness Management Guidelines, "LNT" practices, Desolation Wilderness Regulations	Compliance	Enforcement of special use permit provisions	Wilderness Managers	$2,000 each year
Peak Registers				Wilderness Managers	$300 each year (part of Wilderness Ranger's salary)
Restoration of closed campsites, trails or other impacted areas			Adjust Restoration planning; See list of possible actions in Appendix A	Wilderness Managers to coordinate with Botanist or Restoration Specialist	$ 500 each year or to be determined
Presence of Noxious Weeds	Goal is to prevent any noxious weed from becoming established and to eradicate any that are identified	presence of any noxious weed	Eradication	Forest Noxious Weed Coordinator	$ 500 each year

ACTIVITY, PRACTICE, OR EFFECT	MONITORING OBJECTIVE	MONITORING TECHNIQUE	PRECISION OR VALIDITY	MINIMUM FREQUENCY	REPORTING PERIOD
Lake shore conditions	To determine if soil cover adjacent to lakes is adequate to prevent erosion and filter sediment	U.S. Forest Service Region-5 Erosion Hazard Rating System (EHR)	High	Key areas to be monitored annually	Compile report every 3 to 5 years
Utilization of herbaceous species	Measure the percentage of annual herbage production removed	Height, weight, ocular, stubble height	Moderate	Monitor key areas twice yearly	annually
Utilization of woody riparian species	Measure utilization of woody riparian species	Cole browse or Extensive browse	Low to moderate	Monitor key areas twice yearly	annually
Herbaceous species composition*	To determine early seral or mid-to-late seral plant composition	step-point transects	Moderate	Monitor key areas once every 5 years	Compile Report every 5 years
Herbaceous plant distribution and vigor*	To determine if species are well distributed, vigorous, and reproducing well	Quadrat or nested frequency methods	High	Monitor key areas once every 5 years	Compile Report every 5 years
Deciduous woody riparian plant vigor and age class distribution*	To determine if species are well distributed, vigorous, and reproducing well	Cole Browse	Moderate	Monitor key areas once every 5 years	Compile Report every 5 years
Soil disturbance: Groundcover*	To determine if soil cover reflects site capability	U.S. Forest Service Region-5 Erosion Hazard Rating System (EHR)	High	Annually	Compile report every 3 to 5 years
Soil disturbance: Rills and Gullies*	Assess presence of erosional features	Presence or absence of erosional features	High	Annually	Compile report every 3 to 5 years

* These Monitoring Activities may be revised upon completion of Forest wide standards and Guidelines for Range.

ACTIVITY, PRACTICE, OR EFFECT	STANDARD OF COMPARISON	VARIABILITY INDICATING ACTION	ACTION TO BE TAKEN	RESPONSIBLE STAFF	AVERAGE ANNUAL COST
Lake shore conditions	EHR should be "Low"	High EHR	See list of possible actions in Appendix A	District Wilderness Manager to coordinate with watershed specialist	$ 500 each year
Utilization of herbaceous species	varies, depending on the area	Utilization levels exceeding standard 3 out of 5 years	See list of possible actions in Appendix A	Range Conservationist	$ 600 per allotment each year
Utilization of woody riparian species	20% utilization	Exceeds 20% 3 out of 5 years	See list of possible actions in Appendix A	Range Conservationist	$ 600 per allotment each year
Herbaceous species composition*	≤30% early seral ≥50% or more mid-to-late seral	<25% of vegetation is m is mid-to-late seral	Adjust utilization	Range Conservationist	$ 200 per year
Herbaceous plant distribution and vigor*	Mid-to-late seral species are well distributed, growing vigorously and reproducing well	Poor vigor; not reproducing; species are clumped	Adjust utilization	Range Conservationist	$ 200 per year
Deciduous woody riparian plant vigor and age class distribution*	Woody riparian species are well distributed, growing vigorously and reproducing well; broad range of size classes exists	Poor vigor; not reproducing; species are clumped; narrow range of size classes exists	Adjust utilization	Range Conservationist	$ 200 per year
Soil disturbance: Groundcover*	EHR should be "Low"	High EHR	Data to be used in establishing Ecological Conditions/ utilization levels	District Wilderness Manager to coordinate with watershed specialist	$ 200 per year
Soil Disturbance: Rills and Gullies*	Rills and gullies should be absent		Data to be used in establishing Ecological Conditions/ utilization levels	District Wilderness Manager to coordinate with watershed specialist	$ 200 per year

