REFERENCES

LAWS REFERENCED

Antiquities Act of 1906. 16 U.S.C. 431–433.

Archaeological Resources Protection Act of 1979, as amended. 16 U.S.C. 470aa–mm; Pub. L. 96-95. October 1, 1979.

Architectural Barriers Act of 1968. 42 U.S.C. 4151 et seq. Implementing Regulation: 41 CFR Subpart 101-19.6.

California Wilderness Act of 1984. 16 U.S.C. 1131 et seq.; Pub. L. 98-425; 98 Stat. L. 1619. Enacted September 28, 1984.

Clean Air Act of 1963, as amended. 42 U.S.C. 7401 et seq.; Pub. L. 88-206; 77 Stat. 392.

Clean Water Act of 1972, as amended. 33 U.S.C. 1251 et seq.; Pub. L. 92-500; 86 Stat. L. 816. October 18, 1972.

Council on Environmental Quality (CEQ). 40 CFR 1500 et seq.

Endangered Species Act of 1973 (ESA), as amended. 16 U.S.C. 1531–1544; Pub. L. 93-205; 87 Stat. L. 884. Approved December 28, 1973.

Executive Order 11988, *Floodplain Management.* 42 FR 26951. May 24, 1977.

Executive Order 11990, *Protection of Wetlands.* 42 FR 26961. May 24, 1977.

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.* 59 FR 7629. February 11, 1994.

General Authorities Act. 16 U.S.C. 1a-8; Pub. L. 91-383; 84 Stat. L. 825. August 18, 1970.

Historic Sites Act of 1935, as amended. 16 U.S.C. 461–467; 49 Stat. L. 666. August 21, 1935.

National Environmental Policy Act of 1969 (NEPA), as amended. 42 U.S.C. 4321 et seq.; Pub. L. 91-190, Sec. 2; 83 Stat. L. 852. Jan. 1, 1970.

National Historic Preservation Act of 1966 (NHPA), as amended. 16 U.S.C. 470 et seq.; Pub. L. 89-665. October 15, 1966.

National Park Service Organic Act. 16 U.S.C. 1 et seq. August. 25, 1916.

National Register of Historic Places. 36 CFR 60. July 1, 2004.

Native American Graves Protection and Repatriation Act of 1990. 25 U.S.C. 3001–3013; Pub. L. 101-601; 104 Stat. L. 3048. November 16, 1990.

Omnibus Public Land Management Act of 2009. H.R. 146. March 30, 2009.

Protection of Historic Properties, Section 106 Procedures. 36 CFR 800. July 1, 2003.

Redwood Act. 16 U.S.C. 1a-1; Pub. L. 95-250; 92 Stat. L. 163. March 27, 1978.

Rehabilitation Act of 1973, as amended, section 504. 29 U.S.C. 794; Pub. L. 93-112.

Secretarial Order 3175: Identification, Conservation, and Protection of Indian Trust Assets. November 8, 1993.

Wilderness Act of 1964. 16 U.S.C. 1131–1136; P.L. 88-577; 78 Stat. L. 890. Enacted September 3, 1964.

SELECTED BIBLIOGRAPHY

California Water Quality Control Board Central Valley Regional 1995 *Water Quality Control Plan for the Tulare Lake Basin*, Second Edition.

Derlet, R. 2005. *Kings Canyon National Park: 2005 Report on Backcountry Water Analysis for Coliforms*.

Derlet, R., and J. R. Carlson. 2006. "Coliform Bacteria in Sierra Nevada Wilderness Lakes and Streams: What Is the Impact of Backpackers, Pack Animals, and Cattle?" *Wilderness and Environmental Medicine* 17(1):15–20.

EPA (Environmental Protection Agency). 1998. *Final Guidance For Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses* http://www.epa.gov/compliance/resources/policies/ej/ej_guidance_nepa_epa0498.pdf.

Landres, P., C. Barns, J. G. Dennis, T. Devine, P. Geissler, C. S. McCasland, L. Merigliano, J. Seastrand, and R. Swain. 2008. *Keeping It Wild: An Interagency Strategy to Monitor Trends in Wilderness Character across the National Wilderness Preservation System*. Gen. Tech. Rep. RMRS-GTR-212. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

Landres, P., M. B. Hennessy, K. Schlenker, D. N. Cole, and S. Boutcher. 2008. *Applying the Concept of Wilderness Character to National Forest Planning, Monitoring, and Management*. Gen. Tech. Rep. RMRS-GTR-217WWW. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

Landres, P., S. Boutcher, L. Merigliano, C. Barns, D. Davis, T. Hall, S. Henry, B. Hunter, P. Janiga, M. Laker, A. McPherson, D. S. Powell, M. Rowan, and S. Sater. 2005. *Monitoring Selected Conditions Related to Wilderness Character: A National Framework*. Gen. Tech. Rep. RMRS-GTR-151. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

NPS (National Park Service, U.S. Department of the Interior).

2009. *Sequoia and Kings Canyon National Park Management Directive No. 49: Minimum Requirement Analysis and Determination*.

2008. *Climate-Friendly Parks: Sequoia and Kings Canyon National Parks Action Plan*. National Park Service. Available at Sequoia and Kings Canyon National Parks.

2007. *Final General Management Plan and Comprehensive River Management Plan / Final Environmental Impact Statement (FGMP/FEIS), Sequoia and Kings Canyon National Parks*.

2006a. *Management Policies 2006*. Acquired online at: http://www.nps.gov/policy/mp/policies.html

2006b. *Results of LeConte Canyon Ranger Station Plant Survey, July 24–25, 2006*. Prepared by Erik Frenzel, Division of Resources Management and Science, Sequoia and Kings Canyon National Parks.

2005. *Museum Handbook*. National Park Service Museum Management Program. Available online at: http://www.nps.gov/history/museum/publications/handbook.html

2003. *Fire and Fuels Management Plan*. Sequoia and Kings Canyon National Parks. November 2003.

2003. *Interim Technical Guidance on Assessing Impacts and Impairment to Natural Resources.*

2001. *Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision Making*. December 12, 2001.

2000. *Director's Order 47: Soundscape Preservation and Noise Management*. December 1, 2000.

1999. *Reference Manual RM 41: Wilderness Preservation and Management*. July 1999.

1999. *Natural and Cultural Resources Management Plan*. Sequoia and Kings Canyon National Parks. December 1999.

1998. *Director's Order 28: Cultural Resource Management*. June 11, 1998.

1991. *Natural Resource Management Guidelines*, NPS-77.

1989. *Sequoia and Kings Canyon National Park: Architectural Character Guidelines*.

1986a. *Sequoia and Kings Canyon National Parks: Backcountry Management Plan*.

1986b. *Sequoia and Kings Canyon National Parks: Stock Use and Meadow Management Plan*.

1976. *Manual for Museums*. R. H. Lewis, National Park Service. January 1, 1976.

USFWS (U.S. Fish and Wildlife Service, U.S. Department of the Interior).

2009. Updated species list. Obtained at: http://www.fws.gov/sacramento/es/spp_list.htm

2008. Designation of Critical Habitat for the Sierra Nevada Bighorn Sheep and Taxonomic Revision. Final Rule. 73 FR 45533–45604, published August 5, 2008.

2006. Federal Endangered and Threatened Species That Occur in or May Be Affected by Projects in the Counties and/or USGS 7.5 Minute Quads. Document Number: 060228051325. Database Last Updated: February 14, 2006. Quad Lists and County (Tulare and Fresno).

2006. Customized Species List Letter, Sacramento Fish and Wildlife Office Document Number 060307030821.

2006. Informal Endangered Species Consultation on Replacing Deteriorating Wilderness Ranger Stations: Le Conte, Rae Lakes, Crabtree Letter. Sacramento Fish and Wildlife Office Document Number 1-1-06-I-0972.

APPENDIX A: ARCHITECTURAL STYLES OF WILDERNESS STRUCTURES

Bearpaw Ranger Station (ca. 1935)

Hockett Meadow Ranger Station (1998)

Little Five Lakes Ranger Station (Yurt; 1999)

Little Five Ranger Station (removed and replaced, 1999)

McClure Meadow Ranger Station (1996)

Crabtree Ranger Station (replaced 1970)

Excerpts from the *Architectural Character Guidelines*

Sequoia and Kings Canyon National Parks

Foreword

Architecture in national parks must be special. Park management caught up in the complexity of the post-war world, placed less and less emphasis on separateness from the outside world and unified design within single parks. The impact of this period can be seen in the presence of numerous "modern" structures that largely ignore the design premises of the rustic era and seek little compromise with adjacent park structures …

… Park visitors still need to perceive the parks as special, significant places. And one way to bring this about is to create a human environment that is different from the daily urban environment. Unified park image has resurfaced once again as a way of seeking distinctive park images, and is now a design goal clearly expressed by Former NPS Director William Penn Mott, Jr. …

… National parks should have an architecture that contributes to the understanding that they are special places that require special attitudes and behavior on the part of park visitors.

Ultimately, park architecture has a significant impact on how visitors perceive and use the park. At its best, good architecture provides a special human setting in which the values of the park are clarified and reinforced. At its worst, it weakens and cheapens the entire park experience, subtracting from the values and perceptions that allow a park to survive and prosper.

Analysis of Existing Architecture

Siting: Buildings are placed to minimize alteration or terrain or intrusion into the natural character of site. Buildings are always subordinate to nature. In a natural setting, buildings fit between trees accentuating the spaces in the landscape.

Analysis of Existing Architecture

Walls/Wall Materials: Facades generally have a three-part composition—foundation wall, main wall, and upper wall at gable ends. These parts are distinguished by changes in material, which in turn are emphasized by wood frames or trim members. The facade is generally horizontal by virtue of its overall shape and horizontal board siding, which lends additional emphasis with its horizontal jointing. Sometimes timber framing members are exposed, adding a minor vertical pattern. Windows are usually rectangular and divided into small lights. In small buildings a typical small window is repeated throughout. A variety of wood siding is used, either as a continuous skin or as infill between timber frames.

