National Park Service
U.S. Department of the Interior

Rocky Mountain National Park
Colorado

Backcountry/Wilderness Management Plan
and Environmental Assessment

July 2001

Backcountry/Wilderness Management Plan
and Environmental Assessment

Rocky Mountain National Park
Colorado

National Park Service
U.S. Department of the Interior

Submitted by: Timothy L. Devine, Wilderness Program Specialist — Date: 7/12/01

Reviewed by: Joseph R. Evans, Chief Park Ranger — Date: 7/12/01

Reviewed by: Anthony J. Schetzsle, Assistant Superintendent — Date: 7-12-01

Approved by: A. Durand Jones, Superintendent — Date: 7/12/01

EXECUTIVE SUMMARY

This document contains the proposed Backcountry/Wilderness Management Plan for Rocky Mountain National Park (RMNP) and the associated Environmental Assessment (EA). The purpose of the plan is to serve as:

1) A public document that defines wilderness management policies and actions at RMNP;
2) A means to identify RMNP's wilderness vision, long range management goals, intermediate objectives, and actions and options to meet those objectives; and
3) A working guide for staff who manage the wilderness resource.

The plan addresses issues and provides guidelines for managing the non-developed areas of the park that are defined as backcountry or as designated, recommended, and potential wilderness. It details a wide array of issues and identifies specific standards for managing administrative actions and visitor use. The plan formalizes current park backcountry management practices, which have been in effect for the past twenty years; it does not affect developed areas, roads, or frontcountry park uses. This plan supersedes and updates any direction or guidance set forth in the 1984 Backcountry Management Plan. The plan's adoption is not a part of the recommendation before Congress to officially designate 248,464 acres (100,628 hectares) as wilderness.

The EA involves analysis of two plan alternatives: the proposed plan (Preferred Alternative) and the No Action/Current Management Alternative. The proposed plan discussion (Section 2.1) includes a detailed description of all items that comprise the plan elements. These include such topics as Management Classes, Resource Conditions, Visitor Experience Conditions, and Administrative Conditions and Management Activities. Within these major headings, the plan formalizes numerous standards and guidelines, many of which are already being implemented on a case-by-case basis. Standards or recommended actions are discussed for such elements as day use and overnight group size limits, stock use, aircraft use, the Backcountry Permit System, campsite standards and management, climbing management, trails management, and facilities in the backcountry and wilderness. The proposed plan provides for an enhanced wilderness interpretation and education effort and establishment of a Wilderness Steering Committee.

The No Action/Current Management Alternative continues the current status of backcountry and wilderness management at RMNP. It differs from the proposed plan in several key areas that are described in detail in Section 2.2 of this document. The primary difference is that there would be no comprehensive backcountry and wilderness management plan in effect, and proposed activities in backcountry and wilderness would be reviewed and approved on a case-by-case basis, based on policies and guidelines that are not formalized, but generally followed. There could be a lack of continuity with changes in staff and/or administrations, and there would be no documented process that would ensure the most consistent protection of backcountry and wilderness values.

This document analyzes the potential effects of both the proposed plan and the No Action Alternative on the natural, cultural, and social aspects of the backcountry and wilderness resource, described in Chapters 3 and 4. In general, the proposed plan includes many standards for resource protection that would result in beneficial, long-term impacts to natural and cultural resources, as well as a consistent review process that would have beneficial effects

on the administration of operations in wilderness areas. There may be some adverse impacts on park operations, due to limitations that would be placed on some management options. The application of a Minimum Requirement Analysis for all projects would require additional staff time and possibly result in some additional costs. Overall, cumulative beneficial impacts would be expected from implementation of the plan, especially considering the potential increased development of private lands that border RMNP.

All issues and concerns were considered and the most significant of these were analyzed in detail. The potential effects of each alternative on natural and cultural resources, visitor use, local and regional economies and the Park's environmental integrity are fully explored.

Important

In order to be considered in the development of the final Plan and EA, comments must be received by close of business on March 30, 2001. Public comments will not be available for public review until after the Plan and EA comment period ends. Names and addresses of people that comment on this Plan and EA would be available to the public upon request. Copies of the Plan and EA have been sent to public libraries in Boulder, Estes Park, Fort Collins, Grand Lake, Loveland, Longmont and Walden, Colorado. You can submit your comments to us in several ways:

- By mail: Superintendent, Rocky Mountain National Park, Estes Park, Colorado, 80517
- By e-mail: romo_superintendent@nps.gov
- By fax: (970) 586-1310
- Hand deliver: Rocky Mountain National Park Headquarters, 1000 Highway 36, Estes Park, Colorado or to the Kawuneeche Valley Visitor Center, Rocky Mountain National Park, P.O. Box 100, Grand Lake, Colorado 80447

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1.0 INTRODUCTION

1.0 INTRODUCTION

1.1 Scope of the Plan

Rocky Mountain National Park (RMNP or the Park) encompasses 265,769.14 acres (107,556 hectares) and is located in north-central Colorado in portions of Larimer, Boulder, and Grand Counties (see Figure 1-1). The towns of Allenspark, Glen Haven, Estes Park, Meeker Park, and Grand Lake are found along its borders. Currently, within RMNP, approximately 2.9 percent, 7,482 acres (3,028 hectares) is developed, 2.1 percent, 5,759 acres (2,330 hectares) is backcountry, 93.5 percent, 248,464 acres (100,628 hectares) is recommended wilderness, 0.4 percent, 1,147 acres (465 hectares) is potential wilderness, and 1.1 percent, 2,917 acres (1,181 hectares) is designated wilderness (see Figure 1-2). Refer to Section 1.3.1 for history of the Wilderness Recommendation. Lands bordering RMNP are a mixture of state, local, private, and federal lands. About 62 percent of the Park boundary borders National Forest Land, with 70 percent of the adjacent Forest lands managed as designated wilderness (see Figure 1-3). The rest of the Park boundary borders subdivisions, summer camps, and burgeoning town populations.

This Backcountry/Wilderness Management Plan addresses issues and provides guidelines for managing the non-developed areas of RMNP that are defined as backcountry (any area more than 100 feet from developed areas or roads) or as designated, recommended, or potential wilderness. As further discussed in Section 1.3.2 below, the scope of this plan includes both designated and recommended wilderness, per NPS Management Policies 2001 (6.3.1). Since backcountry and wilderness do not include the developed areas of RMNP, issues which pertain specifically to developed areas are not within the purview of this Backcountry/Wilderness Management Plan.

This plan supersedes any direction or guidance set forth in the 1984 Backcountry Management Plan. Within this framework, this plan provides direction for management of natural and cultural resources within the context of wilderness and backcountry management policies, with primary focus on visitor use and impacts to wilderness values and resources and administrative actions to mitigate associated impacts. It also sets the tone and increases awareness of the way the public and park staff looks at the wilderness and backcountry character and resources of RMNP.

The scope of this plan does not involve any proposed approval, action, or documentation that is directly related to the recommendation before Congress to officially designate 248,464 acres (100,628 hectares) of RMNP as wilderness. This plan and current actions and policies of the Park must treat any proposed or recommended wilderness the same as officially designated wilderness, based on NPS Management Policies 2001 (6.3.1).

1.2 Purpose and Need For This Plan

The purpose of this Backcountry/Wilderness Management Plan is to serve as:

1) A public document that defines wilderness management policies and actions used at Rocky Mountain National Park (RMNP or “the Park”);
2) A means to identify RMNP’s wilderness vision, long range management goals, intermediate objectives, and actions and options to meet those objectives; and
3) A working guide for staff who manage the wilderness resource.

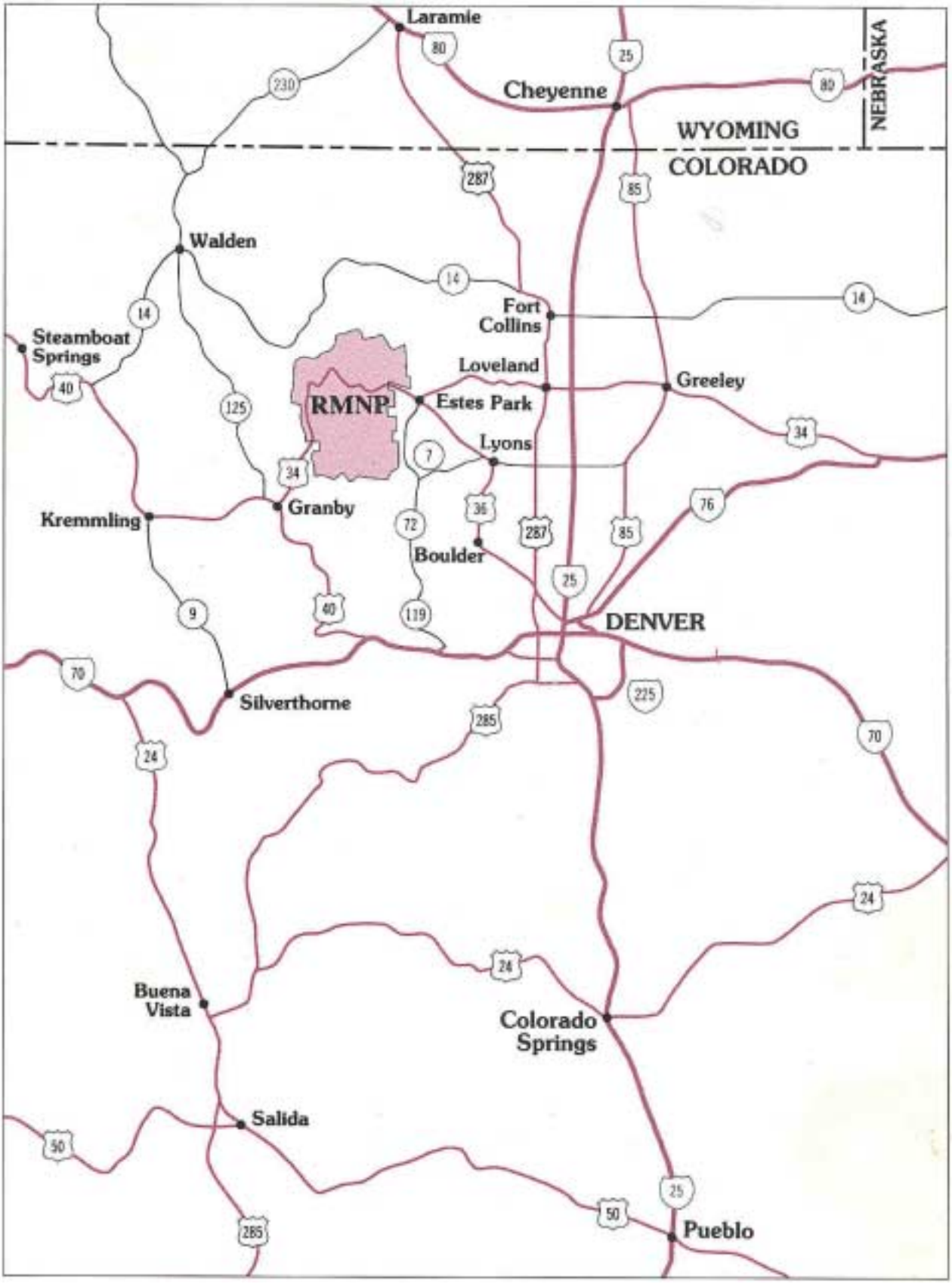
Laramie
80
25
230
Cheyenne
80
NEBRASKA
WYOMING
COLORADO
287
85
Walden
14
14
14
Fort Collins
Steamboat Springs
40
Loveland
Greeley
RMNP
125
Estes Park
34
Lyons
7
34
Granby
Kremmling
72
36
287
85
76
Boulder
25
9
40
119
DENVER
70
Silverthorne
225
285
70
24
24
24
Buena Vista
Colorado Springs
Salida
50
25
50
285
Pueblo

Figure 1-1

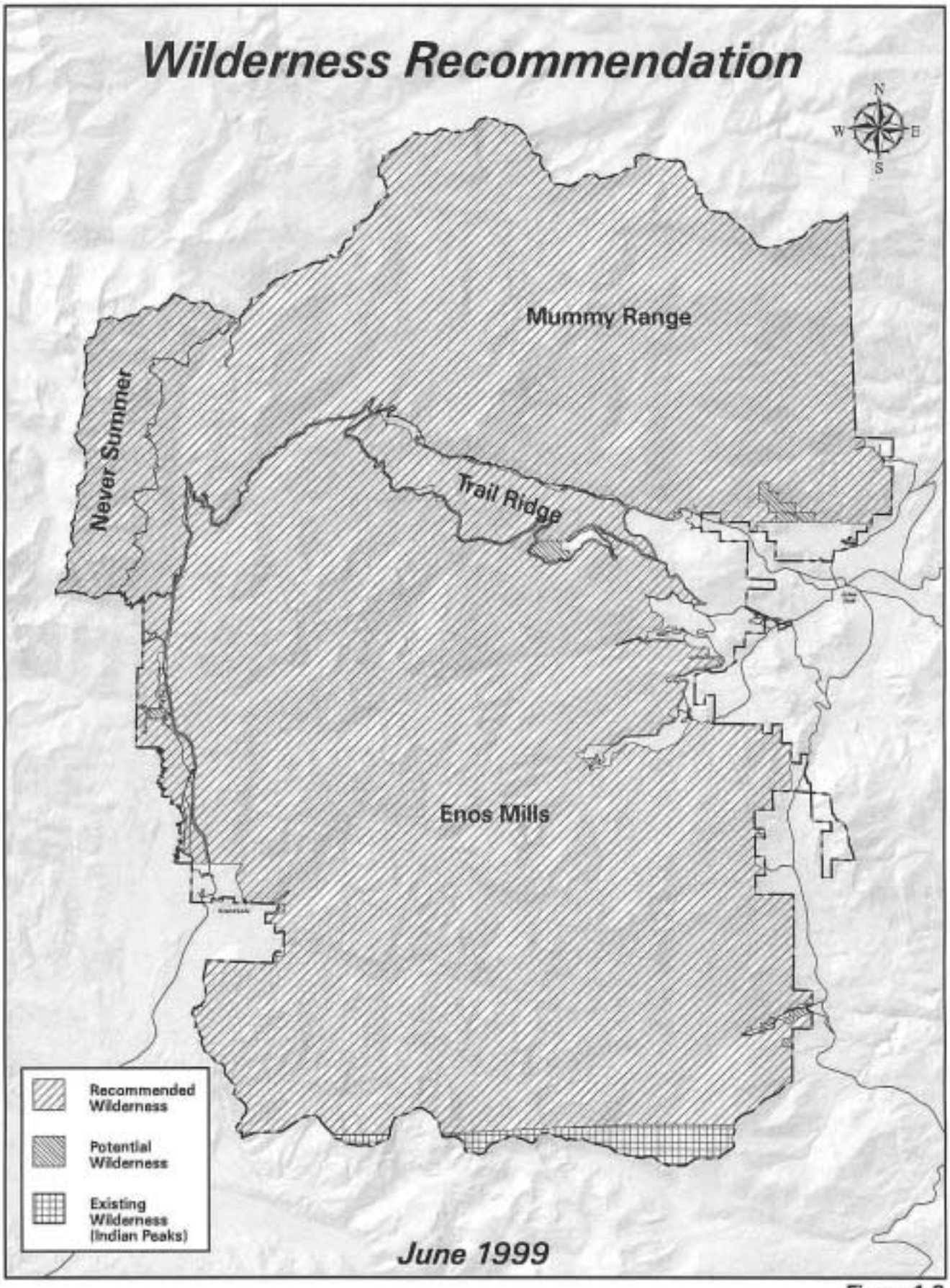
Wilderness Recommendation
N
W
E
S
Mummy Range
Never Summer
Trail Ridge
Enos Mills
Recommended Wilderness
Potential Wilderness
Existing Wilderness (Indian Peaks)
June 1999

Figure 1-2

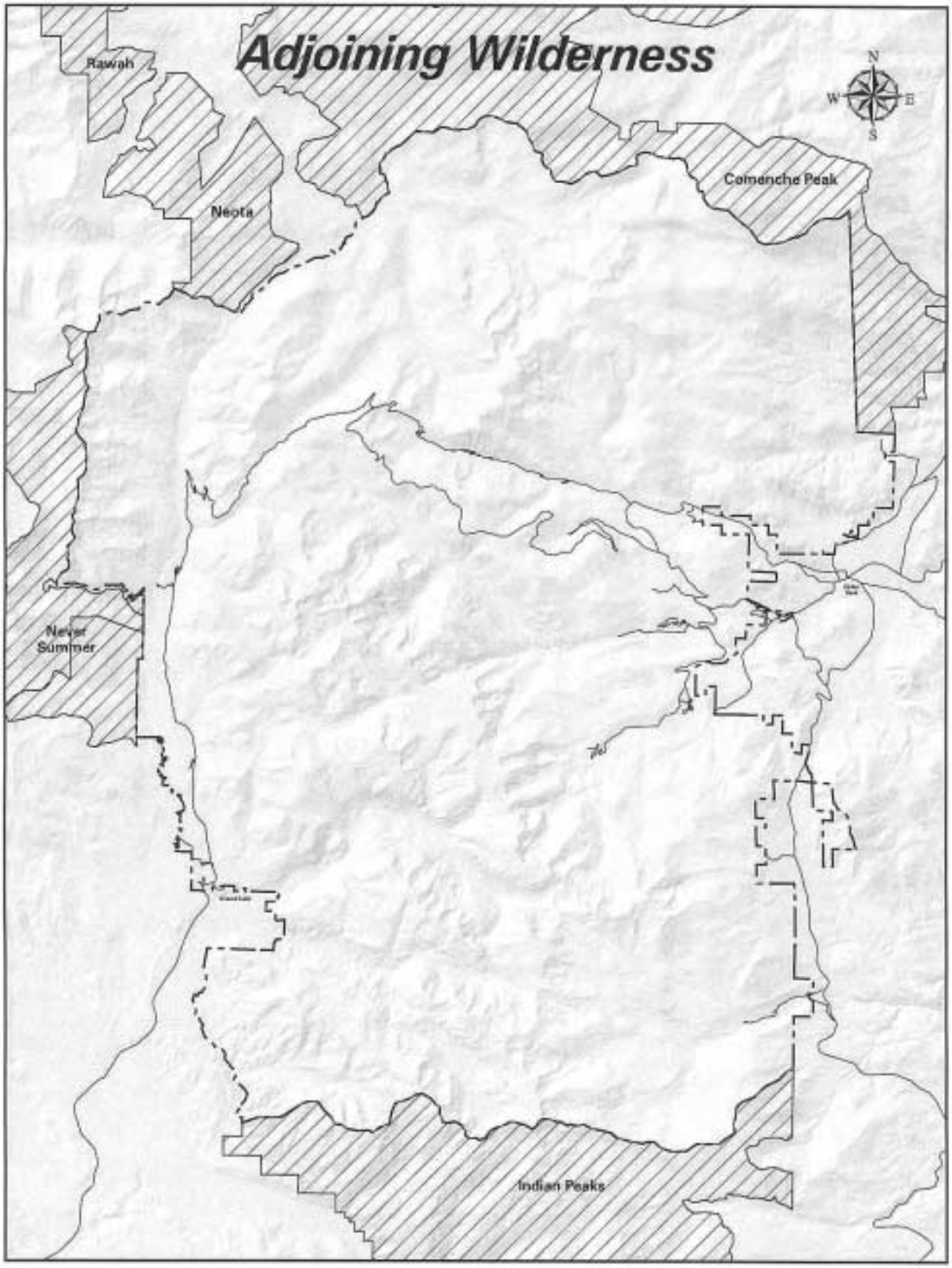
Adjoining Wilderness
N
W
E
S
Rawah
Neota
Comanche Peak
Never Summer
Indian Peaks

Figure 1-3

National Park Service (NPS) policy states that "each park containing wilderness will develop and maintain a wilderness management plan to guide the preservation, management, and use of that wilderness." In addition, Director Roger Kennedy outlined several key park responsibilities with regard to wilderness management in a memorandum to park superintendents dated November 4, 1994. One such responsibility for the RMNP was to "ensure that your park has a wilderness/ backcountry plan completed by the year 2000." Director Robert Stanton reaffirmed this direction in his own memorandum dated February 27, 1998, in which he directed parks to have a current, approved wilderness management plan as soon as possible, but no later than the year 2002.