ACTIVITY, PRACTICE, OR EFFECT	MONITORING OBJECTIVE	MONITORING TECHNIQUE	PRECISION OR VALIDITY	MINIMUM FREQUENCY	REPORTING PERIOD
Soil Disturbance: Pedestalling*	Assess presence of erosion features	Presence or absence of erosion features	High	Three randomly selected sites, annually	Compile report every 3 to 5 years
Channel Conditions: Morphology*	To determine if channel features reflect site capability	Rosgen Classification System (1996)	Moderate	Three randomly selected sites in sensitive areas, annually	Compile report every 3 to 5 years
Channel Conditions: Stream bank Stability*	To determine if bank stability is within range of natural variability	U.S. Forest Service Region-5 Stream Condition Inventory (SCI) protocol	Moderate	Three randomly selected sites in sensitive areas, annually	Compile report every 3 to 5 years
Channel Conditions: Undercut banks*	To determine if undercut banks reflect site capabilities	U.S. Forest Service Region-5 Stream Condition Inventory (SCI) Protocol by Rosgen channel types	High	Key areas annually	Compile report every 3 to 5 years
Channel Conditions: Stream substrate* particle size	To determine if particle size distribution meets requirements for aquatic organism habitat	Pebble counts	High	Key areas annually	Compile report every 3 to 5 years
Water Quality: Fecal Coliform	To determine effectiveness of setbacks for disposal of human waste	Select samples at selected lakes and analyze at State approved water quality laboratories	High	Three random samples from Eagle, Grouse, Sylvia, Lake of the Woods, Ropi, Twin, Tamarak, Avalanche, Gilmore, Stony, Velma and Maude (may add or subtract from sample pool to capture lakes of highest use). Monitor annually (immediately following rain)	Compile report every 3 to 5 years

ACTIVITY, PRACTICE, OR EFFECT	STANDARD OF COMPARISON	VARIABILITY INDICATING ACTION	ACTION TO BE TAKEN	RESPONSIBLE STAFF	AVERAGE ANNUAL COST
Soil Disturbance: Pedestalling*	Pedestalling should be absent		Data to be used in establishing Ecological Conditions/ utilization levels	District Wilderness Manager to coordinate with watershed specialist	$ 200 per year
Channel Conditions: Morphology*	Channels classified to meet site capability	Channel type does not meet site capability	Data to be used in establishing Ecological Conditions/ utilization levels	District Wilderness Manager to coordinate with Watershed Specialist	$ 600 per year
Channel Conditions: Streambank Stability*	Natural range of variability	Streambanks unstable	Data to be used in establishing Ecological Conditions/ utilization levels	District Wilderness Manager to coordinate with Watershed Specialist	$ 600 per year
Channel Conditions: Undercut banks*	Rosgen Type A & B Channels: None to little C Channels: 50% to 85% undercut No D, F or G channels present No evidence of slumping or bank failure	A & B channels have sections continuously undercut C channels <20% undercut E channels 50% undercut Evidence of slumping and bank failure	Data to be used in establishing Ecological Conditions/ utilization levels	Wilderness Manager to coordinate with Watershed Specialist	$ 600 per year
Channel Conditions: Stream substrate particle size*	Fine substrate <2mm makes up less than 15% of total stream substrate	Fine substrate <2mm makes up more than 15% of total stream substrate	Data to be used in establishing Ecological Conditions/ utilization levels	Wilderness Manager to coordinate with Watershed Specialist	$ 600 per year
Water Quality: Fecal Coliform	No coliform present	Coliform present		District Wilderness Manager to coordinate with Watershed Specialist	$ 700 per year