Guidelines for Building Design

Working with the Site: Buildings are an intrusion into the natural environment. Consequences of this intrusion affect both the integrity of the site and the visitors' enjoyment. It must be remembered that in a national park, the highest values are protecting an irreplaceable resource and exposing the visitor to the surrounding natural environment without it creating harmful intrusions. If the environment is harmed or if visitors are separated from the outdoors, the main purpose of the park will be defeated.

Site Character: Buildings should be seen among tree masses and geological features as integral parts of the natural scene. The natural landscape should continue through the building complex. Hence, rustic buildings should work with the existing land form.

Intentionally Left Blank

APPENDIX B: MINIMUM REQUIREMENT / MINIMUM TOOL ANALYSIS

This is the minimum requirement / minimum tool analysis decision matrix used for all Sequoia and Kings Canyon National Parks projects (adapted from Arthur Carhart National Wilderness Training Center's *Minimum Requirement Decision Guide*). This was originally drafted in 2006, but updated and revised throughout the EA process.

SEQUOIA AND KINGS CANYON NATIONAL PARKS
WILDERNESS AND BACKCOUNTRY MINIMUM TOOL ANALYSIS—2009

Background

Section 4(c) of the Wilderness Act states: *"… except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be …* ***no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area****."*

Section 6.3.5 of NPS *Management Policies 2006* states that the minimum requirement concept will be a two-step process to (1) determine if the management action is necessary *"for administration of the area as wilderness and does not cause a significant impact to wilderness resources and character; and* (2) *the techniques and types of equipment needed to ensure that impacts on wilderness resources and character are minimized."* Also, *"When determining minimum requirements,* ***the potential disruption of wilderness character and resources will be*** *considered before, and* ***given significantly more weight than, economic efficiency and convenience."***

Section 5.14 of Sequoia and Kings Canyon National Parks' BMP (which covers both wilderness and non-wilderness backcountry and is NEPA compliant), Administration, provides guidance on how park managers are to treat the above generally prohibited actions of section 4(c) of the *Wilderness Act*. Specifically treated are radio communications (5.14.2.1), helicopters (5.14.2.2), mechanized trail maintenance equipment (5.14.2.3), cabins (5.14.2.4), administrative camps (5.14.2.5), administrative stock use (5.14.2.6), NPS backcountry crews (5.14.2.7), and NPS personnel (5.14.2.8). Section 5.14.3 also provides reference to the *Administrative Use Guideline Addendum* (January 1985), which provides further clarification on administrative and management actions occurring in Sequoia and Kings Canyon National Parks' wilderness and backcountry.

Section 5.16 of Sequoia and Kings Canyon National Parks' BMP, Scientific Study and Impact Monitoring, provides guidance on how park managers are to conduct "scientific study and monitoring" in wilderness and backcountry areas.

The 2007 Record of Decision for the 2006 General Management Plan and FEIS states: "The parks' designated wilderness and other areas managed as wilderness are zoned to reflect the varying intensities of use of different areas. In heavily traveled zones, there exist engineered trails and bridges, food lockers, designated campsites, and toilets to protect park resources, while in less-used areas, amenities are minimal or non-existent. A new subsection, below in italics, entitled *"Decision-making Process for Facilities within Backcountry and Wilderness Zones,"* is added to the GMP/FEIS (Vol.1, Page 67) to clarify the action.

> *This General Management Plan is a programmatic plan. The GMP provides conceptual guidance for park managers about the kinds of resource conditions, visitor services, and visitor experiences that best fulfill the mission of these parks.*

The listing of categories of "appropriate facilities" within the individual zone prescriptions serves only to exemplify the types of facilities that may now exist or that the parks may wish to consider at some point in the future. For a new facility to be considered, or for an existing facility to be repaired or replaced within the Major Trails, Secondary Trails, or Cross-Country Areas zones, the parks would conduct the appropriate level of compliance under the National Environmental Policy Act (i.e., Categorical Exclusion, EA, or EIS). Incorporated into any such compliance would be appropriate consideration of the Wilderness Act (minimum requirement analysis), the Endangered Species Act, and the National Historic Preservation Act. Further, installation of or repairs to facilities would have to comply with any prescriptions contained in the action alternatives considered in this plan. Only facilities that undergo additional site-specific compliance and that comply with all applicable legal and planning requirements would be constructed or repaired.

STEP 1: DETERMINING THE MINIMUM REQUIREMENT

Is administrative action needed?

What is the problem or issue that may require administrative action? Include references from other legislation, policy, or plans, decisions, analyses, and how this issue is addressed in those documents.

Sequoia and Kings Canyon National Parks propose to address the deteriorating condition of three wilderness ranger stations in order to make them more effective for wilderness administration, resource protection, and visitor education. The stations to be considered are Le Conte, Rae Lakes, and Crabtree.

Wilderness rangers protect and monitor the wilderness, provide visitor services, and carry out resource management projects. Visitor services include education, emergency medical treatment, and search and rescue. The ranger stations also provide support to other park wilderness functions, such as research, and to park cooperators conducting data collection, such as the California Cooperative Snow Surveys.

Due to the size of the parks' wilderness (designated wilderness is 807,962 acres and approximately 30,000 acres of proposed wilderness) ranger stations have been determined to be necessary in order to provide the above listed actions and services in the remote areas of the wilderness. Currently the ranger stations at Le Conte, Rae Lakes, and Crabtree are at or approaching the end of their lifespan. Major repair or replacement is necessary for them to continue to serve their purpose as administrative facilities for wilderness rangers and wilderness-affiliated park operations. The situation at Rae Lakes is particularly acute in that the wooden tent frame is rapidly deteriorating and requires immediate action.

Section 4(c) of the *Wilderness Act* provides for both absolute and general prohibitions in wilderness areas. The actions discussed in this analysis are general prohibitions. The NPS and other wilderness land management agencies are authorized to determine whether or not a general prohibition (in this case the landing of aircraft, structures or installations, and the use of motorized equipment) is "necessary to meet minimum requirements for the administration of the area for the purpose of this Act."

The parks' 2007 FGMP/FEIS states, "Up to 96.10% of the parks are designated wilderness or are compatible with management as wilderness. Resource conditions in the parks' backcountry and wilderness areas are improved. Facilities are evaluated for usefulness and compatibility with wilderness, and additional facilities are considered only in the non-wilderness backcountry." The FGMP/FGEIS requires that the NPS "assess backcountry ranger stations and replace or rehabilitate as necessary." The proposal meets the management policy of the 1986 Backcountry Management Plan (BMP) (5.14.2.4),

which states: “Cabins [ranger stations] are located at various places in the backcountry as needed for backcountry rangers, snow survey, etc. These cabins will continue to be maintained and used for such activities.”

The parks’ BMP Administrative Addendum states that cabins (ranger stations) that have been normally and traditionally used for ranger patrol, snow surveys, or other administrative use will be maintained and replaced as needed. Other structures will be removed.

Le Conte, Rae Lakes, and Crabtree ranger stations are each listed in appendix A of the Administrative Addendum as structures that will remain.

The EA for the BMP states that a minimum number of structures will be allowed in the backcountry, including existing ranger stations and snow survey cabins.

Sequoia and Kings Canyon National Parks have conducted a Minimum Requirement Determination and Analysis as documented in Management Directive 49 (NPA 2009, Management Goals section), which states that wilderness management should provide for

> The safety of visitors, which enhances enjoyment;
>
> The protection of the wilderness resource through educational efforts and repair of impacted areas; and
>
> “Gathering and dissemination” of information on wilderness use patterns and activities, which is utilized in planning processes for long- and short-term wilderness preservation and stewardship.
>
> These outcomes are achieved through trail patrols, public contact activities, rehabilitation of damaged areas, emergency medical actions, search and rescue actions, and the preparation of reports detailing wilderness conditions and public use patterns.”

Management Directive 49 (NPS 2009, section 2.B) also states:

> Due to its size and high level of use, it is necessary to maintain a system that provides for controlled levels of use of *park wilderness areas.* This consists of a seasonal wilderness permit system with use quotas, regulatory actions for resource protection (e.g., food canister and fire limit requirements), restoration and closure actions, and the subsequent necessity for rangers conducting these actions to reside temporarily within the wilderness. This means that wilderness ranger stations are essential intrusions to protect resources and provide education and emergency services. Options that do not provide for stations do not allow adequate patrol coverage of the vast area. In order to enhance enjoyment and protect the wilderness resource, the presence of rangers deep within the wilderness is required.

The following questions assist in analyzing whether the issue needs to be resolved in wilderness. Do not consider what tools are to be used here.

Is this an emergency? No.

Is this problem/issue subject to valid existing rights, such as access to valid mining claim, state lands, etc.? No.

Can the problem/issue be addressed by administrative actions outside a wilderness area? No.

Is there a special provision in legislation (the 1964 Wilderness Act or subsequent laws) that allows this project or activity? No.

The following questions are provided to evaluate whether resolving the issue protects wilderness character and values identified in the Wilderness Act. Answer the questions in terms of the need to resolve the issue/problem.

If the issue/problem is not resolved, or action is not taken, will the natural processes of the wilderness be adversely affected?

Yes, there would likely be long-term minor to moderate adverse effects on the wilderness resource. Rangers would not be as effective in providing preventive and corrective wilderness protection actions. Rangers would not be as effective in monitoring, correcting issues, and reporting on wilderness resource status. Possible damage to natural processes and features, particularly at meadows where grazing is authorized, could occur because issues are not discovered in time for effective remedial action.

If the issue/problem goes unresolved, or action is not taken, will the values of solitude or primitive and unconfined type of recreation be threatened?

Yes, there would likely be long-term minor to potentially moderate adverse effects on wilderness condition for the same reasons as described above. In addition, rangers would not be as effective at maintaining and cleaning camps or removing intrusions on wilderness aesthetics and processes. As stations deteriorate, they would require increased helicopter and stock supply trips to maintain them at a minimally safe and effective level of operation. During these activities there would be minor localized loss of solitude but, over the long term, solitude and unconfined opportunities for recreation would increase.

If the issue/problem goes unresolved or action is not taken will evidence of human manipulation, permanent improvements, or human habitation be substantially noticeable?