Other reasons for developing this plan include the following:

- The current Backcountry Management Plan was approved in 1984. There are many sound principles and good guidance in that plan; however, it mainly addresses overnight use of the backcountry. Several visitor and administrative uses have since changed and need to be addressed.

- Overnight use in RMNP has steadily increased since the mid 1980's. It is important to review and revise, if necessary, the Park's management policies and guidelines with respect to overnight use and the permitting process.

- The population along the Front Range of Colorado continues to grow, and visitation to RMNP topped three million in 1994. As a result, day use and its associated impacts have increased significantly. Appropriate management actions are needed to protect the wilderness resources for present and future generations.

- Finally, new technology continues to play a role in how wilderness areas are managed and requires consideration to protect natural resources and visitor experience. Appropriate uses need to be discussed and guidance provided.

1.3 Wilderness at Rocky Mountain National Park

1.3.1 History of Wilderness and Backcountry Management/Wilderness Recommendation

Rocky Mountain National Park has always been recognized for its wilderness character. Many of the management plans developed have addressed various aspects of the wilderness found within RMNP. In 1984, the current Backcountry Management Plan was approved, which includes principles and guidance for wilderness management. However, the 1984 plan and earlier versions primarily focused on overnight use of the backcountry.

Total park visitation continues to increase. Since 1994 visitation has topped three million annually. Many visitors enter the wilderness/backcountry for day and overnight trips. Documentation of current day use levels is limited. A 1977 backcountry/wilderness day use study estimates hikers at 700,000 per year (Tarhan, 1977). In 1994 and 1995 an exit survey of 4,000 visitors was conducted, in which 48 percent of the respondents stated hiking was a main activity. Considering current park visitation figures, this would more than double the 1977 estimate. Park management for day use has included hardening trails and high use destination sites, dispersing use throughout RMNP, and educating the public on impacts they may cause.

Statistical trends of overnight backcountry use can be seen from the Park's earliest records beginning in 1960 (see Figure 1-4). Annual user night use of 13,795 continued a steady increase to a peak of use in 1977, with 62,708 user nights. This was followed by a decline to 32,705 user nights in 1987, followed again by a steady increase to a total of 41,772 user nights in 1999. The backcountry of RMNP is an ever-increasing destination for those seeking a quality wilderness experience.

The Backcountry Permit System developed prior to 1968 in response to the overuse and severe impacts that had appeared in high use backcountry areas within RMNP. Many of the camp areas were near popular high country lakes. It was reported in those years that the popular Fern Lake area was often crowded with over 200 people on busy weekends. One report from Park Ranger Bob Haines said that "there were tents, fires and pits toilets everywhere even right up to the edge of the lake". The impacts were highly visible and severe.

Park officials, in an attempt to mitigate these impacts, instituted a permit system in order to regulate and more evenly distribute backcountry use. This system allowed for focused impacts in specified areas that could be directly managed. The system was administered on a "first come, first served" basis.

An advance reservation system for overnight use was initiated in July 1974. Fifty percent of RMNP's then 200 backcountry campsites were included in the reservation system. The other 100 sites continued to be on a 24-hour advance "first come, first served" basis as had been in the past. Designated sites at this time allowed 1-7 people, and group limits permitted 8-25 people for overnight camping. There were no fees for backcountry use or the administration of backcountry permits.

In the summer of 1976, due to the difficulty of administering 50 percent of the sites by reservation and 50 percent by "first come, first served", all backcountry campsites were transferred to the reservation system. Sites that had not been reserved in advance were, of course, still available on a "first come, first served" basis. In May 1976, group site limits were reduced from 25 to 20, and night limits increased from seven (7) nights total allowed year-round to seven (7) nights from June - September and an additional 15 nights allowed from October - May, for a total of 21 nights allowed year-round. Beginning in approximately November 1976, self-registration boxes for backcountry permits were placed at strategic trailheads (Wild Basin, Long's Peak, and North Fork) during the winter months instigated by staffing constraints and for the convenience of park visitors. In January 1993, overnight group size limits were reduced again from 20 (summer) and 15 (winter) to 12 (year-round), due to high impacts and declining national trends.

From 1968 to 1994, the reservation system was entirely tracked by hand. Due to the incredible workload and advance in computer technology, the current Backcountry Reservation System was computerized and put online on January 1, 1994. The system was designed and developed in park by the Computer Specialist, Wilderness Program Specialist, and Backcountry Office Manager. The system is reviewed, improved, and updated annually.

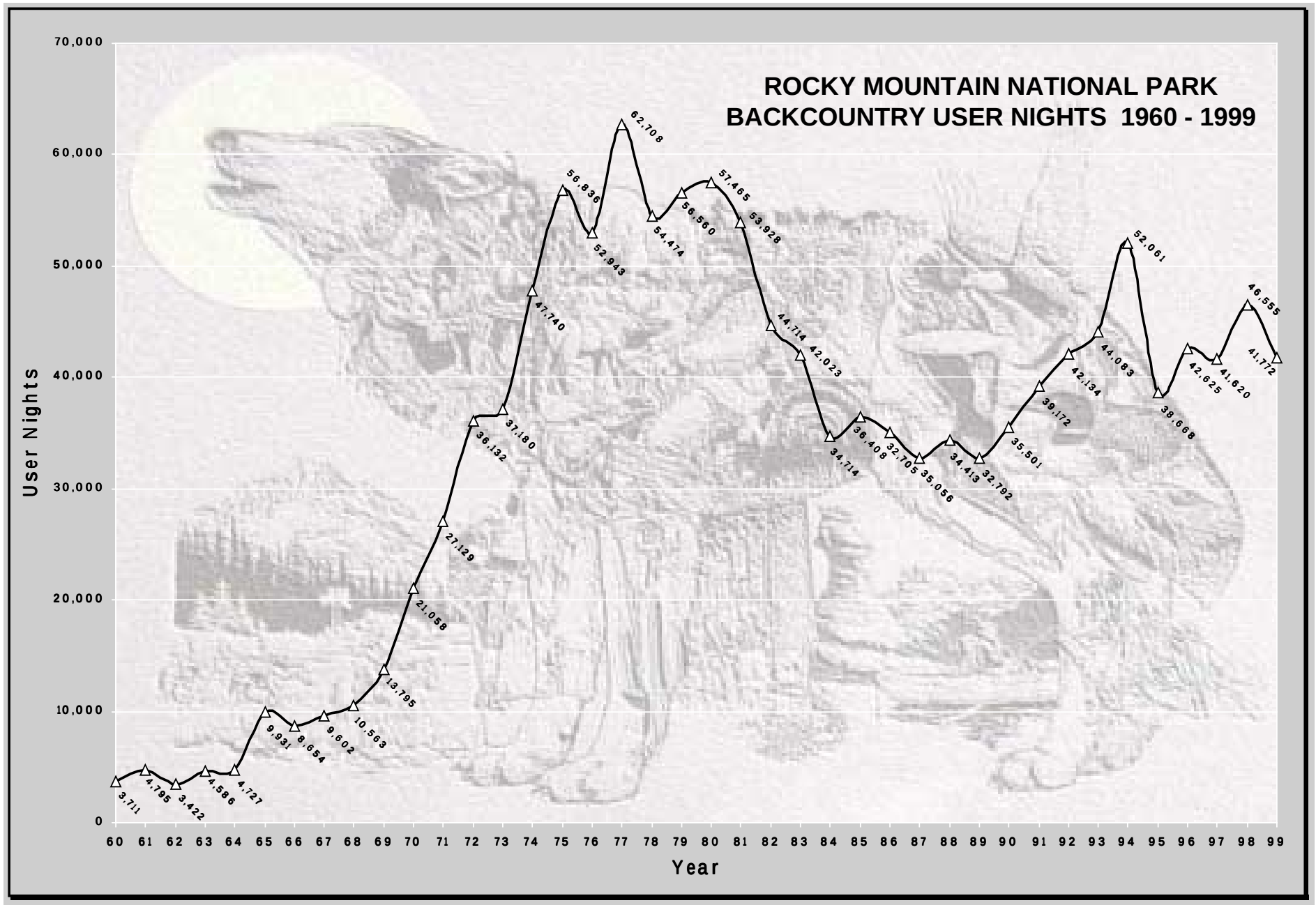
ROCKY MOUNTAIN NATIONAL PARK
BACKCOUNTRY USER NIGHTS 1960 - 1999
User Nights
Year
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99
3,711
4,795
3,422
4,586
4,727
9,931
8,654
9,602
10,563
13,795
21,058
27,129
36,132
37,180
47,740
56,836
52,943
62,708
54,474
56,560
57,465
53,928
44,714
42,023
34,714
36,408
32,705
35,056
34,413
32,792
35,501
39,172
42,134
44,083
52,061
38,668
42,625
41,620
46,555
41,772

Figure 1-4

Due to ever increasing demands on RMNP's budget, fees for the administration of backcountry permits were introduced on May 1, 1995 under Special Park Use authority. All money collected stays within RMNP and is used directly for the administration of backcountry permits. The initial fee was $10 for the administration of each permit (which included all nights of the permit and all people in the party). The administrative fee was raised to $15 on May 1, 1997.

A recommendation to officially designate much of RMNP as wilderness was first introduced to Congress by President Nixon on June 13, 1974. The original recommendation consisted of 239,835 acres to be designated as immediate Wilderness, and 479 acres to be managed as Potential Wilderness Additions. Since 1974, legislation for official designation has been introduced several times which included modifications to the recommended boundaries and acreage due to changes in land ownership, changes in the place of diversion or storage for water rights and several boundary adjustments. In 1980, a park boundary change resulted in 2,917 acres (1,181 hectares) of existing wilderness within the designated Indian Peaks Wilderness being transferred to RMNP.

On April 3, 2001, Congressman Mark Udall (D-CO) introduced the most recent Wilderness legislation for Rocky Mountain National Park to Congress. This recommendation consists of 248,464 acres (100,628 hectares) to be designated as immediate wilderness and 1,147 acres (465 hectares) to be managed as Potential Wilderness Additions (see Figure 1-2). These preliminary acreages correspond to the Rocky Mountain National Park Recommended Wilderness Boundaries Map #121-60,403a dated June 1999. Official maps will be produced and official acres calculated upon official designation by Congress. This recent recommendation has not been acted on and remains pending before Congress.

1.3.2 NPS Wilderness Management Policies

The Wilderness Act, NPS Management Policies, and Director's Order 41: Wilderness Preservation and Management provide guidance for wilderness management. Policies state that wilderness resources or character cannot be compromised unless the actions only have localized, short-term adverse impacts. Wilderness should be an area where the earth and its community of life are untrammeled by humans. It should retain its primeval character and influence without permanent improvements.

NPS wilderness management policies are based on provisions of the Organic Act and the Wilderness Act, as well as the establishing legislation of individual parks within the national system. As outlined in DO 41, wilderness management programs and policies apply to parks that have suitable, study, proposed, recommended, and designated wilderness, since NPS Management Policies 2001 (6.3.1) treats all categories of wilderness in the same manner:

> *..."the term "wilderness" will include the categories suitable, study, proposed, recommended, and designated wilderness. Potential wilderness may be a subset of any of these five categories. The policies apply regardless of category."*

Therefore, the Park Service will take no action that would diminish the wilderness suitability of an area recommended for wilderness study or for wilderness designation until the legislative process has been completed. Until that process has been completed, management decisions pertaining to recommended wilderness and wilderness study areas will be made in expectation of wilderness designation.

NPS Management Policies also address the management of public use of wilderness, and state that the NPS will "encourage and facilitate those uses of wilderness that require the wilderness environment and do not degrade wilderness resources and character". As stated in the Wilderness Act, these areas are for public purposes of recreational, scenic, scientific, educational, conservation, and historical uses. Visitors are encouraged to comply with the concept minimum impact wilderness use.

Regarding public use, NPS Management Policies 2001 (6.4.1) states:

> *"Park visitors need to accept wilderness on its own unique terms. Accordingly, the National Park Service will promote education programs that encourage wilderness users to understand and be aware of certain risks, including possible dangers arising from wildlife, weather conditions, physical features, and other natural phenomena that are inherent in the various elements and conditions that comprise a wilderness experience and primitive methods of travel. The National Park Service will not modify the wilderness area to eliminate risks that are normally associated with wilderness, but it will strive to provide users with general information concerning possible risks, any recommended precautions, related user responsibilities, and applicable restrictions and regulations, including those associated with ethno-graphic and cultural resources."*

1.3.3 Pre-existing Conditions in RMNP Wilderness

There are certain conditions or uses located within the backcountry/wilderness at RMNP that existed prior to the formation of the Park. These uses, through the Park's enabling or subsequent legislation, have the right to continue, subject to park oversight and applicable regulations (i.e. 36 Code of Federal Regulations) that protect park resources and values, regardless of property ownership if it is within the boundaries of RMNP.

The pre-existing conditions within the backcountry/wilderness at RMNP include the following:

- Inholdings:
  - 23 Private, 115.09 acres
  - 2 Private-NPS lease, 79.98 acres
  - 2 Use and Occupancy, 69.95 acres
  - 1 Conservation Easement, 12.67 acres
  - 1 Life Estate, 3.98 acres
- Grazing:
  - MacGregor Ranch, 393 acre allotment, Expires 1/30/01
- Rights of Way:
  - Qwest Communications
  - Public Service Company of Colorado
  - Town of Estes Park
  - Water Supply and Storage Company
  - Grand Lake Lodge
  - Mountain Prairie Girl Scout Council
  - Mountain Parks Electric
  - Three Lakes Water and Sanitation District
  - Grand Lake Metropolitan Recreation District

- Water Rights:
  East of the Continental Divide - Decree signed October 1994
  Mountain Prairie Girl Scout Council
  Town of Estes Park, Colorado
  Water Supply and Storage Company
  City of Longmont, Colorado

  West of the Continental Divide - Decree signed November 2000
  Columbine Lake Water District
  Grand Lake Metropolitan Recreation District
  Southeastern Colorado Water Conservancy District
  Town of Grand Lake, Colorado
  Water Supply and Storage Company
  Grand Lake Lodge

1.3.4 Relationship of Wilderness Management to other RMNP Plans

This Backcountry/Wilderness Management Plan supersedes and updates the 1984 Backcountry Management Plan and provides direction for all actions in wilderness at RMNP. This plan sets the tone for what may need to be incorporated into other park plans. It guides any actions that take place in the backcountry or wilderness under other plans, including the following:

- Master Plan (1976)
- Trails Plan (1982)
- Backcountry Sign Plan (1988)
- Land Protection Plan/Amendment (1985/1991)
- Fire Management Plan (1992)
- Trails Management Plan (1994)
- Commercial Horse Use Plan and EA(1994)
- Vegetation Restoration Management Plan (1994)
- Aviation Management Plan (1996)
- Resources Management Plan (1998)
- Emergency Operations Plan (1999)
- Commercial Services Plan (Draft-1999)
- Trail System Maintenance and Reconstruction Plan (2000)
- Exotic Plant Management Plan and EA(Draft-2000)
- Snowmobile Management Plan and EA (Draft-2000)

1.4 Laws, Plans, Policies, and Authorities

The basis for this Backcountry/Wilderness Management Plan can be found in Congressional legislation, NPS policies, and park policies that provide guidelines for administering each National Park. The following provides a summary of the federal, NPS, and RMNP regulations, policies, and guidelines that provide the authority and basis for this plan.

1.4.1 Federal and General Provisions

Administration of the wilderness resources at RMNP is conducted in accordance with the following regulations:

The Wilderness Act of 1964 (16 USC §1131 et seq.) secures "for the American people of present and future generations the benefits of an enduring resource of wilderness." By definition, wilderness is "…a tract of undeveloped federal land of primeval character without permanent improvements or human habitation; an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain; where the forces of nature predominate and the imprint of human activities is substantially unnoticeable; which provides outstanding opportunities for solitude or a primitive and unconfined type of recreation". This act allows for the designation of wilderness areas and establishes management directives that specify the preservation of wilderness character.

The National Environmental Policy Act of 1969 (P.L. 91-190, 42 USC §4321 et seq.) directs agencies to develop procedures to ensure that the natural, physical, and cultural aspects of the environment are given due consideration in federal actions that may affect these resources. Documentation of existing resources, potential effects to these resources as a result of the proposed project, and public involvement are key elements of the NEPA process. NPS compliance procedures are described in NPS-12, the NEPA Compliance Guideline.