ACTIVITY, PRACTICE, OR EFFECT	MONITORING OBJECTIVE	MONITORING TECHNIQUE	PRECISION OR VALIDITY	MINIMUM FREQUENCY	REPORTING PERIOD
Water and Air Quality: Water Chemistry	To compare trends in pH, ANC, clarity, temperature and zooplankton as related to air quality	Coordinate with Jim Simas of University of California, Santa Barbara	Moderate	Annually at selected lakes	Compile report every 3 to 5 years
Air Quality Related Values	To meet the intent of the Clean Air Act in protecting Class I Airsheds	Various; to be determined	To be determined	To be determined	Annually
Presence of mountain yellow-legged frog	Assess distribution in wilderness and monitor populations in locations where use impacts threaten viability	Distribution inventory. Counts of individuals. Habitat condition.	Moderate to high	Annually at selected stream reaches, ponds or lakes	Annually

ACTIVITY, PRACTICE, OR EFFECT	STANDARD OF COMPARISON	VARIABILITY INDICATING ACTION	ACTION TO BE TAKEN	RESPONSIBLE STAFF	AVERAGE ANNUAL COST
Water and Air Quality: Water Chemistry	No downward trend	Downward trend		Forest air resource staff to coordinate with Forest Hydrologist and Wilderness Managers	$ 3,000 per year
Air Quality Related Values	See "Guidelines for Evaluating Air Pollution Impacts on Class I Wilderness Areas in the PSW Region". See also Beth Plymales Master Thesis.	To be determined	To be determined	Forest Air Resources Coordinator and Wilderness Managers	To be determined
Presence of mountain yellow-legged frog	NFMA, population viability, known habitat requirements Initial inventory establishes distribution, habitat condition & abundance at specific site for future comparison	Frogs no longer present at site	Work with CF&G to develop appropriate management strategy	Forest Fisheries Biologist, Wildlife Biologist	$ 4,000 per year

APPENDIX A

RANGE OF MANAGEMENT ACTIONS TO BE TAKEN IF LAC STANDARDS ARE EXCEEDED

INDICATOR - Number of groups encountered per day while traveling.

Actions to be taken if Standards are Exceeded

- De-emphasize attraction of excessively used areas; redirect visitors to non-wilderness trails.
- Improve signing, parking, and promotion of nearby non-wilderness trails.
- Develop additional nearby trails outside the wilderness.
- Adjust or remove administrative and informational signing.
- Reduce trailhead access, parking and road signs.
- Lower trail maintenance levels to discourage use.
- Implement and/or adjust day use quotas in areas where standards are exceeded.
- Lower overnight quotas for areas where standards are exceeded.
- Allow only day use.

INDICATOR - Number of occupied campsites within sight or sound of a campsite.

Actions to be taken if Standards are Exceeded

- Inform the public of "Leave No Trace" ethics and practices, including site selection (the use of screened sites located away from lakes, streams, meadows, and other visitors) and noise considerations through public service messages, trailhead notices, informational brochures, and personal contact.
- De-emphasize attraction of excessively used areas; redirect visitors to trails and destinations outside of wilderness.
- Adjust or remove administrative and informational signing.
- Reduce access, parking, and road signs at trailheads leading into areas where standards are exceeded.
- Close campsites which are undesirable or unacceptable, or are in excess of the desired number of sites for each area. Campsites which will be targeted for closure include those sites which are: too close to water, trails or other campsites; highly visible; in riparian areas or on other fragile ground; or excessively impacted with erosion problems. Before eliminating campsites, consider if this action will cause formation of new campsites.
- Revegetate damaged areas and post site restoration messages.
- Lower overnight quotas in areas where standards are exceeded.
- Require users to camp in designated campsites.
- Increase wilderness ranger contacts regarding excessive noise from campers where that is a problem.