Yes. The existing structures, especially Rae Lakes Ranger Station, do not meet the parks' *Architectural Character Guidelines* for rustic structures in wilderness settings. As they exist now, they are an intrusion on wilderness character and scenic resources. More aesthetically pleasing and better designed structures may be less intrusive depending on the perception of the wilderness visitor. If rangers spend inordinate amounts of time maintaining their stations, they have less time for wilderness patrol, and would spend less time educating and contacting the public, preventing and repairing resource damage, removing garbage and illegal camps, and enforcing "no fire" and other minimum impact regulations that reduce the signs of human use and habitation.

Does addressing the issue/problem or taking action protect the wilderness as a whole as opposed to a single resource?

Yes. Rangers would be able to effectively patrol the wilderness, contacting and educating visitors about minimum-impact camping techniques; cleaning and maintaining camps; enforcing wilderness regulations; and monitoring, evaluating, and reporting on resource issues. Rehabilitating or building new stations would bring the stations into compliance with the parks' *Architectural Character Guidelines* for rustic structures in wilderness settings. This could result in less intrusion on the wilderness experience of some visitors. In addition, Le Conte and Rae Lakes stations are vulnerable to break-in by bears and other

animals. A more secure structure would prevent this and ensure bears and other wildlife do not obtain human food.

Rangers at the Le Conte, Rae Lakes, and Crabtree stations perform wilderness stewardship actions for 98, 50, and 39 square miles of wilderness, respectively.

Does addressing this issue/problem or taking action contribute to protection of an enduring resource of wilderness for future generations?

Yes. Rangers would be able to more effectively patrol the wilderness performing preventive and remedial actions, such as contacting and educating visitors on minimum-impact camping techniques (preventive measures); cleaning and maintaining camps (remedial measures); enforcing wilderness regulations; and evaluating and reporting on resource issues, which leads to more informed wilderness management decisions by park managers.

Is this an issue for reasons other than convenience or cost of administration?

Yes, this is an issue of providing optimal wilderness resource protection, wilderness stewardship, resource monitoring, and supporting visitor services for recreational opportunities in wilderness, as well as visitor safety. This action is the means by which wilderness resources and character can be most effectively protected. Cost and convenience are considered in every management action, but these are secondary to the primary purpose of providing for effective wilderness stewardship.

If administrative action is warranted, then what is the minimum action which will resolve the issue?

An EA has been prepared that discusses different alternatives to resolve the problems of structural safety and effectiveness of ranger operations in protecting the wilderness resource and character.

A no-action alternative was considered. Under this alternative, the stations would continue to deteriorate, maintenance costs and personnel time for repair would continue, and impacts due to supporting repair using helicopters or stock would continue to increase. Visitor services would be increasingly adversely affected and wilderness management goals could not be effectively carried out. This alternative does not meet the objectives of the *Wilderness Act* or the parks' mandate. It does not meet the project objectives.

An alternative involving repairing the existing stations was considered. It would require greater impacts from construction activity but would not achieve the goal of stations that are fully structurally sound or safe in winter. It does not adequately achieve the project objectives of wilderness protection or the parks' wilderness stewardship mandate to provide resource protection and appropriate visitor services.

An alternative involving replacing the existing stations with new structures was considered. Stations designed and engineered for the setting would minimize environmental impacts necessary to accomplish the project objective. It would allow the park service to more effectively carry out its wilderness stewardship mandate and would enhance wilderness opportunities for users. It would increase efficiencies and extend the parks' ability to provide for visitor enjoyment and safety. New ranger stations on the former stations' existing sites would preserve park and wilderness values and resources for future generations and provide aesthetically pleasing stations in compliance with the parks' *Architectural Character Guidelines*. As such, it is the minimum tool to achieve the goal of having structurally sound and safe ranger stations for providing resource protection and visitor services while being aesthetically pleasing and blending into the natural environment.

An alternative consisting of removing the stations and naturalizing the sites was considered. Though the alternative of removing the cabins would be technically in compliance with the *Wilderness Act* by removing structures from wilderness, it would not provide for optimal wilderness protection activities. It does not allow for these parks to fully meet the objectives of the *Wilderness Act* or achieve the parks' wilderness stewardship mandate as stated in the BMP. It does not meet the project objectives.

The *Wilderness Act* provides authority to the managing agency to determine whether or not a structure or installation is *"necessary to meet minimum requirements for the administration of the area for the purpose of this Act."*

Without the actions of the wilderness rangers and the support these stations provide, enjoyment of the wilderness by the visiting public and protection of the wilderness resource would be compromised. The quality of the wilderness experience and the quality of the wilderness resource would be adversely impacted.

The minimum requirement for managing visitor use and enhancing wilderness enjoyment and resource protection in *park wilderness areas* thus consists of a system of wilderness rangers and stations supported by specific facilities and actions as defined above.

Removal of the stations would result in wilderness rangers starting their patrols from trailheads. They would need to carry all their supplies and equipment for a 5- to 10-day patrol with them. Since distances to the patrol areas covered by these stations are great, patrols of the area would be significantly reduced. There would be no contact point for visitors seeking information or emergency services, reduced maintenance of wilderness camp sites, and winter patrol and snow survey operations would be more difficult and dangerous. Assuming historic wilderness ranger staffing levels of one ranger per station, removing the wilderness ranger stations would reduce visitor services and have long-term moderate adverse effects on wilderness stewardship goals.

STEP 2: DETERMINING THE MINIMUM TOOL

Describe the specific operating requirements for the action. Include information on timing, locations, type of actions, etc.

With some variation, depending on the site, the construction needs and impacts for a replacement station are as follows:

Construction needs and materials would not be significantly different for any of the stations. However, removal of the Rae Lakes station would require less material packed or flown out because the structure is smaller.

The existing two-room Crabtree station would be built somewhat larger than Rae Lakes and Le Conte to accommodate use by snow survey personnel in winter, but would still be within the footprint of the existing station.

Because rebuilding on the existing Le Conte Ranger Station site would cause unacceptable environmental impacts on a potentially significant prehistoric site, the location would be moved to a site 100 feet away. The old site would be rehabilitated. A park archeologist would be on site during all construction and rehabilitation activity.

Specific site conditions would dictate how much digging, fill material, and concrete would be needed, but the differences would be no more than 1–2 cubic yards of fill.

Most of the prefabrication would be done in the frontcountry, leaving only assembly of components in the wilderness. This would reduce the need for power tools and on-site construction time, minimizing disturbance to park visitors' wilderness experience.

Work Sequence

Demolish existing station.
Excavate for foundation.
Pack and fly in materials for foundation, log shell, and framing.
Pack and fly out old station debris as backhaul.
Pour foundation.
Erect new structure shell.
Pack and fly in furnishings and install.
Pack and fly out waste materials as backhaul.

Camp, tools, and crew food and equipment

900 to 1,200 pounds of material would be supplied initially. Approximately 200 pounds/week would be supplied thereafter.

Supplies and materials of appropriate size to be brought in by packstock:

150–220 packstock loads of materials to be hauled. Since a mule can carry 150 pounds, and Readymix concrete is packaged in 60-pound sacks, feed for the livestock can be packed in with no additional animals needed.

These materials could be flown, but at a cost of an additional 40–60 helicopter flights during peak season.

Since stock would be tied and fed, temporary stock restraints (e.g., hitching rail, electric fencing) would need to be set up and the site rehabilitated after use. A previously impacted or durable stock restraining site would be used.

Large construction materials and logs and large lumber would be flown in by helicopter.

40–60 helicopter flights would be needed. Flights would be in June or September to avoid high visitor use periods in the backcountry. Approximately two to five flights would be required in June. The remaining flights in September would be done within a 1-week operational period.

Crew size and duration on site

Site visit with construction supervisor and helper: 2 days on site.

Main construction crew: Six to eight crew members, 7 to 9 weeks on site (1 week for set up, demolition, and preparation; 1 week to dig foundation; 1 week to pour foundation; 4 weeks to construct station, furnish, and clean up—extra time for contingencies).

Less time is needed relative to alternative 2 because it is easier to tear down a station and put up a new one than to jack a station up, work under it, and retrofit around existing problems.

Camp location

Crew would camp within 1/4 mile of the sites at existing and previously impacted campsites. The camps would be screened from the main trail and more than 100 feet from water. All minimum-impact regulations and considerations would be followed. The Le Conte crew camp would be surveyed by an archeologist to make sure no impacts on archeological resources occur at the campsite.

Ground disturbance

12–15 cubic yards of material to be excavated for foundation wall trench.

Dirt and gravel not used in construction or fill on site would be evenly spread on similar gravels throughout the area. This is the most natural method of removal, as the site's slope naturally washes gravel downhill throughout the area.

Power tools needed

3.5 kW generator, electric cement mixer, small chainsaw, electric air compressor to run power nailers and roofing staplers.

Generator (ultra-quiet, "inverter" type). Under field conditions, tested noise at full power is equivalent to that of an idling passenger car.

Handheld power tools (electric circular saws, cordless drills). (Whenever possible, hand tools would be used; however, power tools mean significantly shorter work times to complete tasks and so less crew time on site.)

Electric compressors and cement mixer would be used because there are no "quiet technology" gas-powered compressors and cement mixers.

To mitigate noise, the generator would be placed in a sound-insulated enclosure to make it even quieter. The construction work would not be heard beyond about 50 yards.

What is the method or tool that will allow the issue/problem to be resolved or an action to be implemented with a minimum of impacts on the wilderness?

Use of activities or tools normally prohibited in wilderness.

This project does not involve the use of temporary roads, motor vehicles, or motorboats. It does involve the use and landing of helicopters. It does involve the reconstruction of an existing station/structure. Most work would be done by hand, but some power tools would be used.

Materials that are too large or heavy (logs and lumber) would be flown in by helicopter. Selective and limited use of motorized equipment would occur. Motorized equipment use would be limited to a generator to power hand tools, drills, nailers, saws, and a cement mixer and, possibly, a chainsaw.

Steps to minimize impacts on wilderness:

Use of motorized tools and helicopter flights would be limited to between 8:00 a.m. and 5:00 p.m. Visitors would be informed of periods when noise might be an intrusion on their wilderness experience. Rangers and permit-issuing stations would suggest alternative times or routes during the approximately 1-week period when helicopter noise would be an intrusion. The use of motorized tools and landing of

helicopters would lead to impacts, primarily noise and potential of fluid spills. Not using motorized tools and/or helicopters would lead to impacts related to increased use of stock (on trails) and localized impacts at camps from crews remaining on site for a longer period of time.