Parker vs. the United States, the U.S. Court of Appeals, Tenth Circuit, found that federal lands adjoining or contiguous to recommended wilderness, predominately of wilderness value, shall not be impacted until Congress acts on the wilderness proposal.

The National Wild and Scenic Rivers Act of 1968 (16 USC 1271-1287) provides for designation and protection of Wild, Scenic, or Recreational Rivers which are free-flowing streams with related adjacent land areas that possess outstanding scenic, recreational, geologic, fish, wildlife, historic, cultural, or other similar values. Per this act, these waterways are to be preserved in free-flowing condition with the immediate environment protected for enjoyment and benefit of present and future generations.

Clean Water Act (Federal Water Pollution Control Act of 1972, 1977 and 1987 Amendments, and E.O. 11752) is a national policy set forth to protect and enhance the quality of water resources and to prevent, control, and abate water pollution. This act requires a permit for a point source to discharge pollutants into navigable waters and a permit from the U.S. Army Corps of Engineers for any discharge of dredge or fill. This act prohibits discharge of oil or other substances defined as hazardous, in quantities defined as harmful.

The Endangered Species Act of 1973 (16 USC 1531-1543) requires federal agencies to ensure that management activities authorized, funded, or carried out by the agency do not jeopardize the continued existence of listed endangered or threatened species, or result in the destruction or adverse modification of habitat that is critical to the conservation of the species.

E.O. 11988 "Floodplain Management," May 24, 1977 (42 USC 4321 note) and E.O. 11990 "Protection of Wetlands," 1977 (42 USC 4321 note) instructs federal agencies to avoid, to the extent possible, the long and short term adverse impacts associated with the occupancy and modification of floodplains and wetlands, and to avoid direct or indirect support of development in floodplains and wetlands wherever there is a practicable alternative. Where floodplains or wetlands cannot be avoided, procedures focus on mitigation of the adverse effects of any action.

Clean Air Act of 1977 (42 USC 7401-7626) was established for the purpose of preserving, protecting, and enhancing air quality. This act establishes National Parks greater than 6,000 acres as mandatory Class I areas with only minor degradation of air quality allowed. Managers of such lands have direct responsibility to protect the air quality and related values, including

visibility. Executive Order 12088 (1978) requires federal agencies to comply with all provisions of the Act, including State Implementation Plans. The E.O. establishes procedures and responsibilities to ensure that all necessary actions are taken to prevent, control and abate environmental pollution with respect to federal facilities and activities.

The American Antiquities Act of 1906 was enacted by the Senate and House of Representatives to prevent the excavation and destruction of historic or prehistoric ruins or monuments on government controlled and owned lands. Persons found on government land without permission would be convicted and fined no more than five hundred dollars or would be imprisoned no more than ninety days, or could suffer both fine and imprisonment. The President of the United States is authorized to declare historic landmarks, historic and prehistoric structures, or other historic and scientific interests. Those situated on lands owned or controlled by the government can be made into national monuments or may be otherwise reserved. Permits for excavations, examinations, and gatherings may be issued by the Secretaries of the Interior, Agriculture, and War to those who are deemed properly qualified. The excavations, examinations, or gatherings must provide scientific or educational benefits and the gatherings must be made available for permanent preservation in public museums.

The Historic Sites Act of 1935 (16 USC 461-467) establishes programs to preserve and receive donations of historic sites, buildings, and objects of national significance for the benefit of the American people. This act authorizes the programs including the Historic American Buildings Survey, the Historic American Engineering Record, and the National Survey of Historic Sites and Buildings.

The National Trust Act of 1949 facilitates public participation in the preservation of sites, buildings, and objects of national significance or interest. It also creates the National Trust for Historic Preservation.

The National Historic Preservation Act of 1966, amended, 1976, 1980, 1992 (16 USC 470) directs the federal government to "preserve the historical and cultural foundations of the nation as a living part of our community life and development in order to give a sense of orientation to the American people". Elements of the act include the establishment of the National Register of Historic Places (NRHP); directives for federal agencies to not inadvertently demolish, substantially alter, or allow listed properties to significantly deteriorate; criteria for designating National Historic Landmarks; directives for the Secretary of Interior to nominate properties of international significance as World Heritage Sites; and the establishment of State Historic Preservation Programs and Preservation Officers (SHPO) to direct statewide inventories of historic properties, administer the NRHP, and advise government agencies regarding compliance with the act.

E.O. 11593 "Protection and Enhancement of the Cultural Environment," May 31, 1971 instructs all federal agencies to provide national leadership in historic preservation and to assure the preservation of cultural properties in federal ownership. The order directs all federal agencies to locate, inventory, and nominate all sites, buildings, districts, and objects under their jurisdiction or control that appear to qualify for listing on the NRHP.

Archaeological and Historical Preservation Act of 1974 amends the 1960 Salvage Act, and provides for the preservation of significant scientific, prehistoric, historic, or archeological data that might be lost or destroyed as a result of any alteration of the terrain caused by a result of any federal project or program.

American Indian Religious Freedom Act of 1978 (AIRFA) (P.L. 95-341; 92 Stat. 469; 42 USC 1996) establishes that the policy of the United States is to "protect and preserve for American Indians their inherent right of freedom to believe, express and exercise the traditional religions of the American Indian, Eskimo, Aleut and Native Hawaiians, including but not limited to site access, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites."

The Archaeological Resources Protection Act of 1979 (16 USC 470aa-470ll) defines archeological resources as any material remains of past human life or activities that are of archeological interest and are at least 100 years old. This act provides for the protection of archeological resources located on public and Indian lands, and establishes criteria for issuing permits for any excavation or removal. Per this act, information concerning the nature and location of archeological resources may be exempt from the Freedom of Information Act.

E.O. 13007, "Indian Sacred Sites", May 24, 1996, states that those with statutory or administrative responsibilities for the management of federal lands shall accommodate ceremonial use of and access to Indian sacred sites by Indian religious practitioners, as well as avoid affecting the physical integrity of the sacred site. Reasonable notice must be provided of any proposed actions or land management policies that could restrict ceremonial use of or access to, or affect the physical integrity of sacred sites. Those with statutory or administrative responsibilities for the management of federal lands will report the following to the President, through the Assistant to the President for Domestic Policy: 1. Any changes to accommodate ceremonial use of and access to sacred sites; 2. any changes to avoid affecting the physical integrity of Indian sacred sites; and 3. procedures proposed to facilitate consultation with Indian tribes and religious leaders as well as to resolve conflicts relating to agency action on federal lands.

The Architectural Barriers Act of 1968 (42 USC §4151 et seq.) requires that facilities constructed or renovated using federal funds be accessible to and usable by persons with disabilities.

Section 504 of the Rehabilitation Act of 1973, amended, 1978 states that any program or service provided to the general public must be made accessible to and usable by disabled individuals to the highest extent possible and feasible. It requires that "no otherwise qualified individual shall, solely by reason of his or her handicap, be denied the benefits of or participation in any program or activity funded or conducted by a federal agency."

The Americans with Disabilities Act of 1990 (P.L. 101-336) provides comprehensive civil rights protection to individuals with disabilities in the areas of employment, public accommodations, state and local government services, and telecommunications. Section 507(c) specifically addresses the issue of federal wilderness access stating, "Congress reaffirms that nothing in the Wilderness Act is to be construed as prohibiting the use of a wheelchair in a wilderness area by an individual whose disability requires use of a wheelchair, and consistent with the Wilderness Act no agency is required to provide any form of special treatment or accommodation, or to construct any facilities or modify conditions of lands within a wilderness area to facilitate such use.

1.4.2 National Park Service Provisions

The National Park Service Organic Act of 1916 (16 USC 1a-1) creates the NPS, and establishes its purpose being, "to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." It directs the NPS

to promote and regulate the use of the parks by such means and measures as conform to their fundamental purposes.

Redwood Act of 1978 (16 USC 1a-1) amends the Organic Act to reemphasize Congressional direction for all NPS lands and states, "the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these areas have been established".

36 Code of Federal Regulations, Revised July 1, 1989 contains codification of current regulations published in the Federal Register by the NPS, Department of Interior that apply to National Parks, national forests, and public property. Chapter I lists general regulations for the NPS. Section 7.7 of Chapter I lists regulations specific to Rocky Mountain National Park. A companion document, the *Rocky Mountain National Park Compendium* lists regulations, specific to Rocky Mountain National Park, and is revised and updated annually.

The Vail Agenda, 1993 establishes a vision for the NPS into the twenty-first century. It establishes a set of six strategic objectives for improving NPS stewardship and management. The themes for the objectives are Resource Stewardship and Protection, Access and Enjoyment, Education and Interpretation, Proactive Leadership, and Science and Research and Professionalism. Recommendations for stewardship and management of wilderness are addressed in general terms, and specifically under Access and Enjoyment, "Where wilderness values are present, impairment of those values should not be compromised".

National Park Service Management Policies, 2001 establishes Servicewide policies for preservation, management, and use of park resources and facilities, and guidelines and direction for the management of NPS wilderness. "The NPS will manage wilderness areas for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness. Management will include the protection of these areas, the preservation of their wilderness character, and the gathering and dissemination of information regarding their use and enjoyment as wilderness. The public purpose of wilderness in the national parks includes the preservation of wilderness character and wilderness resources in an unimpaired condition, as well as for the purposes of recreation, scenic, scientific, education, conservation, and historical use". More specific guidelines for application of the Wilderness Act in NPS areas are described in Chapter 6 of Management Policies. Topics include wilderness qualification reviews, wilderness management, wilderness use, and public education. Wilderness management policies are based on provisions of the Wilderness Act and the Organic Act, as well as the establishing legislation of individual parks within the national system.

Director's Order 41: Wilderness Preservation and Management, 1999 establishes specific guidelines to provide accountability, consistency, and continuity to the National Park Service's wilderness management program. Topics include wilderness management planning, management techniques, Minimum Requirement Concept, interagency coordination, interpretation and education, scientific activities, facilities, signs, fire management, cultural resources, general public use, persons with disabilities, commercial services, special events, air quality, mineral development and training requirements.

Concessions Policy Act of 1965 (P. L. 89-249) provides guidelines for concession authorizations within the NPS. This act requires that public accommodations, facilities, and services within National Park system areas are only provided under carefully controlled safeguards against unregulated and indiscriminate use in order to preserve park values. It limits commercial use to

those operations that are necessary and appropriate for public use and enjoyment of National Park areas and are consistent to the highest practicable degree with the preservation and conservation of the areas.

National Park Service Special Directive 83-3: Accessibility for Disabled Persons, 1983 states the official policy of the NPS with regard to accessibility for disabled persons, "In the planning, construction, and renovation of buildings and facilities and in the provision of programs and services to the public and employees, it is the policy of the NPS to provide the highest level of accessibility possible and feasible for persons with visual, hearing, mobility, and mental impairments, consistent with the nature of the area and program and consistent with the obligation to conserve park resources and preserve the quality of the park experience for everyone".

Aircraft Overflights Act of 1987 (P.L. 100-91) requires the Secretary of Interior to conduct a study to determine the appropriate minimum altitude for aircraft flying over National Park system units. Research at identified units is to include impacts of aircraft noise on safety, impairment of visitor enjoyment, other injurious effects of overflights on park resources and the values associated with aircraft overflights.

National Park Service Omnibus Management Act of 1998 (P.L. 105-391), Title IV - National Park Service Concessions Management states that the Congress finds that public accommodations, facilities, and services that must be provided in parks should be provided only under carefully controlled safeguards so that visitation will not impair park resources and values. It is the policy of the Congress that such public accommodations and facilities in NPS units shall be limited to those that are necessary and appropriate for public use and enjoyment of the park and that are consistent with preservation and conservation of park resources and values. Requirements are provided for concessions contracts, which must include measures for resource protection and preservation.

National Parks Air Tour Management Act of 2000 (P.L. 106-181) and Associated Regulations (14 CFR Part 136) propose a 5000 foot level to define commercial air tour operation for most parks. Below this level, the operator would be defined as a commercial air tour operation and would be subject to the requirements of Part 136. However, ***Section 136.5, Prohibition of Commercial Air Tour Operators Over the Rocky Mountain National Park***, prohibits all commercial air tours in the air space over RMNP regardless of altitude.

NPS-77, NPS Natural Resources Management Guideline is a comprehensive guideline on natural resource management, combining existing guidance with documentation of unwritten practices and procedures of NPS resource management. It guides the actions of park managers so that natural resource activities planned and initiated at field areas comply with federal law and regulation and the Department of the Interior and NPS policy. This document was created by the National Park Service and is designed to specifically outline the management of natural resources, their allowable uses, the planning pertaining to them, and the program administration of these natural resources within all parks.

1.4.3 Rocky Mountain National Park Provisions

Rocky Mountain National Park Act, January 26, 1915 (38 Stat. 798) establishes Rocky Mountain National Park and its mission, "…hereby reserved and withdrawn from settlement, occupancy, or disposal under the laws of the United States, and said area is dedicated and set apart as a public park for the benefit and enjoyment of the people of the United States, under the name Rocky Mountain National Park… regulations being primarily aimed at the freest use of

the said park for recreational purposes by the public and for the preservation of the natural conditions and scenic beauties thereof".

Rocky Mountain National Park Master Plan, January, 1976 establishes the guidelines for the overall use, preservation, management, and development of the area known as Rocky Mountain National Park. It identifies the purposes of the area, its relationship to regional environs, its resource values, what human needs it should meet, and the objectives for its management. It contains a land classification plan and a general development plan.

Rocky Mountain National Park Biosphere Reserve, January 17, 1977 designated Rocky Mountain National Park as a Biosphere Reserve by the United Nations Educational, Scientific and Cultural Organization (UNESCO) under the Man and the Biosphere Program. As a Biosphere Reserve, Rocky Mountain National Park was given the greatest recognition for a natural area. As a national park, the protection of the area's outstanding geological, biological and cultural features and processes is assured for all people for all time. Rocky Mountain is unique in meeting both natural and cultural resource criteria for Biosphere Reserve designation.

Public Law 96-560, December, 22, 1980 mandated that those lands established as wilderness in the Indian Peaks Wilderness Area (2,917 acres) and transferred to Rocky Mountain National Park from Roosevelt National Forest be retained as designated wilderness within the Park.

Land Protection Plan for Rocky Mountain National Park, March, 1985 (amended 1991) assists with the establishment of the means necessary to provide sufficient resource protection, to provide for public use, and to establish priorities for protection. The plan describes the three land management zones within the Park; Natural, Historic and Development.

Statement for Management, Rocky Mountain National Park, June 1992 establishes the primary management statement and objectives for the Park. It also outlines the purpose and significance of the Park.

1.5 Vision, Goals, and Objectives

Visitors traveling through the backcountry/wilderness areas of RMNP should have the opportunity for a variety of personal outdoor experiences, ranging from solitary to social. Visitors should be able to continue to experience the backcountry/wilderness with as little influence from the modern world as possible. The visitor experience should relate intimately to the splendor of the wilderness resource of RMNP. Within this context, this Backcountry/Wilderness Management Plan is intended to serve the following vision, goals, and objectives in order to preserve the wilderness/backcountry resource for present and future generations:

RMNP's Wilderness Vision:

Rocky Mountain National Park is recognized internationally as one of the world's most outstanding natural treasures. As a national park and wilderness, the Park's meadows, forests, alpine peaks and tundra, and everything associated with them, must be protected in perpetuity. Park managers must carefully care for these natural and cultural resources. Visitors should be educated about all that wilderness has to offer in order to understand and appreciate wilderness resources and values. It is RMNP's vision to be a world leader and showcase for wilderness protection, management, and education.

Goals of the RMNP's Backcountry/Wilderness Management Plan:

- Manage the wilderness resources in accordance with the Wilderness Act, the NPS Organic Act, RMNP's enabling legislation, and NPS policies.
- Protect and preserve natural and cultural resources and the integrity of the wilderness character for present and future generations.
- Provide for maximum freedom of public use and enjoyment of the wilderness in a manner that will not sacrifice the quality of the wilderness' natural and cultural resources.
- Provide for public understanding and support of wilderness values.

Objectives of RMNP's Backcountry/Wilderness Management Planning Effort:

- Serve as guidance for field and management staff in application of wilderness management techniques and integration of wilderness management objectives into other park management documents.
- Coordinate with adjacent wilderness management agencies to provide continuity, where possible and appropriate, in managing the wilderness' natural ecosystem processes and cultural resources.
- Provide a broad range of opportunities to facilitate wilderness use while protecting the wilderness resource.
- Apply policies consistently, thereby enhancing wilderness users' experiences and ensuring compliance with wilderness regulations.
- Develop and implement a public information and educational program to promote Leave No Trace skills and wilderness ethics in order to reduce behaviors that are harmful to natural and cultural resources and experiences.
- Instill and apply the Minimum Requirement Concept into management actions and practices.
- Base management decisions on sound scientific research. Incorporate new data and information, as necessary, into a dynamic wilderness management program.
- Identify and preserve the outstanding remarkable values of the park backcountry.

1.6 Plan Review and Update

The Backcountry/Wilderness Management Plan will be effective for a minimum of five years, and a period not to exceed ten years. The Park Backcountry/Wilderness Steering Committee, including the Wilderness Program Specialist, Trail Crew Foreman, and one representative each from the Divisions of Visitor Management and Resource Protection, Interpretation, Resource Management and Research, and Facilities Management, will conduct an annual review as needed. The purpose of the annual review will be to evaluate the status and effectiveness of management actions, and to ensure that the management objectives stated in this plan are

being met. The review process will incorporate data from resource monitoring and research projects, visitor use statistics, and status reports on visitor use management in RMNP's backcountry/wilderness areas. Priorities of implementing actions described in this plan will also be determined, and incorporated into the annual work plans for the appropriate work unit. The Backcountry/Wilderness Management Plan update will occur within a five-year period, depending on the need for major revision and update as determined through the annual review process or as necessitated by change in RMNP management direction and/or NPS policy. The update may incorporate public meetings and comments, research and monitoring data, visitor use information, NPS policy, and legislated wilderness mandates.

1.7 The Planning Process

1.7.1 Planning Team

In 1996 a Task Directive was prepared for the development of an updated Backcountry/ Wilderness Management Plan to guide the Park in managing the backcountry/wilderness resource in RMNP, to preserve the natural conditions and scenic beauty, while allowing for use and enjoyment by the public.