INDICATORS

Ecological Condition and Trend

Standards:

1. **Utilization of Herbaceous Species**
2. **Utilization of Woody Riparian Species**

Actions to be taken if standards are exceeded

- Change range management practices, including herding or changing salting locations. No new structural improvements will be built to control use.
- Change the season of use, reduce the number of animals, and/or reduce utilization levels
- Remove livestock from area until resources have recovered and utilization standards are met (resting).

APPENDIX B

QUOTA TABLE

The following table indicates the initial overnight camping quota to be implemented. The overnight camping quota will be implemented by zone. Day Use Quotas, if implemented in the future, will be administered by trailhead. As indicated in Appendix A, the quotas may be adjusted after monitoring if it is determined that Indicator Standards are being exceeded.

Table B-1, Overnight Use Quotas by Zone, indicates the total number of persons permitted to camp overnight the first night of their trip in a given zone from all of the trailheads. Additional people may be camped at a destination if it was a later stop in their itinerary. The total number of people camping in a given zone on the first night of their stay will be the sum of those entering that zone from all of the trailheads that provide access to that area. The average length of stay for Desolation campers is 2.3 nights, and currently the majority of Desolation's overnight visitors choose to camp in the same location for the duration of their trip. Therefore, on high use days (typically weekend and holidays), the number of persons camped in a zone would average 2.3 times the quota number for that zone.

Table B-1 Overnight Use Quota by Zone

	Trailhead	Opportunity Class	Encounter Standard	Daily Camping Quota (persons)
Eldorado zones (primarily)				
001 Rockbound Lk	Loon (1)	3	4	
	Buck Is. (15)	3	4	
001 Total				**25**
005 Brown Mt	Loon (1)	1	1	
	Van Vleck (2)	1	1	
	Buck Is. (15)	1	1	
005 Total				**8**
006 Rubicon Res.	Loon (1)	2	2	
	Buck Is. (15)	2	2	
006 Total				**23**
008 Tells	Van Vleck (2)	1	1	**11**
009 Highland	Van Vleck (2)	2	2	**8**
010 The Lelands	Barrett (3A)	2	2	**19**
011 Camper Flat	Loon (1)	2	2	
	Rockbound (3B)	2	2	
	Buck Is. (15)	2	2	
011 Total				**20**
013 Lks 3,5	Van Vleck (2)	2	2	
	Barrett (3A)	2	2	
013 Total				**8**
014 Schmidell	Rockbound (3B)	3	4	**10**
016 Middle Velma	Eagle Falls (12)	3	4	**20**
019 Lawrence	Barrett (3A)	3	4	**8**
020 Red Peak	Barrett (3A)	1	1	**6**

	Trailhead	Opportunity Class	Encounter Standard	Daily Camping Quota (persons)
021 Lois	Rockbound (3B)	3	4	**8**
022 China Flat	Rockbound (3B)	2	2	**12**
025 Maude	Rockbound (3B)	3	4	**12**
026 Rockbound Pass	Rockbound (3B)	3	4	**6**
027 Mt Price	Lyons Cr. (4)	1	1	**12**
031 Tyler	Rockbound (3B)	3	4	**8**
032 Twin	Twin Lks (3C)	4	15	**20**
033 Aloha	Twin Bridges(5)	3	4	
	Echo (7)	3	4	
	Glen Alpine (8)	3	4	
033 Total				**36**
036 Hemlock	Twin Lks (3C)	4	15	**12**
037 Smith	Twin Lks (3C)	2	2	**5**
038 Waca	Twin Bridges(5)	2	2	**5**
039 American	Twin Bridges(5)	2	2	**10**
040 Lk of the Woods	Twin Bridges(5)	3	4	
	Echo (7)	3	4	
040 Total				**20**
043 Lyons	Lyons Cr. (4)	3	4	**15**
044 Avalanche	Twin Bridges(5)	4	15	**20**
045 Ralston	Ralston (6)	1	1	**4**
Eldorado Totals				**371**