Why is a replacement structure the minimum tool?

Doing nothing to the existing stations or repairing the stations means more long-term impacts from future maintenance activities, and additional long-term impacts associated with helicopter and stock use. Replacement of the existing stations with more sustainable stations would result in increased impacts in the short term, but reduced impacts in the long term. Replacement stations would result in greater efficiencies and safety for park personnel to more effectively patrol, monitor and maintain resources, and carry out wilderness stewardship and resource education actions.

Why will stock be used?

The presence of stock is recognized as a traditional and historical wilderness use. Stock have long been used to transport personnel and material to remote wilderness areas in Sequoia and Kings Canyon National Parks, even prior to park designation. When stock are used, they are usually tied in one area during the day and then turned loose at night to graze the surrounding meadows and other vegetation. However, under this project, stock would be held within a temporary enclosure (e.g., temporary electric fence) or by using a "high line" strung between trees and the animals tied and spaced evenly along that line. They would be fed weed-free feed (compressed cubes, grain, or pellets).

Why is the landing of aircraft the minimum tool?

Packstock would be used to haul as much of the supplies as possible. They cannot haul items longer than 8 feet or over 150 to 200 pounds (depending on the shape). The log siding and some of the construction material is both too large and too long to be carried by stock; therefore, the use of a helicopter is necessary to support this project.

The BMP, section 5.14.2.2 states, "…helicopters will be used for other administrative support functions in the backcountry. However, this use will be kept to the minimum necessary to protect park resources and will be managed to preserve the solitude of the designated wilderness areas of the parks' backcountry as required by the Wilderness Act."

The EA for the BMP, section III.A.9, states "A helicopter is used in many phases of the parks' management operation, imposing undesirable noises and sights on park visitors. Ranger cabins, trail maintenance crews, research and monitoring crews, are often supplied by helicopters … Use of the helicopter has an adverse impact on the quality of visitors' experiences in the backcountry … It should also be recognized that use of the helicopter, particularly in lieu of stock, reduces impacts to trails, campsites, soils, water, and vegetation in the backcountry."

Why are power hand tools the minimum tool?

Handheld power tools, such as cordless drills, would be necessary to drill the logs to fasten them together. Mitigation will be to pre-drill and assemble all lumber in the frontcountry to the greatest extent possible. However, final fitting would require minimal use of motorized hand drills, power nailers, staplers, a compressor, and perhaps a chainsaw to adequately construct the structure. An electric cement mixer would also be required to mix the cement for the foundation wall. Mixing the same amount of concrete by hand would mean a significantly increased time for crew to be on site at each project, and would result in increased use of helicopter and stock to support them with more supplies.

Why is a chainsaw the minimum tool?

First choice for accomplishing work would be the use of non-motorized hand tools. If these prove impractical for safety or other considerations, then power tools may be used. A chainsaw may be used to cut one or two small (trunk under 8 inches dbh) trees that may interfere with the station's site layout. A chainsaw may also be used to make the final cuts of notches when placing the log siding. All logs would be pre-notched and fitted in the frontcountry, but final fitting may require the use of the chainsaw if adjustments are needed.

What are the effects of using the above tools?

Describe the biophysical effects/benefits:

The incidental cutting of branches during construction might have negligible adverse effects on vegetation and wildlife habitat. Using motorized hand tools and a helicopter would have short-term and minor to moderate adverse impacts on wildlife from flight response from the immediate work area. Using motorized hand tools would have a minor short-term adverse effect on the wilderness quality of natural sounds in a place where mechanical sounds are not normally heard. This would adversely affect the wilderness experience of visitors in the immediate area. Disposing of construction waste water from cement mixing inside the foundation walls would have a negligible and short-term adverse effect on water quality. Using motorized tools for the project would have a short-term and beneficial effect by shortening the time crews would have to stay in the area for construction. This would mean fewer packstock trips to support them. Packstock graze the parks' meadows and their hooves cause mechanical disturbance on trail tread. Reducing those impacts is a benefit of some power tool use. Helicopter use would have a moderate and short-term adverse effect on visitors' wilderness experience by disturbing the wilderness quality of silence and wilderness character as a place where mechanical sounds are absent.

Having fuel for gasoline-powered engines (chainsaw and generator) is accompanied by the risk of accidentally spilling small amounts of it during refueling. There is also a remote risk that bears could bite into the containers, spilling larger quantities. Mitigation steps, such as using metal boxes for storage, will be implemented.

Describe the social/recreation effects/benefits:

Using power tools in the wilderness would likely have a short-term adverse social effect for visitors in the area during construction. Using power tools decreases work time on site, resulting in fewer crew resupply trips by packstock. Carrying out construction activities, power tool use, and helicopter resupply during times of the day when visitor use is lowest and increasing visitor education about the project is intended to mitigate these effects. The long-term recreational effect of having a more effective and efficient ranger station to serve the public and protect and monitor resources would be positive. There may be adverse effects on visitors who do not want to see structures in wilderness.

Describe societal/political effects/benefits:

There could be adverse social effects from the use of motorized equipment in the wilderness. Visitors who were unhappy about it could complain to the work crew or to management. Some visitors may see having a structure and a ranger as "confinements" on their opportunity to experience "unconfined recreation." Long-term social effects of having effective and efficient ranger stations would be positive, as they would serve to enhance wilderness stewardship goals of visitor education, visitor emergency services, and more efficient resource protection and monitoring.

Describe health and safety concerns/benefits:

Using a helicopter to bring in the log siding and other heavy material is a safety concern, and long logs can be a difficult load. Packstock can injure people by knocking them over, stepping on or kicking them. Chainsaws, axes, and draw knives can injure people by cutting them. Lifting heavy material such as bags of cement can cause strain injuries.

The existing stations present health and safety hazards to station users, especially in winter. They were not designed for snow loads or for safe and fast exit in the event of an emergency in winter. Stations engineered for the snow loads of the environment and with adequately sized and accessible exits above the snow level (a snow door at the roof peak) would increase safety for winter use.

The ranger stations under consideration have been critical contact points for visitors seeking help in an emergency or when needing safety information about environmental conditions. Historically, the presence of these ranger stations has allowed faster response and the timely delivery of safety information to the public. The existence of Le Conte, Rae Lakes and Crabtree ranger stations and the linked presence of rangers save at least one to three lives per year.

Describe economic and timing considerations/benefits:

Use of motorized equipment would expedite this project, and make it possible to complete it in one to two seasons per station. Weather permitting, and depending on which alternative is adopted, construction or removal would require a minimum crew of four to six people for between 9 and 12 weeks. Completing the project quickly minimizes impacts on wilderness and offsets the impacts of a larger construction crew.

Describe heritage resource considerations/benefits:

Traditionally, ranger stations in the Sequoia and Kings Canyon wilderness were built using logs of native timber. Constructing cabins using this method is a traditional skill. There are only a few people in the parks who still know how to do this. Although the trees used for siding would be from commercially obtained sources and pre-notched, the skill of building a log cabin is one that should be preserved.

Develop and describe any mitigation measures that apply.

Under the direction of the parks' plant ecologist, meadows would be monitored by the area ranger to make sure that unacceptable environmental impacts on meadows are not occurring as a result of grazing (removal of biomass) or mechanical impacts on meadow sod or stream banks. Where established criteria show that unacceptable environmental impacts are occurring or would soon occur, the area would be limited or closed to stock.

Sequoia and Kings Canyon National Parks' packstock operations are subject to the same minimum impact standards and grazing regulations as general park users. In addition, for each station, the parks' plant ecologist would survey the areas where stock would travel or be held and write a site-specific grazing plan for construction operations. The site-specific grazing plan would outline mitigation measures and best management practices to be used to reduce environmental impacts as a result of stock use.

Mitigation measures for helicopter use would include:

Helicopter use would be guided by minimum tool determinations and best management practices. Use would be limited to the absolute minimum necessary to bring in and carry out material and

debris that is too large for packstock to carry or when packstock are determined to be inappropriate based on the previous guidance.

If possible, flights would be scheduled before and/or after the peak visitation periods of July and August.

Flights would occur only between 8:00 a.m. and 5:00 p.m. and would follow the same flight path to and from the project sites.

Park staff would inform hikers of possible noise intrusions, when they would occur, and alternative routes or times visitors can use to avoid the noise. Park staff would inform visitors camping near the construction and landing areas of flights and construction activities.

Rae Lakes bighorn sheep use area: The parks' wildlife biologist would provide a map of known bighorn sheep areas, and the helicopter would avoid those areas; the final approach to the landing zone would stay below the area of the historic sightings. Flights would be suspended if sheep are observed within 1/2 mile of the construction area. The landing zone for the helicopter would be located approximately 500 feet from an area where sheep have been observed.

Other wilderness mitigation:

The maintenance supervisors and crew leader would select a previously impacted site for project base camps.

All crews would be instructed in and expected to use "Leave No Trace" and minimum-impact camping practices.

Approved food storage boxes would be provided for the construction area and crew camp.

Crew camps would be located at previously impacted areas with minimum potential to disrupt wildlife habitat or habits.

No motorized equipment would be used in camps. A propane/white gas or battery-powered lantern would be used to light the cooking area inside the cook tents. All other light would be from personal flashlights and headlamps.

Supervisors would ensure that group noise levels do not disturb nearby campers.

Construction activities would be planned to minimize or eliminate any procedure that might displace normal visitor access or impact on the visitor wilderness experience.

Construction would be done only between 8:00 a.m. and 5:00 p.m.

During construction periods, wilderness visitors would be informed of construction activities. This would occur through the permit issuance process, wilderness rangers on the trail, and other educational contacts. Where possible, visitors would be told of alternative routes and times to avoid these noise intrusions.

An ultra-quiet generator would be used and turned off when it is not in use.

To reduce the need for power tools on site, most of the cutting and drilling of the structure would be done in the frontcountry prior to transport to the project sites. On-site use of power tools would

be kept to a minimum and used only where hand tools cannot achieve the same result in a minimum amount of time.

All areas impacted as a result of removal/construction activities would be rehabilitated.