The first step in developing of this plan was the establishment of an internal planning team with interdisciplinary capabilities. The core team consisted of eight members, including specialists in wilderness, ranger operations, trails/sanitation, natural and cultural resources, and interpretation. This core team was chiefly responsible for developing the Backcountry/ Wilderness Management Plan and associated environmental assessment. Additional park staff were called upon on an as needed basis.

The team identified and used a planning process modified from the Limits of Acceptable Change (LAC) and Visitor Experience and Resource Protection (VERP) processes. Those processes are generally based on desired natural and social conditions, impacts to the resource and actions to avoid or mitigate impacts. The planning steps included:

- Assemble a team and develop statements of park purpose, goals and objectives
- Identify issues and concerns
- Develop a range of management classes (desired resource and social conditions)
- Choose and formulate standards for resource and social indicators of change
- Monitor conditions
- Compare desired future conditions to existing conditions
- Identify alternative management class allocations and management actions for each alternative
- Select an alternative
- Implement appropriate management action

Alternatives were developed based on this process. Input was obtained from the public and other agencies, regarding issues and concerns, in a variety of ways at various points in the process.

1.7.2 Scoping

A very important part of the planning process for the Backcountry/Wilderness Management Plan was scoping. Early in the process, the planning team consulted with the U.S. Fish and Wildlife Service about threatened and endangered species; with the State Historic Preservation Office about cultural resources; and with the United States Forest Service about adjacent Wilderness areas. Public workshops were held in May 1997 in Grand Lake, Estes Park, Fort Collins, Walden, and Boulder to gather input from the public and governmental agencies. Internal scoping was conducted in June 1997 by holding two employee meetings to discuss the plan, issues, and concerns with park staff.

A public scoping newsletter was mailed to 161 individuals, organizations, and government agencies in Spring 1997, to introduce the purpose of the plan, and to announce the locations, times, and dates of the scoping workshops. Space was provided on the mailer for written comments that could be submitted by returning that portion of the mailer to RMNP.

A web page was developed and put online in May 1997. It outlined the Park's purpose and significance, the wilderness vision, goals and objectives, the planning process and provided an avenue for input including contact information for further questions. Over 10,000 hits have been recorded.

Through the series of workshops, plus release of a scoping brochure and use of the web page to advertise the process and solicit input, the planning team collected the public's ideas and comments about issues and concerns. All issues and concerns identified during public scoping were considered by the NPS for inclusion in the Backcountry/Wilderness Management Plan and EA.

Comments from a total of 57 individuals or organizations were received either through the web page, email, letters or returned mailers. Forty-five individuals made comments at the public and staff workshops.

Six categories were used to organize the comments. They were Environmental Quality, Trails/Facilities, Quality of Experience, Management Actions, Recreational Use, and Unidentified Issues. From comments within those six categories, the team identified 10 significant issues. Those issues were used to focus the scope of the plan, develop a draft outline, and formulate alternatives.

The 10 significant issues were:

- Education
- Recreational use
- Trails and trailheads
- Overnight permit system
- Camp areas
- Appropriate facilities
- Administrative actions
- Research activities
- Resource impacts
- Social impacts

Several issues were raised during scoping that were not directly addressed or not advanced into the plan. Specific issues that were raised during scoping regarding air and water quality, and fish and wildlife management, are indirectly addressed in this plan by way of setting general guidance. Other comments were made on issues concerning such things as wildland fires, transportation systems and commercial services. These are discussed under separate management plans and will be linked to the Backcountry/Wilderness Management Plan for consistency.

A large number of comments addressed the issue of pets in the backcountry, particularly on allowing or not allowing dogs on trails. The public is widely split on this issue. Current NPS regulations do not permit pets in the backcountry of RMNP, and a change in these regulations would have to occur before RMNP could even consider any change at the park level. The use of horses, particularly concerning waste control or cleanup on trails and trail tread impacts, was also raised as an issue of concern. Specifics on those issues are within the scope of other park management plans (i.e., 1994 Commercial Horse Use Plan and the 1982 Trail Plan).

Many comments were raised that related to the status of RMNP's recommended wilderness designation, rather than the plan itself. Wilderness designation is a separate issue and is not affected by actions in this plan.

1.7.3 Resources and Concerns Addressed in this Plan/EA

Each of the ten significant issues identified during scoping was included in various sections of the proposed Backcountry/Wilderness Management Plan described in Chapter 2. Topics for impact assessment were then derived by the planning team, based on an assessment of which elements of the natural or human environment could be most affected by implementation of the proposed plan. These included both natural and cultural resources, as well as local social and economic concerns and administrative/managerial operations, and are listed below:

- Geology, soils, and vegetation
- Natural quiet, sound, and lights
- Aquatic, wetland, and riparian communities
- Endangered, threatened, and rare species
- Wildlife
- Air quality
- Visitor use and experience
- Socioeconomics
- Cultural resources
- Park operations

The impacts anticipated from implementing the alternatives for each of these topics are described in Chapter 4, Environmental Consequences and the topics themselves are described in Chapter 3, Affected Environment.

2.0 PLAN ALTERNATIVES

2.0 PLAN ALTERNATIVES

There are two alternatives presented in this plan: Alternative A, the Preferred Alternative/ Proposed Action, and Alternative B, No Action/Current Management. In formulating the proposed plan, a variety of management options were considered that met the purpose and need in different ways. However, many of these options were duplicative with less environmentally damaging or less expensive alternatives, were not raised as important issues during scoping, and/or were not within the authority of this planning action (e.g., would require changing current regulations). Based on these considerations, these options were not developed in an official alternative, and two alternatives were ultimately considered.

Section 2.1 Alternative A includes a detailed description of the issues and items that comprise the plan elements. Some issues and items are required by law and policy leading to actions that must be done a certain way. These are consistent between the two alternatives and will be discussed only in Alternative A.

Other issues and items do not have required actions and may be addressed in a variety of ways. These issues and items form the difference between the two alternatives. Section 2.2 Alternative B focuses on those issues and items where actions are different between the two alternatives. Table 2-1, at the end of this chapter, provides a comparison of standards between the two alternatives.

Throughout the discussion of the two alternatives, the terms “Minimum Concept Requirement” and “Minimum Concept Analysis” are used. The reader is referred to Section 2.1.4.1 for an explanation of these terms.

2.1 Alternative A, Preferred Alternative (Proposed Action)

2.1.1 Management Classes/Desired Future Conditions

All backcountry/wilderness areas of Rocky Mountain National Park (RMNP or the Park) are designated in one of four Management Classes. Each Management Class is described in terms of the desired social, resource and managerial conditions for that area. While social and resource indicators generally remain the same across Management Classes, standards in each may be different. These descriptions provide guidance for management decisions related to backcountry/wilderness resources and use. All actions and activities, which may be different among Management Classes, will follow wilderness laws and policies.

Management Classes are designated based upon the following criteria:

1. Type and amount of use;
2. Accessibility and challenge;
3. Opportunity for solitude;
4. Acceptable resource conditions;
5. Management use.

2.1.1.1 Management Class 1

Management Class 1, approximately 170,236 acres, generally includes Research Natural Areas, tundra areas, and other areas not in Management Classes 2, 3 or 4. (See Figure 2-1).

Use:
- Day use only
- No overnight camping (except approved management activities and winter area camping with restrictions)
- Group size of seven (7) or less desirable
- Low day use
- No stock use

Access and challenge:
- Generally moderate to difficult
- Challenge/risk/freedom and self reliance are primary goals of the visitor

Opportunity for solitude:
- Outstanding opportunity for solitude
- Chance of seeing other visitors/park staff is low
- Natural sounds prevail

Acceptable resource conditions:
- Natural environment with little evidence of recent impacts by humans
- Evidence of management is extremely rare
- Resource impacts are non-discernable

Management use:
- No designated or maintained trails
- Routes are generally non-discernable
- No signs, cairns
- No facilities
- No aircraft or motorized equipment (except during emergency operations or absolutely critical for the protection of natural or cultural resources as determined on a case-by-case basis through a Minimum Requirement Analysis and approved by the Superintendent)

2.1.1.2 Management Class 2

Management Class 2, approximately 36,832 acres, generally includes crosscountry routes, crosscountry camping areas, and bivouac areas. (See Figure 2-1).

Use:
- Area camping allowed, seven (7) or fewer people; no fires
- No designated camp areas (except Little Rock Lake)
- Low to moderate use
- No stock use

Access and challenge:
- Moderate to difficult
- Challenge/risk/freedom and self reliance are primary goals of visitors

Opportunity for solitude:
- Opportunity for solitude high most of the year, moderate during summer months

- Chance of seeing other visitors/park staff is low to moderate
- Some noise interferes with natural sounds

Acceptable resource conditions:
- Resource impacts are restricted to minor losses of vegetation where camping occurs and along use routes
- Predominately unmodified natural environment

Management use:
- No designated trails, but some designated routes
- No formal maintained treadway (erosion and drainage control techniques allowed}
- Minimum cairns as necessary to provide for resource protection and visitor safety
- No facilities (cabins, hitchrails, privies)
- No motorized equipment (except when approved via Minimum Requirement Analysis)
- Only those signs necessary to protect resources and public safety

2.1.1.3 Management Class 3

Management Class 3, approximately 27,474 acres, generally includes formal trail corridors (100 feet on either side of trail) and designated campsite areas (100 feet from edge of campsite). (See Figure 2-1).

Use:
- Moderate - high
- Day group size of no larger than 20 recommended
- Designated campsites - group size 1-7 or 8-12
- Campfires in specific campsites only
- Stock use allowed on stock designated trails and camp sites only

Access and challenge:
- Low to high
- Broad spectrum of expected challenge level

Opportunity for solitude:
- Broad spectrum, low to high, depending on time of year, day of week, time of day, weather etc.

Acceptable resource conditions:
- Resource impacts are limited to the immediate trail corridor (100 feet either side of center line of trail) and campsites (100 foot radius from metal arrowhead)

Management use:
- Facilities: privies, hitchrails, corrals, cabins, tent pads, food protection devices, signs, research equipment etc. as per the Minimum Requirement Concept
- Use of aircraft/motorized equipment/blasting, requires Minimum Requirement Analysis (programmatically in an approved management plan or on an individual basis)
- Use of stock for facility/trail maintenance
- Designated, formally constructed and maintained trails (Standards D, E and F – see Section 2.1.4.7.2)

2.1.1.4 Management Class 4

Management Class 4, approximately 23,313 acres, generally includes formal trail corridors (200 feet on either side of trail), specific day use areas (200 feet from edge of area) and backcountry areas not recommended as Wilderness. (See Figure 2-1).

Use:
- High
- No group size recommendation; however, large groups encouraged to split up
- Day use only, no camping (except Moore Park, Rabbit Ears, Peregrine, Cub Lake, Arch Rocks, Mill Creek Basin and Upper Mill Creek designated camp areas)
- Stock use allowed on stock designated trails only

Access and challenge:
- High access
- Low to moderate challenge

Opportunity for solitude:
- Broad spectrum, low to moderate, depending on time of year, day of week, time of day, weather, etc.
- Chance of seeing other visitors and staff high during summer months

Acceptable resource conditions:
- Resource impacts are limited to the immediate trail corridor (200 feet either side of center line of trail) and day use areas (200 foot radius from attraction)

Management use:
- Facilities: privies, hitchrails, signs, hardened areas at attractions etc. as per the Minimum Requirement Concept
- Use of aircraft/motorized equipment/blasting, requires Minimum Requirement Analysis (programmatically in an approved management plan or on an individual basis)
- Use of stock for facility/trail maintenance
- Designated, formally constructed and maintained trails (Standards B through F – see Section 2.1.4.7.2)

2.1.2 Resource Conditions

2.1.2.1 Vegetation/Soils

Vegetation and soils should prevail in their natural condition. However, visitor use and management activities can affect vegetation and soils. Perhaps the most visible impacts in the wilderness are large bare ground areas and social or braided trails, resulting from vegetation loss and soil erosion due to visitor use. Trampling (primarily by visitor and stock travel and camping), tree mutilations, alteration of vegetative composition (including introduction and spread of exotics), impacts on special category plants (e.g., rare or threatened species), and use of native materials for wilderness facilities can all cause unacceptable changes to resource conditions.

2.1.2.1.1 Bare Ground/Social and Braided Trails. Day use areas (e.g., lakes, waterfalls, scenic vistas) are a major concern for impacts to vegetation and soil. Bare ground may develop as a result of repeated day use activities (e.g., fishing, viewing scenery or picnicking). Bare

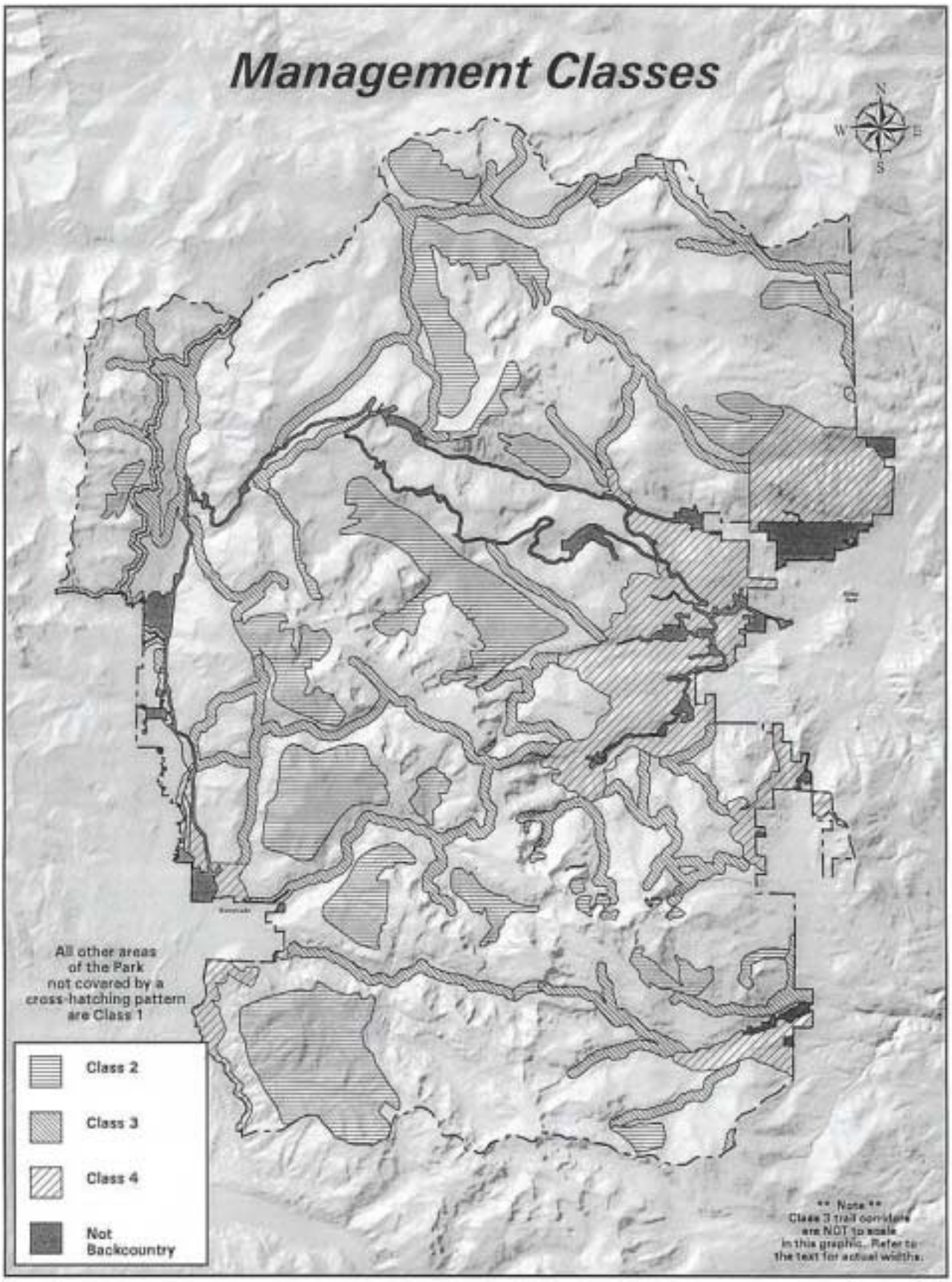
Management Classes
N
W
E
S
All other areas of the Park not covered by a cross-hatching pattern are Class 1
Class 2
Class 3
Class 4
Not Backcountry
** Note **
Class 3 trail corridors are NOT to scale in this graphic. Refer to the text for actual widths.

Figure 2-1

ground sites are created and exist in day use areas more than are necessary or acceptable. A determination will be made of the appropriate number and location of bare ground day use sites based on resource and visitor experience considerations. These sites will be officially "designated" to be retained for visitor use. A monitoring system will be developed to accurately track vegetation damage and soil erosion at these locations.

Only naturally occurring bare ground areas will be allowed in Management Class 1. At day use destination sites bare ground areas will not exceed 50-sq. ft. in Management Class 2; 100-sq. ft. in Management Class 3; and 150-sq. ft. in the Management Class 4.

New bare ground sites will only be allowed when relocation of existing sites is necessary, or development of new sites will better protect resources or the visitors' wilderness experience. Project Proposal/Clearance review, including Minimum Requirement Analysis, is required for the development or improvement of new day use sites.

Visitors and stock create social trails and braided trails when they leave the main trail for a number of reasons. These impacts occur mainly at or near destination day use areas, around backcountry campsites or along trails that pass through meadows. Once established, vegetation loss and erosion are accelerated. Social trails are undesirable and will be blocked off and rehabilitated whenever possible in all Management Classes. The Park may provide appropriate and durable access trails to points of interest at popular destinations.

Trail braiding develops mostly during the spring when trails may still be snow covered, wet and muddy, or blocked by fallen trees. Early season and proper trail maintenance (e.g., cleaning out drainage, clearing logs) will be performed to provide adequate and durable trail tread in order to minimize conditions that tempt visitors off the trail. Information will be made available to visitors on how to avoid causing impacts from traveling off trail or in fragile areas. All areas where trail braiding occurs will be rehabilitated, and problems causing visitors to leave the trail will be addressed.