	Trailhead	Opportunity Class	Encounter Standard	Daily Camping Quota (persons)
LTBMU Zones (Primarily)				
002 General Cr(PCT)	General Creek (14)	1	1	**10**
003 Genevieve	Meeks (13)	3	4	**20**
004 Grouse Lks	Meeks (13)	1	1	**2**
007 Stony Ridge	Meeks (13)	3	4	**20**
012 Phipps	Meeks (13)	2	2	**4**
015 Dicks Pk.	Glen Alpine (8)	1	1	
	Bayview (11)	1	1	
	Eagle Falls (12)	1	1	
015 Total				**4**
017 Lower Velmas	Bayview (11)	3	4	
	Eagle Falls (12)	3	4	
017 Total				**40**
018 Eagle	Eagle Falls (12)	ELSMA	35	**6**
023 Dicks	Eagle Falls (12)	3	4	
	Bayview (11)	3	4	
023 Total				**16**
024 Kalmia	Bayview (11)	2	2	**6**
028 Half Moon	Glen Alpine (8)	2	2	**5**
029 Gilmore	Glen Alpine (8)	4	15	
	Fallen Leaf (9)	4	15	
	Mt.Tallac (10)	4	15	
029 Total				**18**

	Trailhead	Opportunity Class	Encounter Standard	Daily Camping Quota (persons)
030 Cathedral	Fallen Leaf (9)	4	15	
	Mt.Tallac (10)	4	15	
030 Total				4
034 Susie	Glen Alpine (8)	3	4	8
035 Grass	Glen Alpine (8)	3	4	8
041 Tamarack	Echo (7)	4	15	20
042 Triangle	Echo (7)	1	1	2
LTB Totals				193
Grand Total*				564

* includes an estimated 25% non-compliance rate

KEY:

See Desolation Wilderness Management Zones and Opportunity Classes Map for zone locations and boundaries.

Trailhead: For each zone, the trailheads that provide primary access to the zone are given.

Opportunity Class: The Opportunity Class designation given to the zone - this differs by alternative.

Encounter Standard: The encounter standard is the indicator standard for the average number of encounters per day. The number given corresponds to the Opportunity Class designation for the zone.

Daily Camping Quota:

The overnight quota will be administered by zone. As with the current quota, this limit will apply to camping on the first night only. The average length of stay for Desolation campers is 2.3 nights and currently the majority of Desolation's overnight visitors choose to camp in the same location for the duration of their trip. Therefore the number of persons camped in a zone would average 2.3 times the quota number on high use days (typically weekends and holidays). If the indicator standards for a zone are exceeded, the quota for that zone may be changed in order to meet standards.

APPENDIX C

Table C-1 Trail Maintenance Standards

ELDORADO NATIONAL FOREST					
Trail Name	Trail Number	miles	Opport. Class	Maint Std	User Grps
Pacific Crest Trail	2000.1	8.3	1	E	H,E
Red Peak	15E08.2	3.7	1	D	H,E
Lawrence Lake	15E08.A	0.1	3	D	H
Lake # 3	15E08.B	0.5	2	D	H, E
Highland	15E21.2	3.2	1	MD	H
McConnell Loop	16E06.	6.2	2	MD	H
Highland Spur	16E06.A	0	2	abandoned	
Blakely	16E07.	4.3	3	D	H,E
Rockbound	16E08.2	6.4	3,3,2	D	H,E
Tyler Lake	16E09 (A)	0	3	abandoned	
Gertrude Lake	16E09.	2.3	3	MD	H
Twin Lakes	16E12.2	1.5	4	D	H
Hemlock	16E12.A	1.7	4,2	D	H
Lyons	16E13.2	1.6	3	D	H,E
Sylvia	16E13.A	0.5	3	D	H,E
Schmidell	16E28.	1.5	3	MD	H,E
Rubicon	16E30.2	12.6	3,2,2,2	D	H,E
Clyde Lake	16E30.A	0.5	2	MD	H
Red Peak Stock Trail	16E31.1	4.4	1	MD	H,E
Tahoe Yosemite	17E01.3	1.3	3	D	H,E
Lk of the Woods	17E11.2	2.7	3	D	H,E
Aloha Tie	17E11.A	0	3	abandoned	
Aloha	17E39.	1.7	3	D	H
Aloha Desolation	17E40.	1	3	D	H,E
Velma	17E34.2	2.6	1	MD	H,E
Mt Ralston	17E41.1	1	1	MD	H
Ralston Peak	17E41.A	0.5	1	MD	H
Eldorado totals	E =	8.3			
	D =	39.6			
	MD =	22.2			
Total miles maintained		70.1			