Approvals and Routing:

_____	_____
Prepared by: Date	Recommended by (Division Chief) Date
Submitted by (program manager)	
_____	
Approved by (Superintendent) Date	

Intentionally Left Blank

APPENDIX C: PRESS RELEASE FROM INITIAL PUBLIC SCOPING

National Park Service
U.S. Department of the Interior

Sequoia and Kings Canyon
National Parks

47050 Generals Highway
Three Rivers, CA 93271

559 565-3341 phone
559 565-3730 fax

Sequoia and Kings Canyon National Parks News Release

February 22, 2006
For Immediate Release
Alexandra Picavet 559 565-3131 Alexandra_Picavet@nps.gov

Public Comment Sought on Planning Options for Three Wilderness Ranger Stations

Sequoia and Kings Canyon National Parks propose to address the deteriorating condition of three Wilderness Ranger Stations in order to make them more effective for wilderness administration, resource protection, and visitor education. The stations to be considered are Le Conte, Rae Lakes, and Crabtree.

Wilderness rangers protect and monitor the wilderness, provide visitor services, and carry out resource management projects. Visitor services include education, emergency medical treatment, and search and rescue. The ranger stations also provide support to other park wilderness functions, such as research, and to park cooperators conducting data collection, such as the California Cooperative Snow Surveys. Due to the size of the park's wilderness – over 723,036 acres – ranger stations are necessary in order to administer wilderness in the remote areas of the backcountry. Currently the ranger stations at Le Conte, Rae Lakes, and Crabtree are at or approaching the end of their lifecycles. Major repair or replacement is necessary for them to continue to serve their purpose as support facilities for wilderness rangers and park operations. The situation at Rae Lakes is particularly acute in that this wood tent frame is rapidly deteriorating and requires immediate action.

The Wilderness Act provides the Park Service authority to determine whether or not a structure or installation is "necessary to meet minimum requirements for the administration of the area for the purpose of this Act." The proposal meets the management policy of the 1986 Backcountry Management Plan (5.14.2.4) which states: "Cabins are located at various places in the backcountry as needed for backcountry rangers, snow survey etc. These cabins will continue to be maintained and used for such activities"

COMMENTS: The parks welcome public input on the project. Questions and/or comments must be submitted in writing to the Superintendent at Sequoia and Kings Canyon National Parks, 47050 Generals Highway, Three Rivers, CA 93271, or email your comments to: SEKI_Superintendent@nps.gov. Please include the phrase "wilderness ranger stations" at the top of your comments or in your email subject line. Comments will be accepted throughout this scoping process; however those that have been postmarked or transmitted no later than March 24, 2006 will be of the most use.

Please note that names and addresses of people who comment become part of the public record. If individuals commenting request that their name or\and address be withheld from public disclosure, it will be honored to the extent allowable by law. Such requests must be stated prominently in the beginning of the comments. There also may be circumstances wherein the NPS will withhold from the record a respondent's identity, as allowable by law. As always: the NPS will make available to public inspection all submissions from organizations or businesses and from persons identifying themselves as representatives or officials of organizations and businesses; and, anonymous comments may not be considered.

NPS

Intentionally Left Blank

APPENDIX D: EVALUATION OF ALTERNATIVE SITE LOCATIONS FOR LE CONTE RANGER STATION

An interdisciplinary team consisting of the parks' resources division (ecology and archeology), ranger division (operations and visitor services), and maintenance division (construction and maintenance) visited the Le Conte site to select a site for the relocation of the existing ranger station. A new site was needed because the park archeologist determined that the immediate area under and around the Le Conte Ranger Station is a potentially significant prehistoric site.

The interdisciplinary team searched for a station location where no significant environmental impact would occur as a result of construction and location of the ranger station. The following are the guidelines used for selecting a location for the station:

The site choice must not cause unacceptable environmental impacts.

Any ranger station must be within 1/4 mile of the John Muir Trail (JMT) / Bishop Pass trail junction, to allow access by JMT travelers as well as by North Lake–South Lake travelers, and to allow the patrol ranger access to both.

The site must be out of avalanche zones.

The site must be close to the trail but not on it.

The site must be near enough to water for hauling by hand to the station.

The site must be close enough to a helicopter landing zone for staging and resupply.

The following options were considered:

Option A: Move the station slightly or rotate it within its current impact zone. This option would require a team of archeologists to survey and excavate the trench required for the foundation wall. This would require at least two archeologists for 6 to 8 weeks at the site. Their supplies would be brought in by packstock or helicopter, depending on snow and stream conditions while the survey is being carried out. Such a detailed archeological excavation would add to the parks' knowledge of Native American history and culture. However, the excavation would require the artifacts to be removed and place in the parks' museum and the site would be permanently disturbed. Survey and excavation would cause major long-term adverse impacts on park cultural resources.

The previously impacted use zone surrounding the ranger station was examined for a suitable alternate station location. Two specific sites were considered.

Option B: Move the station to an area immediately surrounding the current outhouse location about 40 feet north of the existing station. The site is flat and vegetation is sparse as a result of previous impacts from visitors, stock, and rangers. The archeologist examined the area and found dense lithic scatter throughout the area as well as lithic artifacts to a depth of 16 inches below the ground surface.

The park archeologist has determined that this site is a significant prehistoric cultural site. Were this site to be chosen for a ranger station location, mitigation would require a team of archeologists to survey and excavate the trench required for the foundation wall. This would require at least two archeologists for 6 to 8 weeks at the site. Their supplies would be brought in by packstock or helicopter while the survey is

being carried out. An archeological excavation would add to the parks' knowledge of Native American history and culture. However, the excavation would require the artifacts to be removed and place in the parks' museum and the site would be permanently disturbed. Survey and excavation would cause major long-term adverse impacts on park cultural resources.

Option C: Move the station to an area about 100 feet south of the existing station. This location is composed of mixed rocky and sandy soils with sparse vegetation that shows signs of previous human impact as a result of its proximity to the ranger station. The park archeologist examined the ground surface and dug a test pit to about 16 inches. Fewer than five lithic artifacts were found during this survey.

The parks' plant ecologist examined the area and determined there were no sensitive or endangered plant species in this area. The archeologist suggested that should a ranger station be built at this site, the access trail be rerouted to avoid the entire area containing the significant prehistoric cultural site. A possible access route to the site from the JMT was surveyed by the archeologist and plant ecologist. No archeological resources or plant species of concern were found.

The subject matter experts agreed that this site had been previously impacted by human use; that it contained no significant archeological resources; that no sensitive plant or animal species would be affected by construction of a ranger station; and that it was a suitable site to carry out the operational and wilderness management mandate of a ranger station in the Le Conte patrol area.

Other options considered but rejected included:

The subject matter experts examined areas above and below the current station for about 2 miles in both directions. Two sites up canyon of the existing station were considered but rejected (one 75 yards north of the existing station on top of a knoll, another 150 yards north in or near an existing stock camp). Both these sites were over 200 feet horizontally and to 70 feet vertically from water. Farther up canyon there appears to be heavy avalanche activity for over 1/4 mile past Little Pete Meadow.

One site on the Bishop Pass Trail was considered but rejected. The site is about 50 yards up the trail from the junction on a slick rock bench right next to the landing zone used for the Le Conte Ranger Station. This site is constrained on all sides by trails. A ranger station would have to be adjacent to the trail or would be in direct view of the Dusy Basin switchbacks for about 1/2 mile. Farther up the trail the terrain is very steep and appears to have heavy avalanche activity. Down canyon from the existing station there appears to be significant avalanche activity, precluding construction of a ranger station.

There were no areas examined outside the immediate impact zone of the current station found suitable for a ranger station that would allow rangers to effectively carry out their wilderness stewardship mandate. All sites examined were either ecologically pristine, where construction would cause an unacceptable environmental impact; were in avalanche terrain; or would have too great of an intrusion on wilderness qualities. None would be effective in meeting wilderness stewardship goals.

Conclusion: The team of subject matter experts then used a Choosing by Advantages (CBA) process to select the best area for the reconstruction of Le Conte Ranger Station. They unanimously recommended option C. Option C meets the criteria established in section 101(b) of NEPA. It is the only alternative that minimizes disturbance to a significant prehistoric cultural site. It reroutes foot and horse traffic to avoid important cultural resources. It minimizes the materials, time, and intrusion on wilderness qualities necessary to accomplish the project objective. It optimizes wilderness opportunities for a variety of users. Rangers would be able to more effectively meet their wilderness stewardship mandate to provide for visitor education and emergency services and the inventory and monitoring of resources. The site would

provide a suitable location for a station that meets the parks' *Architectural Character Guidelines* as a contact point for visitors. The site would allow for the preservation of park values and resources for future generations.

Intentionally Left Blank

APPENDIX E: SEQUOIA AND KINGS CANYON NATIONAL PARKS MANAGEMENT DIRECTIVE 49

Intentionally Left Blank

United States Department of the Interior

NATIONAL PARK SERVICE
Sequoia and Kings Canyon National Parks
47050 Generals Highway
Three Rivers, California 93271-9651
(559) 565-3341

IN REPLY REFER TO:

September 15, 2009

MANAGEMENT DIRECTIVE NO. 49
Subject: Minimum Requirement Analysis and Determination

SCOPE AND PURPOSE:

This directive addresses management of wilderness in Sequoia and Kings Canyon National Parks.