2.1.2.1.2 Plants and Trees. There currently are no federal or state listed T&E plant species within the Park. There are 27 plant species that are recognized by the Colorado Natural Heritage Program (CNHP) as being vulnerable to extremely rare. The status of these plant species, along with their location in the Park, will be monitored.

Impacts to trees are sometimes caused at camp areas and destination day use areas due to the carving and hacking of trunks, knocking down of dead, standing trees, breaking or cutting dead limbs off live trees, compaction of soils and soil erosion surrounding roots. Management actions including increased enforcement and site rehabilitation will occur in any area with these impacts.

The RMNP 1996 Standards and Guidelines for Hazard Tree Detection and Correction and NPS-77 Natural Resources Management Guidelines will be followed for hazard tree survey/ assessment and abatement in the backcountry/wilderness. The Minimum Requirement Concept will be followed. In cases where an extreme hazard tree is located in or near a camp area, day use area or backcountry facility, management actions may include removal of the hazard tree, site closure or facility relocation. Project Proposal/Clearance review is required for site closure or facility relocation. Hazard trees that are removed will have stumps flush cut and camouflaged.

2.1.2.1.3 Use of Native Materials. In keeping with wilderness character, natural materials (e.g., logs, rock, gravel, soil) are preferred to repair or construct wilderness facilities (e.g., water

bars, sign posts, tent pads, bridges) or restore desired conditions to impacted areas, though they must be selected and obtained carefully. The use of local native materials may cause impacts in and of themselves. Immediate and short-term impacts, as well as cumulative impacts from removal of materials from within the Park, must be evaluated. Wilderness resource preservation and protection of wilderness values must be of primary concern. The least number and type of facilities and structures necessary to meet wilderness objectives will be permitted. This will ensure that Wilderness Act objectives are met and use of native materials is kept to a minimum.

Sources of materials may include: areas immediately adjacent to the project site; areas from within wilderness but not from the project area; collection from park developed areas or road corridors; and purchase from commercial businesses or other agencies. Decisions to obtain natural materials from any of these sources must consider the relative impacts on the natural environment and sustainability, with priority given to protecting the wilderness resource and values. When native materials are used from within the wilderness, the source location is to be returned to its natural appearance. Materials to be used in any project will be discussed as part of the project review process.

When logs are needed for a project, sections from dead and down trees should generally be used. The use of live trees or standing snags for may only occur when no practicable alternatives exist and upon full compliance with Endangered Species Act guidelines. Live trees should not be cut within 1/2 mile of treeline.

The removal of soil, sand, gravel and rocks from the wilderness can result in adverse impacts. When determining the source of materials, consideration must be given to potential impacts on vegetation (especially special category plants) and wildlife (due to removal of materials), impacts on the visitor experience (from the method required to transport the materials), and potential introduction of exotic seeds in imported fill. Removing native materials from lakes, ponds and streams or their shorelines could impact fish, aquatic insects, and amphibians by disturbing hiding, resting, feeding, or spawning areas and may be a violation of the Clean Water Act. Removal of sand, gravel, and rocks from these sources should not occur.

The amount of material needed will be determined by each individual project. Small amounts of soil, gravel and rocks may be obtained from sites adjacent to the project area. Potential sources of soil, gravel and rocks include trail drainage areas, root wads, talus slopes, slides and borrow pits. However, repeated removal from the same source sites should be avoided. When large amounts of material is needed they should be obtained from outside sources. Refer to Section 2.1.4.7.3, Fill Material and Borrow Pits.

2.1.2.1.4 Exotic Plants. Exotic plants/noxious weeds are one of the greatest threats to the integrity and biological diversity of the backcountry/wilderness resources of the Park. Currently, there are over 100 invasive exotic plant species known to exist in the Park, of which the Park is actively managing 28 species as identified in the Exotic Plant Management Plan. Fortunately, many have not made their way into the backcountry/wilderness. Noxious weeds invade and spread by a variety of means. Once established, they often rapidly increase their range, transported by wind, water, animals, or people. The are most commonly found along the trail corridor and other locations of visitor and stock travel.

Noxious weeds are aggressive and competitive. They displace native plants by stealing moisture, nutrients, and sunlight from the surrounding plants. Some can inhibit the growth of native plants around them. In addition, noxious weeds destroy habitat for flora and fauna and

can cause increased soil erosion, which leads to long-term changes in plant communities. The goal is to eliminate all noxious weeds within the wilderness. This may be impractical or impossible; however, containment and/or reduction may be possible. The Park's highest priority for prevention of invasion and control of target exotics is in the backcountry/wilderness.

Wilderness is partly defined by the 1964 Wilderness Act to mean "…an area of undeveloped Federal land retaining its primeval character… which is protected and managed so as to preserve its natural conditions…". If invasive noxious weeds are not controlled, there will be an irretrievable and irreversible loss of natural conditions. The Park will control and manage noxious weeds in order to preserve the natural conditions of the wilderness resource.

An Exotic Plant Management Plan is currently being developed. Proposed actions include preventing invasion of noxious weeds, increasing public awareness, inventorying and monitoring locations, conducting research, integrating planning and evaluation, working closely with adjacent landowners and local communities, and managing invasive noxious weeds by a variety of treatments. Appropriate treatments will be identified within the Exotic Plant Management Plan.

RM-41 Wilderness Preservation and Management states that wilderness resources or character cannot be compromised unless the actions have only localized short-term adverse impacts. Certain treatments may impact wilderness values in the short-term, but will benefit wilderness values in the long-term. The Minimum Requirement Concept will be followed when deciding which treatment to use and how it is applied in wilderness.

Ground-disturbing activities provide suitable substrate for many invasive exotic plants. Any management action with new ground-disturbing activities (e.g., installation of research equipment, trail work, new privy holes, revegetation) will include an evaluation of the potential for introduction of exotic plants and what mitigation actions will take place to prevent any introduction.

2.1.2.2 Fish and Wildlife

Rocky Mountain National Park is known worldwide for its fish and wildlife species. A main reason many visitors come to the Park is to view and enjoy these valuable resources. The Park will maintain the natural abundance, diversity, and integrity of indigenous fish and wildlife. Genetically diverse populations of native species will be maintained, with special emphasis on the protection of federally listed threatened and endangered species (Appendix A) and their habitats. Threatened and endangered species management will be closely coordinated with the USFWS. Management and use restrictions may occur to protect threatened and endangered species, as well as to prevent rare species from becoming listed.

Native species that have been extirpated will be restored if deemed feasible. Any non-native species, which threaten park resources or public health, may be controlled or removed when prudent and feasible. Specific management of fish and wildlife species (e.g., elk, bear, greenback cutthroat trout, problem/nuisance animals) is detailed in the Park's Resource Management Plan. All wildlife management actions will be conducted in full compliance with the Minimum Requirement Concept, Section 2.1.4.1.

The fishery resource will be managed to preserve native populations of cutthroat trout and provide quality angling opportunities for wild trout. Fishing was a traditional and popular activity in the area even before the Park's establishment. The only native sport fish in the Park are the

Greenback cutthroat (a federally listed Threatened species) and Colorado River cutthroat trout. Some suckers also inhabit streams and lakes. In an attempt to improve the sport, early settlers, and even the NPS as recent as 1968, stocked many streams with non-native species of trout (e.g., Brown, Rainbow, Brook) and moved trout to lakes and streams that lacked them. This is no longer acceptable or allowed. In order to restore the fishery resource to original conditions, artificial stocking is only done to supplement or restore native cutthroat species to waters previously altered. Native fish restoration projects (e.g., Greenback and Colorado River cutthroat) will be conducted as outlined in the Resource Management Plan.

Wildlife is to be protected as much as possible from human disturbance with incidents of feeding, touching, teasing, hazing, frightening or otherwise disturbing wildlife minimized. Human disturbance should not displace wildlife from crucial areas (e.g., wintering and calving areas). Temporary or permanent closures of, or visitor use limits in specific areas (e.g., trails, campsites, meadows, rock faces, climbing routes) may be established to protect wildlife species during critical periods of time or critical habitat.

Certain risks are inherent when visiting the habitat of wild animals. Visitors must be aware of potential safety and property damage hazards when travelling and camping in wilderness. Information on how visitors can prevent unacceptable interactions between wildlife and humans will be made available. Proper food storage and garbage handling procedures, by visitors and employees, will be emphasized and enforced. Where problems currently exist, or a potential for such problems is high, additional education will be provided and food protection devices will be considered. If food protection devices are determined to be necessary, visitors will be required to use such facilities at night and whenever food/scented items are not in active use. Once determined to no longer be necessary, the device should be removed. Garbage containers will not be placed in the backcountry/ wilderness. Burying of garbage is not allowed. All garbage must be packed out and disposed of properly in wildlife proof containers.

When wildlife becomes an unacceptable nuisance or direct hazard to humans, management actions, such as area closure or animal trapping, translocation, or destruction may be required for human safety. Where hazardous animals pose a risk to human safety, an evaluation will be done on a case-by-case basis to determine the best actions to ensure the protection of both humans and wildlife.

2.1.2.3 Air Quality

Air quality in the Park may be some of the most pristine in the state; however, airborne pollutants are known to be affecting the wilderness' air quality. Rocky Mountain National Park is designated a Class I area under the Clean Air Act and is thus given the highest level of air quality protection. Air quality within the wilderness will be maintained or restored to the highest quality possible and protected so that minimal or no degradation occurs.

The majority of air quality-related effects on the wilderness originate from outside the Park. Acid precipitation, harmful biologic effects, and adverse impacts on ambient air quality including visibility may all result from activities outside park boundaries. Management Policies outline that "the Park Service will assume an aggressive role in promoting and pursuing measures to safeguard air quality related values from the adverse impacts of air pollution". The Park Service will participate in the development of federal, state, and local air pollution control plans and regulations, will review permit applications for major new air pollution sources and will make recommendations on permit approval or modification to ensure RMNP wilderness air quality values meet Class I standards. The Park will also work with potential and known air pollution

sources to meet the National Visibility Goal of the Clean Air Act: to remedy impaired visibility and prevent any future impairment of visibility from human-caused air pollution.

Temporary degradation of visibility and increased particulate matter from wildland fires and management prescribed fires may occur. Fire management personnel will work to minimize the effects and stay within federal and state air quality standards.

The goal for air quality monitoring in Rocky Mountain National Park will be to monitor weather, air quality, acid precipitation, and biological effects within the backcountry/wilderness to determine if unacceptable impacts to air quality related values are occurring.

2.1.2.4 Aquatic Resources

There are approximately 147 lakes, 473 miles (757 kilometers) of rivers and streams, and an unknown number of springs in the Park. The majority of influences on park waters are from management activities, visitor use, or atmospheric influences. Threats such as alterations due to cloud seeding, air pollutants, and from human use; sedimentation from shoreline erosion and contamination with human wastes; and past management activities such as those associated with the Grand and Specimen Ditches and livery stables are recognized and are currently being investigated. Several water diversion/delivery systems (e.g., Eureka Ditch) and water storage dams (e.g., Bluebird, Pear, Sandbeach, Lawn Lake) have been removed and the areas are being restored to natural conditions.

All lakes and streams are naturally occurring with the exception of Sprague, Lily, and Copeland Lakes and the Colorado River that is impacted by diversions from the Grand Ditch. Tonahutu Creek is affected by diversions from Harbison Ditch and the Grand Lake Lodge. Aquatic ecosystems will be managed to maintain and restore natural processes and native species indigenous to the Park.

2.1.2.4.1 Water Quality. Obvious signs of pollution from humans and stock are litter, food particles, cleansing agents, and other wastes; high levels of chemical and biological indicators of cultural eutrophication of lakes, streams, and wetlands; presence of social trails adjacent to lakes, streams, or wetlands; adverse effects on habitat and populations of aquatic organisms (fish, amphibians, macroinvertebrates, aquatic vegetation, plankton).

No measurable degradation of water quality (as determined through aquatic resource monitoring programs) should result from human activity, including park administrative use and management of the backcountry/wilderness. Coliform counts for adjacent lakes and streams will not exceed the legal limit as defined by the Colorado Department of Health.

Designated camp areas/sites should not be located less than 200 feet (70 adult steps) from surface waters. Camping in crosscountry, bivouac and winter areas should not be located less than 200 feet (70 adult steps) from surface waters. Visitors will be advised to treat all drinking water. Where adjacent surface waters are suspected of being seriously degraded by recreational use, as suggested by documented chemical, biological or physical characteristics, designated camp areas/sites may be closed or use limited until problems can be mitigated.

Privies will not be placed less than 200 feet (70 adult steps) from surface waters and all privies will meet applicable standards. Privies not meeting sanitation standards will be removed, relocated and/or replaced with an alternative waste management system, if feasible. Current privies that are infiltrated with ground water will be removed and relocated. No washing or use

of cleansing agents, disposal of dishwater or food, human or animal wastes is permitted within 200 feet (70 adult steps) of surface waters. Trails will be not located in areas where they may cause sedimentation into adjacent surface waters, or threaten critical habitat of aquatic organisms. Trails that threaten aquatic resources will be closed and damage mitigated.

Periodic inspections of management facilities such as underground fuel tanks and sewage treatment facilities will be conducted to prevent contamination to downstream wilderness areas. Inventories of aquatic organisms will be conducted and habitat maps developed to aid in monitoring the effects of human use on aquatic fauna. Public education, interpretive media and enforcement of regulations will be utilized to protect aquatic resources. Introduced fish species will be eradicated using methods that are least disruptive to aquatic ecosystems and values.

2.1.2.4.2 Monitoring. Aquatic conditions are monitored and evaluated on a rotating basis at two permanent National Water Quality Assessment Stations (NAWQUA) administered by the U.S. Geological Survey. One station, Moraine Park, is located on the Big Thompson River on the Park's east side. The other station, Baker Gulch, is located on the Colorado River on the west side of the Park. Long-term monitoring and research is also being conducted in the Loch Vale drainage.

Additional long-term wilderness monitoring programs will be developed and conducted to determine the effects of recreational use and management activities on aquatic resources and to develop more measurable standards such as using mean concentrations of selected nutrients (e.g., nitrates, sulfates, phosphates), and identification and monitoring for indicator species. Periodic sampling of lakes and streams will be done and tested at the Park's lab or other certified water quality lab for presence of such things as Cripto and Giardia. Areas suspected of contributing or causing water quality problems may be monitored more frequently.

2.1.2.4.3 Water Quantity. The Park will establish and use water in conformance with federal and state laws and procedures. Water is currently available for both consumptive and in situ purposes for those portions of the Park lying east of the Continental Divide. Both federal reserved water rights and state appropriative water rights were decreed in Case No. CW-8439-76. In addition, the Park will continue with its policy as delineated in the 1976 Master Plan "To pursue all possibilities of removing water rights and storage facilities and to utilize the authority of the Secretary of the Interior to ensure that those persons or companies having water rights will manage their collection and reservoir systems to provide maximum protection to the natural and cultural resources. Whenever possible, water right holders will be encouraged to relocate reservoirs outside the Park and to eliminate comparable storage rights within the interior of the Park…"

The Park will also strive to obtain a decree comparable to CW-8439-76 for water rights located within the Park on the west side of the Continental Divide.

2.1.2.5 Fire Management

Fire management activities conducted in wilderness will conform to the basic purposes of wilderness. The Park recognizes the need to integrate responsible fire, ecosystem and wilderness management practices with the protection of community and public safety. The Park's Fire Management Plan identifies the natural and historical role of fire in the wilderness and defines the appropriate management response to all wildland fires, including the full range of management alternatives from aggressive suppression to managing wildland fire for resource benefits.

The restoration of fire on the landscape is an important and immediate need. The longer the process is delayed, the more extreme the problem becomes. To restore natural fire regimes and maintain public safety, a systematic and comprehensive program of action with consideration for the immediacy of the need is critical. Both the Resource Management Plan and the Fire Management Plan call for the use of prescribed fire and hazard fuel reduction as critical management tools and as effective means to restore fire into the ecosystem.

In order to meet anticipated risk reduction needs, as well as maintain, sustain, and conserve native ecosystems, the Park is committed to monitoring and evaluating fire management needs so that appropriate action can be taken in a timely manner. Prescribed fires planned for implementation within the wilderness are intended to restore the natural role of fire to various park ecosystems, to reestablish a mosaic of fire history within the landscape and increase public and community safety, as identified in the Park's mission and goals statement.

It is critical to manage the forest fuels on park lands that may pose a risk to community and public safety. The Fire Management Plan identifies an extensive hazard fuel reduction program that is designed to increase community safety, protect National Park Service facilities, and provide increased protection for private developments adjacent to the Park boundary. Within these areas, a combination of treatments may be used to reduce hazard fuels including tree thinning, removal of dead and downed material, pile burning, and broadcast burning.

Actions taken to perform hazard fuel reduction projects, conduct prescribed fires and manage wildland fires will follow the Minimum Requirement Concept. They will be conducted in such a way as to protect natural and cultural resources and wilderness values. Application of the minimum requirement process and minimum/primitive tool procedures will be conducted as specified in the Wilderness Act (1964), NPS Management Policies (2000), NPS Director's Order #41 (1999) and this Backcountry/ Wilderness Management Plan.

Aircraft, motorized equipment (e.g., chainsaws, portable pumps, weed whackers, generators) and installations (e.g., portable weather stations, smoke monitoring devices, fire effects monitoring plots, communications equipment) may be allowed during hazard fuel reduction projects, prescribed fire operations, and wildland fire actions if determined to meet the minimum requirement.

A Minimum Requirement Analysis Worksheet (ROMO-180) will be completed for hazard fuel reduction projects and prescribed fire operations and will be included as part of the Project Proposal Form (ROMO-178) and/or Prescribed Fire Burn Plan. In the case of wildland fires, a Minimum Requirement Analysis Worksheet (ROMO-180) will be either included in the Wildland Fire Implementation Plan or as a component of the transition package and Wildland Fire Situation Analysis.

All wildland fires within wilderness, whether suppression actions or fire use actions, will be effectively managed considering wilderness resource values, while providing for public and fire personnel safety using the full range of strategic and tactical options. Wildland fire management response will include the application of minimum impact techniques and, if a suppression action, utilize minimum requirement suppression techniques.

All impacts of fire activities, whether wildland or prescribed, will be rehabilitated, at a minimum, as follows: stumps flush cut, firelines filled and camouflaged, water bars installed as necessary, temporary campsites cleaned and restored to natural conditions, and other effects of fire management activities will be restored to natural conditions.