E = Easiest D= More Difficult MD = Most Difficult

Key:

Trail Name: The name of the trail or trail segment, as listed in maintenance logs or Forest Trail System Inventory.

Trail Number: The number assigned to the trail segment by the Forest

Miles: The miles of trail that will be maintained

Opport. Class: the Opportunity Class(es) in which the trail is located.

Maint Standard: The maintenance standards to which the trail will be maintained:
E = easiest, D = More Difficult, MD=Most Difficult

User Groups: The user groups for whom the trail will be maintained/managed.
H= hiker, E=Equestrian

LAKE TAHOE BASIN MANAGEMENT UNIT (LTBMU)					
Trail Name	Trail Number	miles	Opport. Class	Maint Std	User Grps
Genevieve	16E03	2.2	3	D	H,E
Tahoe Yosemite Trail	17E01.2	7	3	D	H,E
Eagle Meadow	17E02	1	3	D	H
Eagle Lake	17E03	0.1	ELSMA	E	H
Eagle Falls	17E03.1	3	ELSMA	E	H
Bayview/Maggies	17E04.2	2.3	3	D	H,E
Cathedral Spur	17E05	0.2	4	D	H
Cathedral Trail	17E05.1	0.3	4	D	H
Grass Lk	17E07	0.9	3	D	H,E
Glen Alpine	17E06.1	1	4	E	H,E
Glen Alpine	17E06.2	1	4	E	H,E
Phipps Trail	17E08	0.4	2	MD	H,E
Lk. Margery	17E09	0.5	3	D	H,E
Triangle Lk	17E10A	0.6	1	MD	H,E
Tamarack	17E10.2	3	4	MD	H
Lk of the Woods	17E11	0.3	3	D	H,E
Half Moon	17E31	1.5	2	MD	H,E
Susie	17E32	0.5	3	D	H,E
Mt Tallac Ridge	17E33	0.5	4	E	H
Floating Island/Mt Tallac	17E33.2	4.7	4	E	H
Velma Lakes	17E34	1	3	D	H,E
Triangle Lateral	17E38	0.3	1	MD	H
Mt Ralston	17E41.1	1.3	1	MD	H
Cathedral Lateral	17E45	0.4	4	D	H
Ralston Lk	2000.1	1	4	E	H
Pacific Crest Trail	2000.2	13.5	4,3,3,3,2,3	E	H,E
LTBMU totals	E =	24.8			
	D =	16.6			
	MD =	7.1			
Total miles maintained		**48.5**			
Wilderness total miles maintained:		**118.6**			

E = Easiest D= More Difficult MD = Most Difficult

Key:

Trail Name: The name of the trail or trail segment, as listed in maintenance logs or Forest Trail System Inventory.

Trail Number: The number assigned to the trail segment by the Forest

Miles: The miles of trail that will be maintained

Opport. Class: the Opportunity Class(es) in which the trail is located.

Maint Standard: The maintenance standards to which the trail will be maintained:
E = easiest, D = More Difficult, MD=Most Difficult

User Groups: The user groups for whom the trail will be maintained/managed.
H= hiker, E=Equestrian

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