Wilderness Unit	Acreage
The designated Sequoia-Kings Canyon Wilderness (the original 723,036 [1984] acres and the additional 45,186 acres [2009])	768,222 acres
The designated John Krebs Wilderness (2009)	39,740 acres
Potential Wilderness Areas: 1. Five potential designated wilderness areas as defined by the 2003 Final Wilderness Boundary (from 1984 CA W.A.): a.)Bearpaw Meadow Camp area, b). Pear Lake Ranger Station area, c).Oriole Lake private inholdings; d). a 60 foot wide powerline corridor running from Moro Rock Summit Benchmark to near the Middle Fork Road, and e). a 60 foot wide powerline corridor on the west side of Kings Canyon National Park from near Lookout Peak to Cedar Grove vicinity. 2. Five potential designated wilderness areas as defined by the 2009 legislation: a). Empire Mine private land, b). Monarch Lake and dam area, c). Crystal Lake and dam area, d). Franklin Lake and dam area, and e). Eagle Lake and dam area	1. 82.4 acres consisting of: 31.6 acres Bearpaw Meadow Camp 5 acres Pear Lake Ranger Station 12 acres Oriole Lake inholdings 11.8 acres Moro Rock powerline 22 acres Cedar Grove powerline 2. 128.1 acres consisting of; 16.7 acres Empire Mine 21.2 acres Monarch Lake 20.7 acres Crystal Lake 40.0 acres Monarch Lake 29.5 acres Eagle Lake
The recommended wilderness area of southern Hockett Plateau	~30,000 acres
The wilderness eligible area consisting of the non-developed portion of the large cherry stem area along the road of the Mineral King Addition of 1978	~1,000 acres
Total wilderness areas in Sequoia and Kings Canyon National Parks	~839,172.5 acres

This directive uses the term "*park wilderness areas*" to include all of the above described areas. NPS Management Policies (2006), Section 6.3.1 General Policy, states:

> *"For the purposes of applying these policies, the term "wilderness" will include the categories of eligible, study, proposed, recommended, and designated wilderness. Potential wilderness may be a*

subset of any of these five categories. The policies apply regardless of category except as otherwise provided herein."

This Management Directive specifies the actions and activities which are [may be?] allowed to occur in all *park wilderness areas*. No distinction is made whether a specific wilderness unit is located in Sequoia or Kings Canyon National Parks. No distinction is made whether a specific wilderness unit is classified as designated, potential designated, recommended, or eligible. All these areas, regardless of category, will be managed in the same manner. The actions and activities described in this directive are only allowed when the procedures and safeguards defined below are properly and thoroughly followed.

INTRODUCTION:

In order to establish and maintain wilderness character in designated wilderness areas, the Wilderness Act of 1964, Section 4 (c) establishes the following standard:

...except as necessary to meet the minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area) there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.

The National Park Service's Management Policies, Section 6.3.5 (2006), further define this process:

All management decisions affecting wilderness must be consistent with the minimum requirement concept.... When determining minimum requirements, the potential disruption of wilderness character and resources will be considered before, and given significantly more weight than, economic efficiency and convenience. If a compromise of wilderness resources or character is unavoidable, only those actions that preserve wilderness character and/or have localized, short-term adverse impacts will be acceptable.

Director's Order 41, *Wilderness Preservation and Management,* provides additional guidance on the minimum requirement concept:

Wilderness managers may authorize (using a documented process) the generally prohibited activities or uses listed in Section 4(c) of the Wilderness Act if they are deemed necessary to meet the minimum requirements for the administration of the area as wilderness and where those methods are determined to be the 'minimum tool' for the project. The use of motorized equipment and the establishment of management facilities are specifically prohibited when other reasonable alternatives are available.

The minimum requirement process first involves a determination of whether a proposed management action is appropriate and necessary for the administration of the area as wilderness and does not pose a significant impact to its wilderness resources and character. If the project is found to be appropriate and necessary, the second step is to determine the management method (tool or technique) that would result in the least amount of impact to the biophysical resources and experiential qualities of wilderness.

The purpose of this Management Directive is to define, as specified above, the Minimum Requirement for managing all *park wilderness areas* in Sequoia and Kings Canyon National Parks, California, and to identify and analyze those specific actions that represent the "minimum tool" approach to implementing the programs so defined.

Proposed actions that fall completely within the definitions contained herein therefore fall within the scope of Minimum Requirements for the management of all *park wilderness areas*. Proposed actions not

conforming to the following must be the subject of additional specific minimum requirement analysis to determine if the action is appropriate and necessary to resolve the issue, and to determine the action/alternative, techniques and tools that will have the least impact on the wilderness while successfully addressing the problem.

Actions having the potential to impact wilderness resources will be evaluated in accordance with NPS procedures for implementing the National Environmental Policy Act. Those procedures include the use of categorical exclusions, environmental assessments (EAs), or environmental impact statements (EISs). Administrative actions impacting wilderness must be addressed in either the environmental assessment or environmental impact statement accompanying the approved wilderness management plan or as a separate environmental compliance document.

These processes and procedures are consistent with and supported by these parks' Final General Management Plan (FGMP) and accompanying Environmental Impact Statement, 2006 and Record of Decision (ROD), 2007. The FGMP states that wilderness/backcountry areas:

> *"are natural areas – relatively remote, roadless portions of the parks . . . . Efforts are made to preserve a sense of remoteness and freedom from human-caused impacts. However simple amenities (e.g. ranger stations, hitch rails, and campsites) may be present to support administrative activities, reduce or control resource impacts, or provide for research and monitoring."*

The ROD states:

> *"The parks' designated wilderness and other areas managed as wilderness are zoned to reflect the varying intensities of use of different areas. In heavily traveled zones, there exist engineered trails and bridges, food lockers, designated campsites, and toilets to protect park resources, while in less-used areas, amenities are minimal or non-existent. . . . The listing of categories of 'appropriate facilities' within the individual zone prescriptions serves only to exemplify the types of facilities that may now exist or that the parks may wish to consider at some point in the future. For a new facility to be considered, or for an existing facility to be repaired or replaced . . . . the parks would conduct the appropriate level of compliance under the National Environmental Policy Act. Incorporated into any such compliance would be appropriate consideration of the Wilderness Act. . . ."*

This Management Directive is also consistent with the Sequoia and Kings Canyon National Parks Backcountry Management Plan (BMP) 1986, its supporting Environmental Assessment (EA) 1984, and its supporting Finding of No Significant Impact (FONSI) 1986.

Both the FGMP/FEIS/ROD, and the BMP/EA/FONSI provides overall, and in some cases, specific direction for the management of *park wilderness areas.*

MANAGEMENT GOALS:

Section 2 (c) (2) of the Wilderness Act states that a designated wilderness is an area that:

> *has outstanding opportunities for solitude or a primitive and unconfined type of recreation.*

This statement makes it clear that recreation is one of the purposes of designated wilderness.

Section 2(a) of the Wilderness Act states that wilderness areas:

> *shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness.*

Section 2(c) defines wilderness as:

an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. . . . an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres . . .; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

This section clearly identifies the responsibility of agencies to manage wilderness areas. As implied by the legislation, this management should provide for:

- The safety of visitors, within wilderness character parameters, which enhances enjoyment;
- The protection of the wilderness resource through educational efforts and repair of impacted areas; and
- "Gathering and dissemination" of information on wilderness use patterns and activities, which is utilized in planning processes for long and short term wilderness preservation and stewardship.

These outcomes are achieved through trail patrols, public contact activities, rehabilitation of impacted areas, emergency medical actions, search and rescue actions and the preparation of reports detailing wilderness conditions and public use patterns.

Section 4(a) (3) of the Wilderness Act stipulates that wilderness areas in national parks remain subject to national park legislation:

Nothing in this Act shall modify the statutory authority under which units of the national park system are created. Further, the designation of any area of any park, monument, or other unit of the national park system as a wilderness area pursuant to this Act shall in no manner lower the standards evolved for the use and preservation of such park, monument, or other unit of the national park system in accordance with the Act of August 25, 1916, the statutory authority under which the area was created, or any other Act of Congress which might pertain to or affect such area....

Section 4(b) of the Wilderness Act reinforces this concept by stating:

Except as otherwise provided in this Act, wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.

Together, these statements confirm that all *park wilderness areas* should continue to be managed under the Acts of 1890, 1926, and 1940 that created and enlarged Sequoia and Kings Canyon National Parks (SEKI), and the Act of 1916 that created the National Park Service in a manner that is consistent with the Wilderness Act of 1964, the California Wilderness Act of 1984, and the Omnibus Public Land Management Act of 2009.
These acts collectively address the responsibility of National Park Service units to protect and understand natural and cultural resources, and preserve wilderness character.

The Management Goals of *park wilderness areas* follow from and are mandated by the above legislation, and are supported by the desired future conditions as stated in these parks' FGMP, 2006:

1. To properly administer the area and provide for appropriate activities and facilities that support and facilitate primitive and unconfined wilderness recreation and visitor enjoyment in a manner that is attuned with the Wilderness Act and the legislation creating Sequoia and Kings Canyon National Parks;
2. To implement appropriate administrative activities and facilities that support visitor management and resource protection so as to provide for enjoyment of the wilderness resource while preserving wilderness character; and

3. To protect, restore (in certain cases), and gain knowledge to thoroughly understand and provide effective stewardship of natural and cultural resources in wilderness.

These three goals generate a suite of management programs, which, taken together, constitute the Minimum Requirement for Management of all *park wilderness areas*. Management and administrative programs and actions will strive to optimize wilderness stewardship by ensuring the four elements of wilderness character: undeveloped; natural; untrammeled; and providing opportunities for solitude and primitive recreation, are emphasized and sustained. All actions undertaken and supporting facilities must be in compliance with the laws, policies, and guidance of the National Park Service and Sequoia and Kings Canyon National Parks.

Management will strive, first and foremost, to achieve administrative wilderness goals by using primitive methods and "tools" to accomplish actions before seeking and or applying minimum requirement variances as allowed in Section 4(c).

MINIMUM REQUIREMENT FOR MANAGEMENT:

1. PROGRAM FOR VISITOR RECREATION AND ENJOYMENT

A. Goal: To provide outstanding opportunities for primitive and unconfined wilderness recreation and visitor enjoyment.

To provide for visitor enjoyment in *park wilderness areas*, the National Park Service maintains a trail system of approximately 800 miles of foot and horse routes in SEKI. Trails are maintained and improved by trail work crews that are often based in wilderness, with subsequent logistical support facilities and actions. Trails in *park wilderness areas* are constructed primarily of available native materials including earth, rock, gravel, and logs. Causeways of timber, rock and earth may be constructed in wet areas. Trails are generally 2-3 feet wide, but may be wider in areas of heavy use or rough terrain, where additional space is required for appropriate uses (e.g. stock with pack boxes, or extreme exposures).