For wildland fires that exceed initial attack or that are being managed for resource benefits, a Delegation of Authority document will outline specific requirements to be adhered to, in the case that the management of these fires within wilderness is turned over to an Incident Management Team.

2.1.2.6 Cultural Resources

Cultural resources are true treasures of our past and important parts of our heritage. Physical remains serve both as commemorative sites for local communities and as interpretive places for visitors to the area. Documentation of resources now gone, in the form of written records and photographs, provide a window into our past and are important in keeping history alive. Whether conducting inventories, restoring historic structures or documenting objects and sites then allowing them to "melt into the land", wilderness and cultural resources managers will work closely to insure that both wilderness and cultural resources are effectively documented and protected in ways that best preserve the integrity of both resources.

2.1.2.6.1 Management of Cultural Resources. Cultural resources (e.g., historic sites, structures, objects) in the backcountry/wilderness will be preserved through a range of management actions (e.g., inventories, documentation, photographic record, stabilization). Management will be consistent with the National Historic Preservation Act of 1966 (as amended) the Archaeological Resources Protection Act of 1979 (as amended), NPS-28, the Wilderness Act and RM-41: Wilderness Preservation and Management. Those actions within wilderness will be reviewed through the Minimum Requirement Analysis Process (Section 2.1.4.1). The challenge is to determine how cultural resources can be best managed in ways compatible with preserving other wilderness values.

2.1.2.6.2 Inventory and Research. Physical remains will be inventoried and evaluated for the National Register of Historic Places. Archeological research, including excavations, may be permitted after review through the Project Proposal/Clearance Process, including a Minimum Requirement Analysis. Included is the collection of specialized soil samples from cores or excavation units. Remote sensing devices such as ground penetrating radar, resistance, conductivity, magnetometer, and low level aerial photography using electric or gas powered remote controlled airplanes may be permitted for cultural research purposes. Proposals for the use of motorized and mechanical equipment for cultural resource work (e.g., archeological coring and excavations, remote control airplanes, maintenance of historic structures) will be reviewed through the Minimum Requirement Analysis Process. All research will be consistent with the Rocky Mountain National Park Research Design for Archeology (Butler 1997).

2.1.2.6.3 Site Protection. Site protection is essential. Although it is very difficult to document or quantify, such occurrences, unauthorized collecting of artifacts has occurred since the Park was established in 1915. Vandalism is mostly associated with the moving, removing, and rearranging rocks from prehistoric sites, and logs at the remains of historic cabins. Recent research indicates that the collection of arrowheads, scrapers, knives, pottery, tin cans and other historic items appears to be an ongoing activity, especially in the backcountry/wilderness. Expanded law enforcement and educational efforts are needed to address these problems. Information about the protection and interpretation of cultural resources will be conveyed through programs, brochures and wayside exhibits at trailheads. Only those signs necessary to protect cultural resources will be allowed within wilderness (Section 2.1.4.8.13). Designated camp areas or sites and trails may be relocated if found to have significant adverse impacts to cultural resources due to location or visitor use.

2.1.2.6.4 Work Projects. Projects to rehabilitate, reconstruct, restore, alter, allow benign neglect or remove historic structures and cultural landscapes would impact cultural resources. To ensure the proper protection of cultural resources, all specific projects within wilderness will be evaluated through the Project Proposal/Clearance Process, including a Minimum Requirement Analysis, and must receive approval from the Superintendent.

Routine ground disturbing activities such as the maintenance, minor rerouting or reconstruction of trails; maintenance, rehabilitation, revegetation of campsites or destination areas (e.g., waterfalls and lakes) have potential to affect cultural and archeological resources. All work crews will follow the established protocols developed by the Park's Archeologist (Appendix B). Actions not covered by these protocols, special projects and research activities that may impact cultural resources will be reviewed through the Project Proposal/Clearance Process to determine what actions are necessary. Minimum Requirement Analysis will be a part of the project planning and decision process for treatment and maintenance.

2.1.2.6.5 Native American Concerns. The locations of Native American sites or areas identified from the ethnographic overview study, or from personal communication from Native Americans will be field checked and recorded as archeological sites. Such recording is important for addressing management and treatment for resources that might be included under the American Indian Religious Freedom Act, the Native American Graves and Repatriation Act, and Executive Order 13007 of 1996 on “Indian Sacred Sites” and as Traditional Cultural Properties under the National Historic Preservation Act.

2.1.2.6.6 Historic Structures. There are 18 historic structures located within the backcountry or recommended wilderness and have been either listed in or determined eligible for listing in the National Register of Historic Places (Appendix C, Table 10).

The patrol cabins, ranger station, and Willow Park Stable are used seasonally by park staff. The Shadow Mountain Fire Lookout and shelters are used sporadically by park staff involved in fire monitoring and search and rescue operations respectively. These properties will be preserved and their associated traditional uses will continue within backcountry and wilderness. These historic structures should be inspected annually to assess their physical condition. All cyclic maintenance and needed repairs should follow the Secretary of the Interior’s “Standards for Rehabilitation” and the Minimum Requirement Concept.

The four historic structures on the former Reichhardt property are vacant and in a deteriorated state. The historic resource should be recorded to Historic American Buildings Survey (HABS) Standards. The future of these structures needs to be discussed and determined by the park management staff in consultation with the park archeologist. Due to the location of the structures, commercial or adaptive use is not appropriate in this wilderness setting.

2.1.2.6.7 Unevaluated Historic Structures in the Backcountry/Recommended Wilderness. The small developed area located at the southern edge of Moraine Park contains numerous park and privately owned cabins and cottages dating to the turn-of-the century. Part of this area is identified as a Potential Wilderness Addition and may contain historic structures and cultural landscapes. The use of privately owed property in this area is not affected by this plan. The linear collection of buildings has potential for listing in the National Register of Historic Places as a “residential historic district.” These properties, and any other that may be identified, are documented and evaluated for the National Register of Historic Places.

2.1.3 Visitor Experience Conditions

2.1.3.1 Solitude

Within the definition of Wilderness in Section 2(c) of the Wilderness Act it states, "An area of wilderness… has outstanding opportunities for solitude or a primitive and unconfined type of recreation;…".

It might be hard to believe that outstanding opportunities for solitude would be possible with visitation exceeding 3 million a year since 1994. However, many of visitors never leave the paved roads and developed areas. National trends do indicate increasing backcountry/ wilderness day use and overnight use in the Park has seen a slow, but steady increase. Fortunately, use is highly dependent on things such as season of year, day of week, time of day, weather, and access. Thus, experiencing solitude is possible anywhere in the Park depending on the circumstances.

Less solitude exists where high concentrations of use occur in popular areas (e.g., Bear Lake, Longs Peak, Lulu City) or within a few miles of a trailhead, generally Management Class 4 areas. Due to access and management actions (e.g., no trails, few facilities) the opportunity is greatest in Management Classes 1 and 2. Those visitors who seek solitude only need to plan accordingly.

2.1.3.1.1 Group Size Limits. Limits on group size for overnight use are discussed in Section 2.1.4.4. There are currently no mandatory day use limitations for the general public. Regulations or restrictions of day use may be implemented if significant social impact or resource damage occurs as a result of unregulated day use and also to protect threatened and endangered species as mandated by the Threatened and Endangered Species Act. Information will continue to be gathered on use levels and actual group sizes.

To avoid impacts and future imposed limits, the Park recommends and encourages day use group size limits based on information gathered from Wilderness Monitoring Logs. The recommendation in Management Classes 1 and 2 is a maximum day use group size of 7 visitors and in Management Class 3 a maximum day use group size of 20 visitors. In Management Class 4 there is no limit day use group size recommendation; however, large groups are encouraged to split up and travel separately.

2.1.3.2 Risk and Challenge

One of the great values of wilderness is its wildness, including the unpredictability of nature's elements and its general lack of human-constructed facilities. Wilderness provides opportunities to enjoy nature in the purest form still available, and for personal challenges through risk, self-sufficiency, and the special skills required for travelling and camping within wild areas. Visitors are expected to accept wilderness largely on its own terms, without the comfort, convenience, or safety of modern facilities. Visitors must accept and be prepared for the potential risks from weather, geographic features, wildlife encounters, and other natural phenomena, that are inherent in a wilderness experience.

The Park will not totally eliminate or unreasonably control risks that are normally associated with the wilderness environment. The Park will make available information about potential hazards,

recommended precautions, Leave No Trace skills and ethics, park guidelines and regulations, and the benefits of a wilderness experience.

Wilderness visitors have a wide array of knowledge and skills. Identifying Management Classes enables visitors to experience a range of opportunities for risk, challenge, and self-sufficiency. Management Classes 1 and 2, the more pristine classes, that provide few or no facilities and are further from civilization, offer the greatest opportunities for risk, challenge, and self-reliance. Management Classes 3 and 4, the more developed classes, with trails, bridges and other facilities, and a greater chance of seeing others, offer risk, challenge, and self-reliance at a lower level, while still providing a wilderness experience.

2.1.3.3 Access/Visitor Activities/Special Uses

2.1.3.3.1 Accessibility.

Wilderness Use By Persons With Disabilities

(1) In General--Congress reaffirms that nothing in the Wilderness Act is to be construed as prohibiting the use of a wheelchair in a wilderness area by an individual whose disability requires use of a wheelchair, and consistent with the Wilderness Act, no agency is required to provide any form of special treatment or accommodation, or to construct any facilities or modify any conditions of lands within a wilderness area to facilitate such use.

(2) Definition--For the purposes of paragraph (1), the term wheelchair means a device designed solely for the use by a mobility-impaired person for locomotion that is suitable for use in an indoor pedestrian area.

Section 507(c), 104 Stat. 327, 42 U.S.C. 12207
Americans with Disabilities Act of 1990 (ADA)

(3) In meeting the goal of accessibility, emphasis will be placed on ensuring that persons with disabilities are afforded experiences and opportunities along with other visitors, to the greatest extent reasonable.

NPS Management Policies 2001, 9.1.2

The National Park Service has legal obligations to make available equal opportunities for people with disabilities in all our programs and activities. Management decisions responding to requests for special consideration to provide for wilderness use by persons with disabilities must be in accord with the Architectural Barriers Act of 1968, the Rehabilitation Act of 1973 (amended in 1978), and Section 507(c) of the Americans with Disabilities Act of 1990. Such decision should balance the intent of the access and wilderness laws and find a way of providing the highest level of access for the disabled with the lowest level of impact on the wilderness resource.

While the NPS is not required to provide any modification or special treatment to accommodate accessibility by persons with disabilities, managers should explore solutions for reasonable accommodations when not in conflict with the Wilderness Act (e.g., barrier free trails, accessible campsites). Any facilities, built or altered, must meet current accessibility guidelines. The standards by which park trails are constructed and maintained are discussed in Section 2.1.4.7, Trails Management.

Rocky Mountain National Park has taken proactive steps in accessibility to its backcountry in several ways. The Park has constructed frontcountry accessible trails at Sprague Lake, Lily Lake, Bear Lake, and Coyote Valley. These trails are not considered to be in the backcountry/ wilderness. The Park has constructed an accessible campsite and Sprague Lake, and identified additional sites that are nearly accessible. The Park has inspected park facilities for accessibility and recommended solutions for areas found to be out of compliance. Park programs have been reviewed for accessibility by persons with disabilities. Uses and enjoyment of the Park backcountry and wilderness can be considered a program. Areas where the Park may consider for areas of improvement include: information available on the challenge level associated with specific activities in the Park's backcountry, and identification of barriers associated with backcountry facilities such as trails and campsites.

Wheelchairs. Wheelchairs are appropriate in wilderness only if they meet the definition of the ADA. The intent of this definition is that a wheelchair is a person's primary mode of locomotion, manual or electric, that is suitable for use in indoor pedestrian areas. This definition does not include wheelchairs that function like an all terrain vehicle. This definition is also intended to ensure that persons using wheelchairs are reasonably accommodated in wilderness without the need to compromise either the wilderness resource and its character.

Service Animals. The NPS will allow service animals within wilderness when it makes these areas accessible and usable by persons with disabilities. The ADA defines a service animal as any guide dog, signal dog, or other animal individually trained to provide assistance to a person with a disability. Trained service animals are permitted in wilderness when they are required for day-to-day activities by persons with disabilities. The training of service animals in wilderness is only allowed with specific permission from the Park Superintendent. Documentation must be provided that the animal is legitimately in training to be a service animal. In addition, documentation of current shots (e.g., distemper, rabies) should be readily available.

2.1.3.3.2 Day Use. Appropriate day use activities in the Park's backcountry/wilderness include hiking, horseback riding, fishing, climbing, mountaineering, trail running, photography, studying nature, viewing wildlife, nordic skiing, snow boarding, and snowshoeing. Uses that are not appropriate or allowed include snowmobiling, dog sledding, hang gliding, and bicycling. As new activities emerge, they will be analyzed for appropriateness in wilderness.

Day users make up a large percentage of visitors to the backcountry/wilderness. Past studies estimate day use of about 700,000 visitors per year; however, currently the actual amount or impact of day-use is unknown. Several research studies of day use have been proposed. One is to begin during the summer of 2001. Others, as identified in the Resource Management Plan, will be conducted as funds become available. Additional research needs will be explored. Information from these studies will provide a basis for informed decision-making about day use management in the future. In the mean time, the Park will collect trail use data with electronic trail counters at various locations to determine use trends and monitor popular destination areas for impacts.

In Management Classes 3 and 4, day users are encouraged to travel and stay on designated trails. Users should spread out while traveling in Management Classes 1 and 2. In all Management Classes, users should stay on durable surfaces (e.g., trail, rock, snow) while stopping for any period of time to rest or recreate.

2.1.3.3.3 Public Use of Motorized Equipment and Mechanized Transport. The Wilderness Act prohibits the use of motor vehicles, motorized equipment, motorboats, and other forms of

mechanical transport, except as necessary to meet the minimum requirements for administering an area as wilderness. The use of snowmobiles is prohibited in the backcountry and wilderness areas of the park. The use of motorized watercraft is prohibited on all park waters.

As a general rule, public use of any form of mechanical transport, including bicycles, wheelbarrows, and person or horse drawn carts is prohibited, with the exception of manual or motorized wheelchairs (as defined by the Americans with Disabilities Act and Title 36, CFR) used by disabled visitors.

Bicycles are permitted on all roads open to motor vehicles. Bicycles are prohibited on all other trails, routes, and areas unless otherwise designated by the Superintendent (36 CFR 4.30a). Refer to Section 2.3.2.3.4 Road Closures. Possessing a bicycle in a wilderness area is prohibited (36 CFR 4.30(d)(1)). Public use of motorized equipment, such as chainsaws, rock drills or electrical generators, is prohibited (36 CFR 1.12(a)(1-3).

2.1.3.3.4 Pets. Dogs, cats and other pets are not allowed in the backcountry/wilderness and on established trails of RMNP (36 CFR 7.7 (d)) in order to protect backcountry/wilderness resources and other visitors' experience. Pets can disturb wildlife and visitors. In addition, wildlife can potentially cause harm to pets and pet owners.

The exceptions to this are on certain roads that, after autumn seasonal road closures, convert to winter backcountry road status. For a list of those roads which are closed in the winter that allow pets, on leash, refer to Section 2.1.3.3.5 Road Closures.

The use of search dogs may be authorized during emergencies such as search and rescue or law enforcement operations. The training of search dogs in the backcountry/wilderness is only allowed with specific permission from the Park Superintendent. Guidelines for service animals (animals individually trained to provide assistance to persons with a disability) are found in Section 2.1.3.3.1 Accessibility.

2.1.3.3.5 Road Closures. Park roads are outside of wilderness and are not subject to wilderness standards. However, due to weather and road conditions part of the year, it is necessary to seasonally close portions of certain park roads. During these periods, it is appropriate to manage these areas differently (e.g., backcountry winter trail status, winter road status) from when the road is open to vehicular travel. Closures and other restrictions are imposed under the discretionary authority of the Park Superintendent, Title 36, Code of Federal Regulations, Chapter 1 (36 CFR 1.7(b)).

After autumn seasonal road closures have taken effect, the following roads convert to winter road status and are closed to motor vehicle traffic: Trail Ridge Road, Fall River Road, Upper Beaver Meadows Road, Moraine Park Campground: closed loops, Endovalley Road, Aspenglen Campground Road, Wild Basin Road, Glacier Basin Campground Road, Fern Lake Road, High Drive and Twin Sisters Trailhead Access Road. (Section 1.5, Closures and Public Use Limits (a)(1)(iv)). Administrative motor vehicle travel is permitted on these roads during autumn closing and spring opening operations.

Regulations concerning pets, 36 CFR 7.7(d) and bicycles 36 CFR 4.30 apply to certain roads while in winter road status.

Pets and bicycles are allowed on the following roads that convert to winter road status: Upper Beaver Meadows, Moraine Park Campground (closed loops), Endovalley Road, Aspenglen Campground, High Drive, Twin Sisters Trail Access roads.

Pets and bicycles are not allowed on the following roads that convert to winter trail status: Wild Basin Road, Glacier Basin Campground, Fern Lake Road.

Pets and bicycles are not allowed on Trail Ridge Road and Fall River Road from the day the road is closed for the winter season until the first Saturday in April, when park road crews begin spring opening operations.

Trail Ridge Road and Fall River Road status differs from all other park roads relative to closures in that both these areas close due to snow accumulation and the reversion to a true backcountry trail condition with accessibility primarily by ski or snowshoe only. It is inappropriate to continue to allow pets and bicycles access via these routes once they are closed for the winter. Springtime plowing and roads maintenance operations that begin in early April facilitate the reversion once again from trail to road status. Pets and bicycles are permitted on these two roads following the startup of spring opening as posted.

2.1.3.3.6 Campfires. Campfires are allowed only in specific designated camp areas during the summer. Where allowed, metal fire grates will be provided and must be used. Firewood will not be provided and users will be encouraged to pack in their own or gather wood no larger than wrist size from a wide area around the camp. Any proposal to add a wood fire to a camp area must go through Project Proposal/Clearance review, including Minimum Requirement Analysis. During periods of high fire danger, the Superintendent may put emergency campfire closures into effect.

2.1.3.3.7 Commemorations/Memorialization. Historic burial plots and commemorative features, such as plaques or memorials, that have been previously approved and included in wilderness may be retained. No new additions may be made.

The scattering of human ashes from cremation within the backcountry/wilderness may be allowed. A special use permit issued by the Chief Ranger is required, with specific terms and conditions to ensure that wilderness conditions and the visitors' wilderness experience are not adversely impacted.

2.1.3.3.8 Winter Use. Opportunities for winter travel and recreation abound in the RMNP backcountry/wilderness. There is a wide range of experiences to be found, from short, easy trips at lower elevations to multi-day mountaineering adventures at higher elevations. Due to the varying terrain, high elevation, extreme conditions and sudden changes in weather, winter activities can be risky and dangerous.

Winter activities include hiking, crosscountry skiing, snowboarding, snowshoeing, ice climbing, and mountaineering. Motorized snow machines (e.g., snowmobile, snowcat) and dog sledding are prohibited within the backcountry/wilderness and roads that convert to winter backcountry road status. Weather and trail/route conditions can change rapidly in the mountains. Sudden storms, high winds, cold temperatures, and avalanche potential are major threats. Users should be prepared for extreme conditions at any time. Park staff will provide the best available information on current conditions and winter safety.

Travel is generally done along the park trail system, roads closed to vehicular travel during the winter, or winter routes suitable for travel when snow covers the ground. Most trails are not maintained during the winter, thus travel may be challenging. Trials may be cleared of fallen trees. Routes that do not follow the park trail system or closed roads will not be cleared or enhanced in any way. Many trails/routes lead into high avalanche prone areas and should only be traveled by experienced users. Trails below Bear Lake leading to Glacier Basin Campground, the Visitor Transportation System shuttle bus parking lot, and Hollowell Park are the only marked trails. They are marked with orange metal markers. Markers should be placed so that from any marker another one can be seen in either direction. All other trails/routes require winter route finding skills.

Winter camping is allowed in the backcountry/wilderness and requires a permit. Refer to Section 2.1.4.4, Backcountry Permit/Reservation System for guidelines.

2.1.3.3.9 Special Events. Special park uses are defined as activities that require written permission from the National Park Service (Directors Order and Reference Manual 53). Special park uses that require the Superintendent's approval include sports events, pageants, regattas, public spectator attractions, entertainments, ceremonies, and similar events. Permits for special events within wilderness will not be issued by the Superintendent if the activity is inconsistent with wilderness resources and character, or do not require a wilderness setting to occur (Directors Order and Reference Manual 41).

Special events that are inconsistent with wilderness objectives include: activities that may adversely impact wilderness resources; are contrary to the purposes for which wilderness has been established; unreasonably impair the atmosphere of peace and tranquility maintained in wilderness; unreasonably interfere with wilderness management activities of park staff, visitors or concessionaires; are a clear and present danger to public health or safety; will result in significant conflict with other existing uses (e.g., animal, foot, or watercraft races, physical endurance tests of a person or animal, organized survival exercises, war games).

Permits will include terms requiring full compliance with wilderness regulations and guidelines. In addition, permits may include special terms and conditions to ensure that wilderness resources and the visitors' wilderness experience are protected. These include limitations on type of equipment used, or the time, length of time, or location where the event may take place.

2.1.3.3.10 Watercraft Use. The operation of motorboats is prohibited on all waters of the Park (36 CFR 7.7(c)(1)). The use of non-motorized watercraft (e.g., canoe, kayak, sailboat) is permitted with the exception of Bear Lake (36 CFR 7.7(c)(2)). The opportunity to use watercraft in the Park is fairly limited; however, since the majority of the streams, rivers, and lakes are relatively small and in remote locations with difficult access. Users should take extreme care during put in and take out to avoid impacts to fragile aquatic resources (vegetation trampling, bank erosion, spawning beds).

2.1.3.3.11 Private Stock Use. In RMNP, stock is defined as horses and pack animals. Horses, burros, mules, and llama are designated as pack animals (36 CFR and RMNP Compendium). No other animal may be used as a pack animal. Stock use has been a part of the Park's tradition for many years. The use of stock must be balanced with efforts to protect natural resources and unique ecosystems found in the Park.

Specifics on commercial stock use are addressed in the Park's 1994 Commercial Horse Use Management Plan. Nothing in this section changes or supersedes standards and guidelines

identified in the 1994 Commercial Horse Use Management Plan.

Horses and pack animals may be used only on park trails designated for stock use. Approximately 282 miles of trail are open to commercial and private stock use. This represents about 80% of the total maintained trail network. The remaining 20% are closed to all stock use, with the exception of a few trails where llamas are allowed. Refer to Appendix C, Table 6b for a list of trails open and closed to stock use. Crosscountry travel and off-trail use is not allowed parkwide.

In the interest of public and stock safety, due to narrow trails, steep terrain and visitor use levels, it is recommended that only well-broken, properly shod, gentle stock in good physical condition be used in the Park. The riding of horses and other stock at a speed greater than a trot is not permitted. The maximum number of animals in one group (string) is 20 and multiple strings must be separated by at least 15 minute intervals. The use of stock-drawn equipment is not permitted.

The spread of noxious weeds and exotic plant species in the backcountry and wilderness is a serious and growing problem. In order to mitigate the spread of these plants, possessing, storing or transporting any hay, straw, mulch, or forage which is not certified as free of noxious weeds and seeds by a certified State or County Agricultural Officer is prohibited anywhere in the Park. In addition, any hay, straw, mulch, or forage, either certified or non-certified weed free, beyond any park trailhead is prohibited (RMNP compendium). The grazing of stock is not allowed. Backcountry/wilderness stock users must use feed in the form of pelletized feed, hay cubes, or grain products during any trip.

To prevent resource damage, as well as possible injuries to stock and riders/users, those portions of Flattop, Tonahutu Creek, and North Inlet trails which are above treeline are closed to all stock use annually from October 15 to July 31. These trails may be opened prior to or after August 1, depending on environmental conditions (e.g., snow pack, moisture, erosion). Seasonal closures of any trail to horse and pack animal use may be in effect at various locations throughout the Park when necessary for resource protection or safety reasons. Such closures will be posted and published.

Trails open to stock have hitchrails at various locations along the trail (e.g., popular destinations, end of route). Stock users are encouraged to use these locations for extended stops. Loose herding (e.g., hobbles, bell mare) of stock is not allowed. If it is necessary to stop for a short period of time, in an area without hitchrails, a minimum impact technique should be used to keep stock physically controlled and to lessen impacts to trees, roots and vegetation. Users should clean up after their stock.

Stock is allowed overnight only in designated stock campsites. There are 10 stock campsites for all types of stock and 3 additional campsites where only llama are allowed. A Backcountry Permit is required; refer to Section 2.1.4.4.1 for requirements. Hitchrails are provided at all stock campsites (posts at llama only campsites), and stock must be securely tied to the hitchrail (post) overnight. No public corrals are provided.

2.1.3.3.12 Commercial Services. Commercial services are defined as activities or services conducted in a park, by private parties, for which a fee is charged. They include those provided by both for-profit and non-profit enterprises. Concession operations are one segment of the commercial services spectrum. Commercial activities are managed under a variety of laws and guidelines. These include the Wilderness Act, the Concessions Policy Act, National Park

Service Management Policies, NPS regulations (36 CFR 51), NPS Concessions Management Guidelines (NPS-48), and the National Parks Omnibus Management Act of 1998: Title IV - National Park Service Concessions Management.

The Wilderness Act generally prohibits commercial use within wilderness stating that "there shall be no commercial enterprise... within any wilderness area." However, the Act permits such services if they are necessary to meet wilderness management objectives: "commercial services may be performed within... wilderness areas... to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas."

NPS Management Policies state that commercial services may be authorized in wilderness if they meet the "necessary and appropriate" tests of the Concessions Policy Act and Wilderness Act, and if they are consistent with a park's wilderness management objectives. Such services must also contribute to public enjoyment of wilderness values or provide opportunities for primitive and unconfined types of recreation.

The Park is currently working on a Commercial Services Management Plan. When completed, it will identify the optimum level of commercial services to be provided and their complementary role in accomplishment of the park mission. It will identify services, activities or conditions that are and are not "necessary and appropriate" for each backcountry/wilderness Management Class and that enhance the enjoyment and understanding of the park values, while protecting backcountry/wilderness resources.

Commercial services that are appropriate in the backcountry/wilderness generally consist of guided activities. Guided activities that the Park has determined meet the "necessary and appropriate" requirement in the backcountry/wilderness include climbing, hiking, backpacking, fishing, horseback riding, snowshoeing, crosscountry skiing, painting, and photography. Specific requirements and guidelines for these activities are outlined in current contracts and permits. They will be further discussed in the Commercial Services Management Plan when completed.

2.1.3.3.13 Native American Access. Wilderness, for some Native American groups, is a place of profound tribal history, traditional use, or a homeland. Native Americans will be permitted access within the backcountry/wilderness for sacred or religious purposes consistent with the regulations and intent of the American Indian Religious Freedom Act, EO13007 of May 24, 1996 on "Indian Sacred Sites", the Wilderness Act, related laws, policy and according to criteria for special park uses. Native American groups seeking to perform ceremonies in the Park should contact the Superintendent in advance so that the Park can address type of access issues and assist with insuring that ceremonies are undisturbed.

2.1.3.3.14 Summit Registers. Summit registers have traditionally been used in the mountains of Colorado to record successful attempts. They can be useful during Search and Rescue operations to determine possible point last known locations. Summit registers on mountain tops that historically have had them may remain in place. No new registers may be put in place. The registers must be as small and unobtrusive as possible. A sign or other marking may not be used to identify the location of the register. Park staff will not maintain or re-supply existing registers with paper and pencil.

2.1.3.3.15 Hunting/Fishing. Hunting is not permitted within RMNP. There are five hunting access and game transportation corridors, within the backcountry/wilderness, through which hunters may pass. These are the Never Summer Ranch road, Bowen Gulch trail, Baker Gulch

trail, Twin Sisters trail and North Boundary trail via Cow Creek trail. Specific information about these corridors can be found in the annual Rocky Mountain National Park Compendium (36 CFR 1.7(b).

Sport fishing is permitted in the Park. A valid Colorado fishing license is required. State and special park regulations apply. Fishing regulations are based on management objectives described in Section 2.1.2.2, Fish and Wildlife and the Resource Management Plan. Regulations will be reviewed and may be revised annually. Current regulations can be found in the annual Superintendent's Compendium 36 CFR 1.7(b).

2.1.3.4 Impacts from Civilization

The National Wilderness Preservation System was established "In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions...". The Wilderness Act characterizes wilderness as a place retaining its primeval character. Outstanding opportunities for solitude or primitive and unconfined recreation are to be ensured. Wilderness is to be a place where one can step back to an earlier time and enjoy the wildness of America without the trappings of present-day civilization.

One of the goals of this plan is to "protect and preserve… the integrity of the wilderness character for present and future generations". Reminders of our technological civilization can detract from the wild character of the Park, and destroy the sense of solitude. Wilderness is a place to escape from the stresses, pressures, and reminders of everyday life.

2.1.3.4.1 Visitor Use of New Technology. Visitor minimum impact education will include an emphasis on leaving civilization's technology behind to more fully experience the unique qualities of wilderness, specifically its primitive, wild character and opportunity for challenge, risk, and self-sufficiency. The use of potentially intrusive technology including electronic communication devices (e.g., cellular phones and pagers), radios and computers will be discouraged, except in emergency situations, to protect wilderness character.

2.1.3.4.2 Visual Quality. Two of the basic qualities of wilderness character are solitude and pristine scenery. Minimizing the visual presence of other people provides greater opportunities for visitors to feel a sense of solitude. Leave No Trace education will encourage visitors to minimize their effects on visual aesthetics. Examples might include selecting equipment in colors that blend in with the natural environment.

Activities outside wilderness can also affect visual quality. Land practices outside park boundaries may affect viewsheds. The Park will coordinate with adjacent landowners to make them aware of wilderness concerns. Night sky visibility is becoming more rare as urban development continues to occupy an expanding area. The opportunity for this and future generations to see a dark, star-filled night sky is a wilderness value to be protected. Rocky Mountain National Park will work to minimize the intrusion of artificial light into the natural darkness of wilderness from within the park boundary and will encourage park neighbors and local government agencies to do the same outside the park. Both of these topics were discussed and addressed in the Rocky Mountain National Park Related Lands Evaluation of 1998.

One of the significant values of wilderness is clean air and outstanding visibility of wilderness features. Rocky Mountain National Park is designated a Class I air quality area under the Clean

Air Act. The National Park Service will work with managers of potential polluting sources to protect air quality. This will ensure minimal or no air quality degradation, and help restore wilderness air quality to the highest level practicable.

2.1.3.4.3 Natural Quiet. National Park Service Management Policies state that intangible qualities, such as natural quiet and natural sounds associated with the physical and biological resources of the parks, are values to be protected. Activities that cause unnecessary or excessive unnatural sounds will be monitored. Action will be taken to prevent or minimize their adverse effects on wilderness resources or associated visitor enjoyment. Sound devices that create unreasonable audio disturbances are prohibited.

2.1.4 Administrative Conditions and Management Activities

2.1.4.1 Minimum Requirement Concept

The Wilderness Act of 1964 states in section 4(c) that *"…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 a Wilderness area. The Act allows for the administrative exception, but it is an exception not to be abused and to be exercised very sparingly and only when it meets the test of being the minimum necessary for wilderness. National Park Service Policy dictates that all management decisions affecting wilderness must be consistent with the Minimum Requirement Concept.

The Minimum Requirement Concept enables managers to examine and document if a proposed management action is appropriate in wilderness, and if it is, what is the least intrusive equipment, regulation, or practice (minimum tool) that will achieve wilderness management objectives. The completion of this process assists managers in making informed and appropriate decisions concerning actions conducted in wilderness.

In wilderness, how a management action is carried out is as important, if not more important, than the end product. When determining minimum requirement, the potential disruption of wilderness resources and character 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 in the long run and/or have localized, short-term adverse impacts will be acceptable.

2.1.4.1.1 The Process. To apply the Minimum Requirement Concept at RMNP, a Minimum Requirement Analysis will be completed for any management action, including but not limited to, natural and cultural resource projects, administrative facilities, trail and camp area projects and research, within wilderness. It is the responsibility of the lead person for any proposed action to complete a Minimum Requirement Analysis Worksheet (ROMO-180). Depending on the level of review required, the Minimum Requirement Analysis Worksheet (ROMO-180) may be used alone or in conjunction with the with other park review processes, such as Project Proposal/ Clearance or Flight Requests.

The Minimum Requirement Analysis is a two-part process. Part A helps determine whether or not the proposed management action is appropriate or necessary for administration of the area as wilderness, and does not pose a significant impact to wilderness resources and character. Part B describes alternatives for the proposed action in detail, and evaluates each, to determine

the techniques and/or types of tools and equipment (minimum tool) needed to ensure that overall impacts to wilderness resources and character are minimized. The Minimum Requirement Analysis Worksheet (ROMO-180) and instructions for its completion can be found in Appendix D.

Recurring actions, such as spring trail opening, campsite rehabilitation and management prescribed fire, may be analyzed and the minimum requirement decision and specific guidelines documented in an approved management plan (e.g., Backcountry/Wilderness Management Plan, Fire Management Plan). This eliminates the necessity of the action being analyzed each time it is conducted. Any action not analyzed and approved in a current management plan, or any deviation from an approved action and its specific guidelines, must be analyzed on a case-by-case basis.

The Minimum Requirement Concept is not intended to limit choices. It challenges managers to examine every planned management action to determine if it is appropriate and necessary in wilderness and to choose the best alternative that would least impact unique wilderness resources and character. The purpose and philosophy of wilderness must be considered when evaluating alternatives. Wilderness goals, objectives and desired future conditions must be well understood by anyone proposing and/or analyzing actions.

2.1.4.1.2 Tool and Equipment Use. Life and health threatening search and rescue, medical incidents or environmental emergencies which seriously threaten wilderness resources may require a "higher degree" of minimum requirement than most wilderness management actions. The appropriate minimum requirement for emergencies will be selected by determining what tool/technique will meet emergency and wilderness objectives, while best protecting human health and safety.

Stricter standards will be in place for the use of motorized equipment and mechanical transport in non-emergency actions. In Management Class 1 areas, hand tools and traditional practices will routinely be used. Motorized equipment and mechanical transport will not be allowed, except during emergency operations or when absolutely critical for the protection of natural or cultural resources as determined on a case-by-case basis through a Minimum Requirement Analysis and approved by the Superintendent). In Management Class 2, 3 and 4 areas, hand tools and traditional practices will be used whenever possible. Motorized equipment and mechanical transport will not routinely be used, unless first being reviewed using the Minimum Requirement Analysis Worksheet or approved in a current management plan (e.g., Backcountry/Wilderness Management Plan, Fire Management Plan).

For actions which motorized equipment or mechanical transport uses are approved, they will be planned to minimize impacts to park users and resources by utilizing the least obtrusive and impacting schedules. Season of year, day of week and time of day should be considered. Any proposed use of motorized equipment, except in emergency situations, on holidays and weekends between Memorial Day and June 30th or anytime between July 1st and Labor Day will require that a Minimum Requirement Analysis Worksheet be prepared and the action approved by the Assistant Superintendent. This will be done on a case-by-case basis (e.g., special project) or on a programmatic level (e.g., trail work) in an approved management plan (e.g., Backcountry/Wilderness Management Plan, Fire Management Plan).

2.1.4.2 Aircraft Use

Rocky Mountain National Park is the only unit in the Service that has a federally legislated ban on commercial tour overflights. This ban was enacted by a 1998 Act of Congress that made permanent, a temporary ban previously issued by the Federal Aviation Administration (FAA). However, other flights over the Park are allowed including general aviation (subject to a FAA 2,000 ft; AGL advisory), high level commercial aircraft, military air traffic, and administrative flights for emergency operations (e.g., search and rescue, wildland fire), research, and other administrative uses as deemed necessary by the Superintendent.

The Park Aviation Management Plan (AMP) provides guidelines for use of aircraft on park missions. The AMP establishes approved procedures for official use and safe operations, and sets direction to minimize the number of NPS flights so as to protect park resources and the visitor experience. There are two types of administrative flights, non-routine and routine flights. The following guidelines for aircraft use within wilderness are based on the AMP and NPS Management Policies. For more specific criteria refer to the AMP.