To support recreational use of these trail systems and to manage human impacts associated with use, the Service also maintains the following trail-associated items of human manufacture:

- The trails
- Trail crew camp facilities (food storage lockers, stock accouterments)
- Signing (directional)
- Footlogs and bridges
- Designated trailside camps with limited improvements (pit toilets, site markers, campfire rings)

B. Analysis and Justification:

The use of a system of defined trails to facilitate recreation in the high Sierra of California is a long-recognized attribute of Sierra Nevada wilderness recreation. All of the major trail routes in *park wilderness areas* predate the establishment of designated wilderness in 1984 and 2009. Many of the routes date back to the 19th century and a number follow prehistoric Native American routes.

Park wilderness areas are among the most rugged in the 48 contiguous states. Altitudes vary from 2,000 feet to near 14,500 feet above sea level. Huge canyons (several rivaling the Grand Canyon of Arizona in depth) cut through the range. High ridges separate the various watersheds. A dozen passes exceed 12,000 feet and two are more than 13,000 feet above the sea. Thick vegetation clothes the middle altitude country and thickets can impede travel up to 10,000 feet. Above about 9,000 feet, where Pleistocene glaciers scoured the ground across the landscape as recently as 12,000 years ago, the terrain is rocky and sometimes

unstable. The southern Sierra has few roads above the foothills, and much of the *park wilderness areas* are accessible only by several days of foot or stock travel.

For all these reasons, trail construction began early in the Sierra, and the existing system was essentially complete by 1940. Little has changed over the years, and trails remain the primary means of access. Almost all park wilderness users rely on them for access. Even experienced hikers who enjoy cross-country (off-trail) travel in the high country usually approach their destinations on maintained trails.

Almost all trails in these parks were constructed, over the past 125 years and prior to wilderness designation, to meet the access needs of stock users and hikers. Trails are maintained to continue to meet standards that address the needs of hikers and stock users (private public, commercial, and administrative). In order to assure the existence and upkeep of these valuable trail systems, staffing for trail crews is regularly provided in the parks and is supported through a variety of means.

Associated with the parks' trail system is a number of supporting facilities, and a suite of actions required which are necessary to meet the goal of providing for appropriate wilderness recreation.

Certain facilities and actions are necessary for proper and efficient conduct of wilderness trail maintenance and improvement. Temporary trail crew camps provide the point from which crews work. These provide for shelter, storage of supplies and normal day-to-day living activities. The camps, in order to effectively meet trail maintenance actions, may contain sanitary facilities (privy or other low impact style). Toilets at crew camps prevent human waste from being scattered throughout an area. These are required to prevent unsanitary and unhealthy conditions. Food storage lockers may also be required in order to prevent wildlife from obtaining human food and preventing potentially dangerous human/animal encounters. Equipment storage via lockers may also be required to protect equipment from weather, theft and misuse by the public.

In order for the wilderness trail work crews to sustain themselves and to conduct their duties, it is necessary to supply them regularly. Food, clothing, tools, communication devices, and emergency medical supplies must be maintained at the temporary camps. There are times when it is necessary to deliver these supplies via helicopters. This is limited to when stock access is precluded, such as when passes are snowed in, supplies are too heavy or large, when time-sensitive materials are being transported, stock is not available, in emergency situations, or when it is determined that stock use will cause greater impacts than the helicopter.

Trail crew work actions may at times require the use of motorized equipment or mechanical transport. In order to facilitate timely trail maintenance to prevent off-trail resource damage, crews will occasionally use motorized chainsaws, rock drills, and wheelbarrows.

Trailside signing is limited to that necessary to provide visitors with required orientation (trail junctions, for example), and that required to help visitors avoid the most serious safety hazards (such as lightning on the summit of Mt. Whitney).

Several major rivers emanate in *park wilderness areas.* Crossing them can be dangerous, particularly during the first half of the summer when the snow is still melting. To facilitate access, a small number of footlogs and bridges are maintained where crossings over major streams are particularly dangerous or difficult. The majority of stream crossings are without bridges.

These parks provide for "a primitive and unconfined type of recreation." Thus, camping is allowed over nearly the entire extent of *park wilderness areas.* Most camping, however, tends to be concentrated near level terrain and water, and adjacent to trails. Many sites have been in use as long as the trails themselves and as a result, some are heavily used.

Without this trail system and associated trailside improvements, it would be impossible to sustain wilderness recreation in *park wilderness areas* in the manner that has developed over more than a century and a quarter in the High Sierra of California. Since this form of recreation is, quite literally, one of the forms of wilderness use that helped inspire the Wilderness Act, it is clear that the wilderness should be managed to sustain these uses in a manner that, as the Acts of 1916 and 1964 require, "provides for their enjoyment by future generations...."

Therefore the Minimum Requirement for recreation in *park wilderness areas* thus consists of a trail system supported by the actions of trail crews and with limited trailside signs, bridges and footlogs, and a few areas with designated campsites.

2. PROGRAM FOR VISITOR MANAGEMENT AND RESOURCE PROTECTION

A. Goal: To provide for visitor management in a manner that facilitates protection of the wilderness resource and enhances wilderness character.

In order to protect the wilderness resource, to mitigate unacceptable impacts of use, and to assure appropriate access and education for wilderness users, Sequoia and Kings Canyon National Parks undertake specific management actions and maintain an organized administrative system. This provides for pre-visit information and wilderness based stewardship, protection and restoration activities and is supported by a cadre of wilderness rangers. In order to provide adequate support for the actions of the rangers, and to assure impacts from wilderness visitors are minimized, certain facilities are permitted to exist and to be maintained. These include:

- wilderness ranger stations and associated storage facilities
- small-scale utility systems (directly affiliated with stations)
- toilet facilities (at ranger stations and in high-use areas)
- communication systems (specifically for wilderness administration)
- signs (regulatory)
- drift fences and hitch rails
- limited camp facilities (food storage lockers & campfire rings)
- cultural resource features

B. Analysis and Justification:

Due to its size and high level of use, it is necessary to maintain a system that provides for controlled levels of use of *park wilderness areas.* This consists of a seasonal wilderness permit system with use quotas, regulatory actions for resource protection (e.g. food canister and fire limit requirements), restoration and closure actions, and the subsequent necessity for rangers conducting these actions to reside temporarily within the wilderness. This means that wilderness ranger stations are essential intrusions to protect resources and provide education and emergency services. Options that do not provide for stations do not allow adequate patrol coverage of the vast area. In order to enhance enjoyment and protect the wilderness resource, the presence of rangers deep within the wilderness is required.

Rangers in the wilderness are required to enforce necessary resource protection regulations (e.g. no fires, campsite closed, closed to grazing).

Certain facilities and actions are necessary for proper and efficient conduct of wilderness ranger duties. Ranger stations are the largest facilities. These provide a point from which rangers work. They provide for shelter, storage of supplies (both inside and outside of the station) and normal day-to-day living activities. They also serve as a place for visitors to ask questions and receive assistance. The stations, in order to

effectively meet protection actions, may contain small utility systems (water, electric and sanitary [privy or other low impact style]). The electric systems are primarily solar generated electricity. This is necessary in order to recharge batteries that power communication equipment. Toilets, both at stations and high use camp areas help prevent human waste from being scattered throughout an area. These are required to prevent unsanitary and unhealthy conditions.

In order for the rangers to sustain themselves and to provide visitor management and assistance, it is necessary to supply the rangers and their stations. Food, clothing, tools, communication devices, and emergency medical and search and rescue supplies must be maintained at the stations. There are times when it is necessary to bring these supplies and occasionally insert or remove rangers from their stations via helicopters. This is limited to when stock access is precluded, such as when passes are snowed in, supplies are too heavy or large, when time-sensitive materials are being transported, stock is not available, or in emergency situations.

The system of wilderness rangers requires effective radio communication systems to provide support responses for emergency services, to provide updated information to the frontcountry about trail and other wilderness conditions for the purpose of educating wilderness visitors, and to provide for the safety of wilderness staff. In order to adequately cover the large size of *park wilderness areas*, radio repeaters exist in strategic and extremely remote locations and need to be maintained. It is necessary to provide scheduled maintenance and upgrades to these facilities, and due to their remote inaccessibility this is done via helicopter.

Wilderness rangers conducting rehabilitation and restoration of impacted areas, may also require the ability to erect temporary regulatory resource protection signs to assure long-term effectiveness and sustainability of these actions.

High levels of use concentrated in specific areas necessitates that campsites be designated in certain areas and the campsites may contain (when necessary) constructed fire pits (where fires are legal), food storage lockers (where bears are common and raid camps), or toilets (privy type). At Emerald and Pear Lakes there are two composting toilet buildings. These are necessary as this high use area is underlain by bedrock and pit toilets are not feasible.

Stock use (mainly horses and mules) is common and traditional in *park wilderness areas*, and stock is allowed to graze in many locations. Drift fences primarily protect park resources but also subsequently facilitate stock camping and travel. In some areas, drift fences are maintained where free-grazing is an appropriate use. Drift fences help to protect sensitive resources near camps from which stock tends to drift away. Hitching posts may also be advantageous in areas where tethered stock would otherwise damage vegetation.

Tree hazard (TH) management in wilderness will adhere to legislative mandate and NPS policy. TH actions will take into account considerations of wilderness character, staff and public safety, and other pertinent factors. Specific guidance (e.g. what gets protected, methods of removal/disposal, etc.) on TH management are provided in SEKI's varied planning documents.

Without these organized systems and the actions of the wilderness rangers and the logistical support of wilderness ranger stations, enjoyment of the wilderness by the visiting public and the protection of wilderness resources would be compromised. The quality of the wilderness experience and the quality of the wilderness resource would be impacted.

Therefore the Minimum Requirement for managing visitor use, enhancing wilderness enjoyment, and assuring resource protection in *park wilderness areas* thus consists of a system of management controls and

actions combined with a cadre of wilderness rangers performing specific resource protection measures and supported by wilderness stations as defined above.

3. PROGRAM FOR RESOURCE MANAGEMENT AND RESEARCH

A. Goal: To provide for the preservation, restoration, and understanding of natural and cultural resources in wilderness.

In order to provide for scientific, educational, conservation, and historical use in park *wilderness areas*, the National Park Service conducts a broad resource management and research program. This program assists in preserving and understanding natural and cultural resources in wilderness through methodologies of studying, inventorying, monitoring, protecting, restoring, and maintaining. These actions are conducted through a variety of means and on occasion may require the existence and maintenance of certain support facilities. These include:

- Site markers
- Wells, weirs and Nets
- crew camp facilities (food storage lockers, pit toilets, temporary stock accouterments)
- informational signing for public understanding
- barriers including cave exclusion gates to protect resources from impacts
- boundary fences
- enclosures to protect structures and installations from wildlife depredation
- containment and diversion devices to protect resources from hazardous wastes and other unnatural flows
- the use of motorized equipment, such as saws and drills, to install or maintain the above
- power sources as needed for the above

B. Analysis and Justification:

Scientific, educational, conservation, and historical use of *park wilderness areas* predate the formal designation of the wilderness in 1984. These uses are wholly compatible with the Wilderness Act, and are based on the legislation which established the National Park Service, and Sequoia and Kings Canyon National Parks. These acts give the Park Service a clear mandate to manage and study natural and cultural resources.

Without the parks' resource management and research program and associated facilities and actions, it would not be possible to manage for scientific, educational, conservation, and historical use in *park wilderness areas* in a manner necessary to sustain the quality and integrity of the wilderness resource. This program also aids in providing for the wilderness character element of natural by restoring ecosystem health.

Implementation of the resource management and research program requires that crews enter *park wilderness areas* to do field work. A number of facilities are necessary to meet the goal of scientific, educational, conservation, and historical use. These are temporary and limited to that necessary to support field crews, mitigate safety hazards, and minimize impacts in the wilderness. Project review is conducted to assure full compliance with wilderness character guidelines, and projects are required to remove all structures and installations upon their completion.

To mitigate the impacts of field crew camps, the parks have found it necessary over the years to selectively provide facilities as indicated above. Field-crew camp infrastructure is provided to the minimum extent necessary and disturbed areas are rehabilitated when the facilities are no longer required.

In order to study resources and natural systems; the establishment of plots, and placement of temporary and long-term monitoring devices; the collection of pertinent samples by way of people or devices; the removal of trash and other manmade materials; the removal of non-native plants and animals; and the removal or relocation of hazardous plants and animals, is essential. These actions may require the temporary or potentially long term installation of various devices, as indicated above.

In order to sustain natural fire regimes in wilderness, actions such as prescribed fires, management of natural fire, hazard fuel removal, and fire suppression and control may be necessary. These actions may also require the protection of specific natural and cultural resources, certain structures, and installations.

Stock (mainly horses and mules) are used to support field crews in *park wilderness areas*. Stock traditionally grazes in many locations within the wilderness. Stock-related infrastructure is provided to the minimum extent necessary and is rehabilitated and removed as appropriate when no longer required.

Stock and by foot are the preferred method of supporting field crews in *park wilderness areas*. Helicopter support may be used on specific occasions when: (1) equipment is too fragile for transport by other methods, (2) samples and/or other cargo is time-dependent, or requires stable conditions, or is of large volume or weight as to be compromised by ground travel, (3) stock are not allowed or would damage natural or cultural resources, or (4) areas are inaccessible to stock.

The actions, activities, and services of the resource management and research program ensure that *park wilderness areas* are provided with appropriate resource protection and limited impact on visitor management. These actions, activities, and services are thus categorically defined as the minimum requirement and are carried out with the purpose of appropriate and necessary administration of the area as wilderness and are not a significant impact to wilderness resources and character.

The minimum requirement for scientific, educational, conservation, and historical use in *park wilderness areas* thus consist of the above described resource management and research program.

MINIMUM TOOL:

In order to carry out those actions that are defined above as the Minimum Requirement for Management of *park wilderness areas*, managers must "identify the management method (tool) that causes the least amount of impact to the physical resources and experiential qualities (character) of wilderness." This is defined as the "Minimum Tool."

As defined in Director's Order 41, Section C.2: *"Minimum Tool: means a use or activity, determined to be necessary to accomplish an essential task, which makes use of the least intrusive tool, equipment, device, force, regulation, or practice that will achieve the wilderness management objective. This is not necessarily the same as the term "primitive tool," which refers to the actual equipment or methods that make use of the simplest available technology (i.e., hand tools)."*

PROHIBITED ACTIVITIES:

The following management actions are prohibited within *park wilderness areas* (unless approved by the parks' superintendent through a separate and thorough Minimum Requirement Analysis and decision):

- Construction, maintenance, or use of any temporary road in wilderness.
- Use of any motor vehicle in wilderness, other than approved helicopter use as described above.
- Use of any motorized equipment or motorboats in wilderness, other than described above.
- Landing of any aircraft in wilderness, other than described above.

- Use of any mechanical transport in wilderness.
- Maintenance, placement, or construction of any structure or installation or related facility in wilderness, other than described above.
- Any management action or activity not described above.

SCOPE AND DURATION:

The Minimum Requirement defined by this Analysis and Determination applies specifically to *park wilderness areas* as defined in the Scope and Purpose section of this Management Directive.

The decisions herein documented are valid for five years from the date of approval of this document unless amended by the Superintendent of Sequoia and Kings Canyon National Parks. The three Minimum Requirement Programs as defined above will be reviewed annually by the park's Environmental Management Committee to assure the practices and actions of the programs are still valid and necessary and in compliance with park and service policies and regulations. If changes are needed, EMC will adjust the contents and direction of this document, with the approval of the Superintendent.

IMPLEMENTATION:

To ensure that the decisions documented herein are implemented consistently and appropriately, each of the operating divisions of Sequoia and Kings Canyon National Parks that intend to work in *park wilderness areas* under the authority of this decision will develop and maintain project, or action, specific Minimum Requirement – Minimum Tool (MR-MT) decision analyses. These documents will provide detailed analyses, with alternatives, of all actions to be taken and equipment to be used in wilderness in carrying out the three programs detailed above. These analyses will assure that the parks' MR-MT procedures and safeguards defined in this document, and by supporting NPS policy documents, are consistently and stringently followed. The MR-MT analyses will be reviewed by the sponsoring Division Chief and approved by the Superintendent. Responsibility for following the procedures and safeguards of this Management Directive for actions in wilderness rests with the supporting Division Chief.

Craig C. Axtell 16-Sep-09

Approved - Craig C. Axtell, Superintendent Date

SUPPORTING REFERENCES:
NPS ORGANIC ACT – 1916
THE WILDERNESS ACT – 1964
CALIFORNIA WILDERNESS ACT – 1984
OMNIBUS PUBLIC LAND MANAGEMENT ACT OF 2009
SEKI FGMP/EIS/ROD – 2006/2007
NPS MANAGEMENT POLICIES – 2006
NPS DIRECTORS' ORDER 41 AND REFERENCE MANUAL 41 - 1999
BMP/EA/FONSI/ADMIN. ADDENDUM/ADDENDUM – 1986/1984/1986/1985/1988
SUMMP/EA/FONSI/ADDENDUM – 1986/1983/1983/1988
WILDERNESS CHARACTER DOCUMENT- *Keeping It Wild – An Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System* - 2008

Intentionally Left Blank

APPENDIX F: UNITED STATES FISH AND WILDLIFE SERVICE CONSULTATIONS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
1-1-06-I-0972

MAY 17 2006

Memorandum

To: Superintendent, Sequoia and Kings Canyon National Parks, U.S. National Park Service, Three Rivers, California

From: Assistant Field Supervisor, Endangered Species Program, Sacramento Fish and Wildlife Office, Sacramento, California

Subject: Informal Endangered Species Consultation on Replacing Deteriorating Wilderness Ranger Stations: Le Conte, Rae Lakes, and Crabtree

This is in response to the National Park Service's letter that was received on April 7, 2006, requesting the U.S. Fish and Wildlife Service's (Service) concurrence with the determination that the replacement of wilderness ranger stations at Le Conte, Rae Lakes, and Crabtree is not likely to adversely affect listed species pursuant to the Endangered Species Act of 1973, as amended (Act). The two listed species that potentially occur within the proposed action area are the endangered Sierra Nevada Distinct Population Segment of the bighorn sheep (*Ovis Canadensis californiana*) (bighorn), and the threatened bald eagle (*Haliaeetus leucocephalus*).

Under the preferred alternative, the existing structures would be dismantled and removed from the wilderness. New replacement structures of similar size and style would be constructed. The project is expected to last for 4 to 11 weeks. Construction activities would include the use of helicopters to move equipment in and out of the project area, the use of battery powered hand tools, and occasional use of a generator, cement mixer, and chain saw.

Based on the Service's review of the April 2006, *Environmental Assessment: Address Deterioration of Wilderness Ranger Stations: Le Conte, Rae Lakes, Crabtree*, correspondence, and additional data available to the Service, we concur with your determination that the preferred alternative to replace the existing structures is not likely to adversely affect listed species. Bald eagles, while potentially in the area, are considered rare vagrants to the parks and are unlikely to be in the area during construction activities. The continued presence of ranger stations is not likely to affect eagles due to their sporadic and limited use of the area. The closest bighorn activity is more than one mile away for the Le Conte and Crabtree project areas. One area of the project (Rae Lakes) is located within the historic range of bighorn. However, there have been no observations of bighorn near the station since the early 1990s when the population crashed.

TAKE PRIDE IN AMERICA

When bighorn were present in this location, they frequently grazed within 100 meters of the Rae Lakes Ranger Station. Bighorn appeared to have habituated to hikers traveling through this area and activities associated with operating the ranger station. As this population recovers and reoccupies this historic use area, it is reasonable to expect the bighorn to habituate to the new ranger station.

To minimize potential affects to listed species the parks propose the following measures:

1. The methods used will minimize noise of the construction activities.
2. The methods used will minimize the duration of the construction activities.
3. The methods used will minimize the foot print of the project.
4. Potential foraging habitat of the bighorn (areas of short hair sedge) will be avoided to the maximum extent possible.
5. Helicopters will not fly over habitat occupied by bighorn.

Unless new information reveals that this project may affect listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act, is necessary.

Please address any questions or concerns regarding this response to Amy Fesnock or Roberta Gerson, Branch Chief, at (916) 414-6600.

cc:
George Durkee, Backcountry Ranger, Sequoia and Kings Canyon National Parks, Three Rivers, California

Intentionally Left Blank

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

NPS D-56 (March 2003)