2.1.4.2.1 Non-Routine and Routine Flights

1) Non-routine flights are for emergencies only and exempt from the normal flight approval process. Because of their life or health threatening nature, these types of flights cannot be scheduled in advance and will often occur in both approved and non-approved landing zones. Examples of non-routine flights for emergencies include search and rescue operations, medical evacuations, emergency fire operations, law enforcement emergencies, critical radio repeater repair, administrative emergencies such as life threatening situations, those involving public health, park closure, property protection (gross damage as from flooding or high winds), endangered species, critical actions for resource protection or dignitary protection.

2) Routine flights are flights that can be scheduled in advance. Their postponement will not result in any significant threat to life, property, park resources, or services, and an alternate flight at a later time can be scheduled if they are delayed or do not occur. Examples of routine flights include approved research, routine maintenance, trail projects, rehabilitation projects, management-prescribed fire operations, hauling in/out supplies, routine radio repeater maintenance, helicopter training, special use and filming permits, wildlife surveys, threatened and endangered species reintroduction, visitor use surveys, routine utility maintenance performed by utility companies, concession activities, VIP orientation, administrative uses, and contract work.

Given its special status as the only park to have a legislatively imposed ban on commercial tour overflights, routine flights and landings in wilderness will generally not be allowed. However, in those situations where strong and compelling needs exist, the Minimum Requirement Concept will apply and the completion of a Minimum Requirement Analysis Worksheet and Flight Request Form will be required. The flight will be granted only if it is determined to be the minimum tool to achieve the purposes of the area or for protection of wilderness values. In certain instances, the use of aircraft may be less of an impact to wilderness than an alternative method. In addition, other guidelines for aircraft use outlined in the Aviation Management Plan must also be followed. If the action can be conducted by a method that would have less overall impact to wilderness resources and character, it should be done in that manner. Non-routine flights should be conducted, as much and possible, in such a way to minimize the impact to wilderness resources and character.

2.1.4.2.2 Flight Requests. For any aircraft flight in the Park, a Flight Request Form (ROMO-47) must be completed and reviewed, except in emergency situations. Procedures for this are outlined in the Park's Aviation Management Plan. Briefly, the project leader will complete the Flight Request Form and forward it to the Park Aviation Officer and Wilderness Program Specialist for review. They will forward it, with comments and recommendations, to the Assistant Superintendent for review and approval/disapproval signature. The original will be returned to the project leader and a copy sent to the Aviation Officer and Wilderness Program Specialist for tracking purposes.

If the proposed flight is flying over or landing in wilderness, the completion of a Minimum Requirement Analysis Worksheet (ROMO-180) is also required and should be attached to the Flight Request Form. At times, aircraft may impact wilderness resources and character less than other alternatives, and therefore may be an effective tool for accomplishing park wilderness management objectives. However, the use of aircraft may adversely impact wildlife or the quality of the visitors' wilderness experience and must be carefully analyzed.

If the use of aircraft is determined to be the minimum requirement, the number of flights will be kept to the absolute minimum necessary to accomplish the action, and flight scheduling, routes, altitudes, etc. will be chosen to reduce wildlife disturbance and protect the quality of the visitors' wilderness experience. This pertains to both non-routine and routine flights.

2.1.4.2.3 Flight Scheduling. For actions where aircraft are determined to be the minimum requirement, flights are to be scheduled to minimize impacts to park users and resources. Things such as season of year, day of week, and time of day should be considered. Any proposed use of aircraft, except in emergency situations, on holidays and weekends between Memorial Day and June 30th or anytime between July 1st and Labor Day is highly discouraged. Proposals will require that a Minimum Requirement Analysis Worksheet be prepared and the action approved by the Assistant Superintendent. They may be approved if the action cannot be accomplished during the shoulder seasons due to snow conditions, project requirements or research timelines and if no other reasonable alternative exists.

2.1.4.2.4 Flight Paths. Flight paths will be proposed and documented on the Flight Request Form. They will be planned to mitigate the impact of aircraft presence and noise on wilderness resources and visitors and will be selected to avoid sensitive wildlife and wildlife habitat, especially during critical periods such as breeding and nesting. Whenever possible, flight paths will be selected that least impact visitors in Management Class 3 and 4 and do not pass directly over popular attractions, designated campsites, or travel along main trails. Aircraft will maintain a minimum of 500 feet above ground level (AGL), except during take-off, landing or special use missions (e.g., emergency operations, wildlife capture).

2.1.4.2.5 Landing Sites. Aircraft not under the direction of the NPS are not permitted to land in the Park. All aircraft landings require prior approval unless justified by an in-flight emergency. Landings should occur at sites identified in the Aviation Management Plan or approved by the Incident Commander during an emergency operation. Permanent cleared or constructed aircraft landing sites (e.g., heliports, helipads, or airstrips) are not permitted in the wilderness. Permanent site improvements or markings of any kind will not be permitted. Temporary sites (e.g., helispots) are to be located in natural openings on stable, durable surfaces such as dry, grassy meadows, rock or snow. Temporary improvements may only be authorized during emergency operations, when serious risk to human health and safety will result (search and rescue operations) or substantial resource damage is imminent (wildland fire suppression), if no

reasonable alternatives exist. Restoration to as near original condition as possible is required following the emergency.

2.1.4.2.6 Flight Documentation. The Aviation Coordinator and the Wilderness Program Specialist will track flight requests for routine flights, and actual flight information, for non-routine and routine flights. The Aviation Coordinator will prepare an annual aircraft use report. A copy of this report will be sent to the Wilderness Program Specialist for inclusion in the Annual State of the Backcountry/Wilderness Report.

Flight Request Forms are not required for non-routine flights. For routine flights, the original Flight Request Form will be returned to the person that requested the flight once the flight is approved or disapproved. Copies will be sent to the Aviation Officer and the Wilderness Program Specialist.

For both non-routine and routine flights, a copy of the OAS-23, Aircraft Use Report, will be sent to the Aviation Coordinator. This will include information on the actual flight period, flight area, flight hours, and other pertinent information about the flight. It will be the responsibility of the Helicopter/Aviation Manager to complete the OAS-23.

2.1.4.2.7 Monitoring of Aircraft Use. The administrative use of aircraft over and within wilderness will be monitored to determine aircraft use trends and impacts to the wilderness resource and visitors' wilderness experience. The aircraft use report will be reviewed annually to determine if additional guidelines are necessary to further minimize aircraft use and impacts in wilderness.

2.1.4.3 Emergency Services

NPS Management Policies provide overall guidance to evaluate the urgency of emergency incidents and to allocate available resources. Operational procedures are directed through the Park's Emergency Operations Plan (updated annually), Aviation Management Plan, and Fire Management Plan.

During emergency incidents, consideration will be given to protecting the Park's backcountry/ wilderness natural and cultural resources. While hazard mitigation may be required, under no circumstances will pure convenience dictate the destruction of any park resource. Leave No Trace minimum impact techniques will be incorporated into incident action plans and used whenever possible to lessen impacts to backcountry/wilderness resources during emergency operations.

NPS Management Policies provide for the administrative use of motorized equipment or mechanical transport, including motorboats and aircraft, "…in emergency situations involving human health and safety." For the purposes of this plan, "emergency situations" include:

- Responses to those in need of medical or physical assistance when threats to human health and safety are reasonably assumed,
- Responses to those who are determined to be unjustifiably overdue and threats to human health and safety are reasonably assumed,
- Any response to downed aircraft,
- Any response to an "unknown emergency" (e.g., mirror flash, second-hand visitor report, radio distress signal, etc.)
- Any reported disaster,

- Special law enforcement operations when threats to human health and safety are reasonably assumed and
- Responses to wildland fires which threaten life, property, cultural or natural resources.

Refer to Section 2.1.4.2 Aircraft Use, Emergency Operations Plan and the Aviation Management plan for guidelines.

2.1.4.4 Backcountry Permit and Reservation System

The Backcountry Permit and Reservation System is an integral component of mitigating impacts caused by overnight use. Overnight use causes impacts; however, since RMNP instituted the permit and reservation system, most impacts have been kept to a minimum. The combination of managing where and how visitors camp, and providing face to face information on how to minimize impacts, has improved the overall condition of the wilderness resource from what it once was. The Backcountry Permit and Reservation System is the responsibility of the Division of Visitor Management and Resource Protection.

2.1.4.4.1 The Permit System. A backcountry permit (Appendix E) is required year round for all overnight trips into the backcountry. One permit is required per party per trip. Due to the popularity of Rocky Mountain National Park's backcountry, individuals are allowed to obtain a permit for up to 7 nights, June through September, and an additional 14 nights October through May, for a total of 21 nights within a calendar year. Reserved permits not picked up by 10:00 AM the first day of the trip (from May through October) will be canceled in entirety, so that camping opportunities may be offered to other campers.

An administrative fee is collected from May through October. The fee is non-refundable, non-exchangeable, and does not include the park entrance fee. There is no administrative fee from November through April.

Permits are issued year-round on the east side of the Park at the Backcountry Office located near the Headquarters/Beaver Meadows Visitor Center and on the west side of the Park at the Kawuneeche Visitor Center Backcountry Office. In the summer, permits are also issued at the Wild Basin Ranger Station, Long's Peak Ranger Station, Corral Creek Ranger Station, and Colorado State University's Pingree Park Campus. In the winter, self-registration permits may be picked up at self registration boxes located at the Beaver Meadows entrance station, Fall River entrance station, and at Wild Basin, Sandbeach, Longs Peak, and Dunraven trailheads.

While hiking to camp, the permit should be attached to the outside of the pack. Once at camp, the permit should be securely attached to the tent. The permit should be reattached to the pack for the hike out.

A vehicle dash tag is issued for each vehicle that will be parked at the trailhead overnight. It authorizes the vehicle to be parked at a specific trailhead. The dash tag lists the person's last name, the license number of the vehicle, the trailhead at which the vehicle will be parked and the date, in code, that the party will be exiting the backcountry. The date is written in code to inhibit car clouting (break-ins). This date is written in order to inform Rangers how long this vehicle should be parked at a given trailhead. It assists Rangers when a party is reported overdue to see if the party may still be in the backcountry and so that search and rescue operations may begin.

The permit system was put in place to reduce impacts and to disperse use. To accomplish this, there are five types of camping permitted in the backcountry that provide a range of opportunities and experience for the visitor. Standards for the five types are:

Type 1 - Designated Sites: Individual and Group (Figure 2-2):

- Within Management Class 3 only (except Little Rock Lake, Moore Park, Rabbit Ears, Peregrine, Cub Lake, Arch Rocks, Mill Creek Basin and Upper Mill Creek).
- Camp must be established within 15' of the metal arrowhead and post that marks the site.
- Camp stoves only. Fires prohibited, except in sites specified for wood fires with visible metal fire ring (dead and down wood use only).
- Party size is limited to 7 at individual sites and 12 at group sites.
- Due to excessive impact, groups over 7 persons must use group sites or split up and camp in camp areas at least one mile apart.
- If the designated site has more than 4" of snow, follow the "Winter Areas" standards.

Type 2 - Stock Sites: Individual and Group (Figure 2-2):

- Within Management Class 3 only.
- Camp must be established in "stock camps" only.
- Party size is limited to 6 people and 8 stock at individual stock sites (allowing for 1 pack stock per 3 people and saddle stock).
- Party size is limited to 12 people and 16 stock at group stock sites (allowing for 1 pack stock per 3 people and saddle stock).
- Camp stoves only. Fires prohibited, except in sites specified for wood fires with visible metal fire ring (dead and down wood use only).
- Grazing is prohibited. Certified weed-free feed is required.
- Use hitchrails that are provided. Highlining, hobbling and loose herding is prohibited.

Type 3 - Crosscountry Areas (Figure 2-2):

- Within Management Class 2 only
- Camp must be. . .
  - Established within the designated crosscountry area.
  - At least 200' (70 adult steps) from water.
  - Out of sight and sound of trails and other campers.
  - Below treeline and out of meadows.
  - Moved at least 1 mile each night.
- No more than 2 nights in 1 crosscountry area.
- Party size is limited to 7 people.
- Camp stoves only. Fires prohibited.
- Stock prohibited.

Type 4 - Bivouac Areas (Figure 2-2):

- Within Management Class 2 only
- A bivouac is defined as a temporary, open-air encampment.
- Permits are issued only to technical climbers.

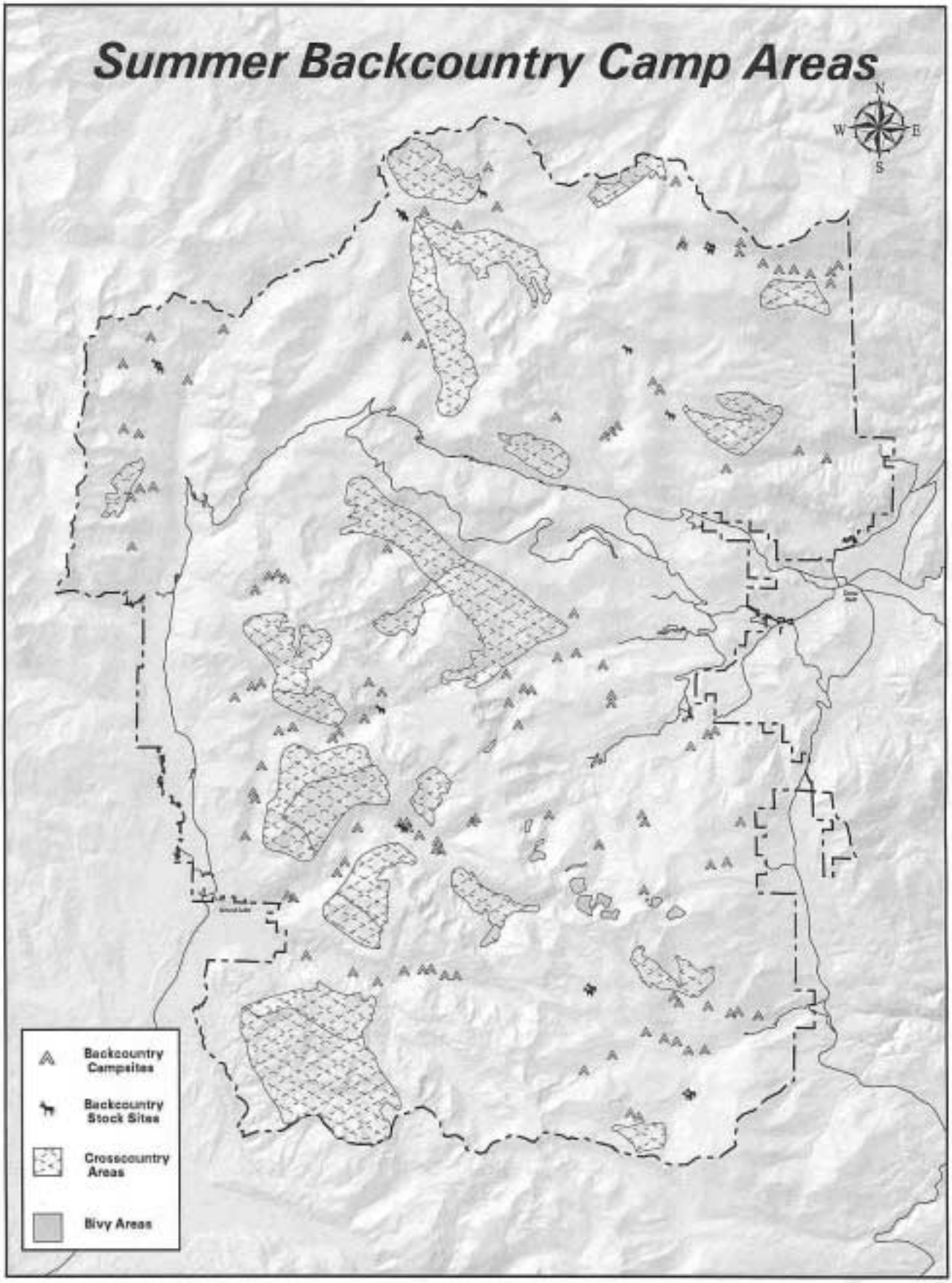
Summer Backcountry Camp Areas
N
W
E
S
Backcountry Campsites
Backcountry Stock Sites
Crosscountry Areas
Bivy Areas

Figure 2-2

- The climb must be 4 or more technical pitches and 3½ or more miles from the trailhead.
- Party size is limited to 4 people and all members must be climbing.
- A bivouac must be established. . .
  - Within the designated bivouac area, or at the base or on the face of the climb.
  - At least 200' (70 adult steps) from water.
  - With camp set up at dusk and taken down before dawn.
  - Without the use of erected type shelters, tents or supported tarps.
  - On rock or snow only, not on vegetation, and out of meadows.
- Camp stoves only. Fires prohibited.
- Stock prohibited.

Type 5 - Winter Areas (Figure 2-3):

- Within Management Classes 1, 2 and 3 only where designated.
- If a designated site in the area has more than 4" of snow, camp at least 200' (70 adult steps) away from the site. Do not camp in the site.
- Party size is limited to 12 people.
- Camps must be established. . .
  - Within the designated winter area.
  - At least one mile from the trailhead.
  - At least 200' (70 adult steps) away from water.
  - On snow or rock only -- never on vegetation or in meadows.
  - Out of sight and sound of other campers, trails or winter travel routes.
- Camp stoves only. Fires prohibited.

Within the backcountry permit system, on any given night in the summer, a total of 1,973 people could be camping in the backcountry. In the winter that number increases to 2,484. A breakdown of camp areas, by type, can be found in Appendix C, Table 1. To date, with the exception of a few holiday weekends, there is always an opportunity for someone to secure a permit for the type of camping experience they desire.

2.1.4.4.2 The Reservation System. In order for visitors to plan trips in advance, a reservation system has been established. All camp areas are open to reservations, though the greatest demand is in the summer. Commercial and private parties follow the same reservation schedule. Reservations can only be made for the current calendar year. Confirmation letters will be mailed for the reservation. Permits must be picked up in person, but not more that 30 days before the trip.

The following is current the annual reservation schedule. These dates are subject to change in the future if determined to better meet visitor needs and management objectives.

- January 1 through February 28 - Reservations by phone, mail, or walk-in (for January and February reservations only)
- March 1 through May 15 - Reservations by phone, mail, or walk-in
- May 16 through September 30 - Reservations by mail or walk-in only
- October 1 through December 31 - Reservations by phone, mail, or walk-in

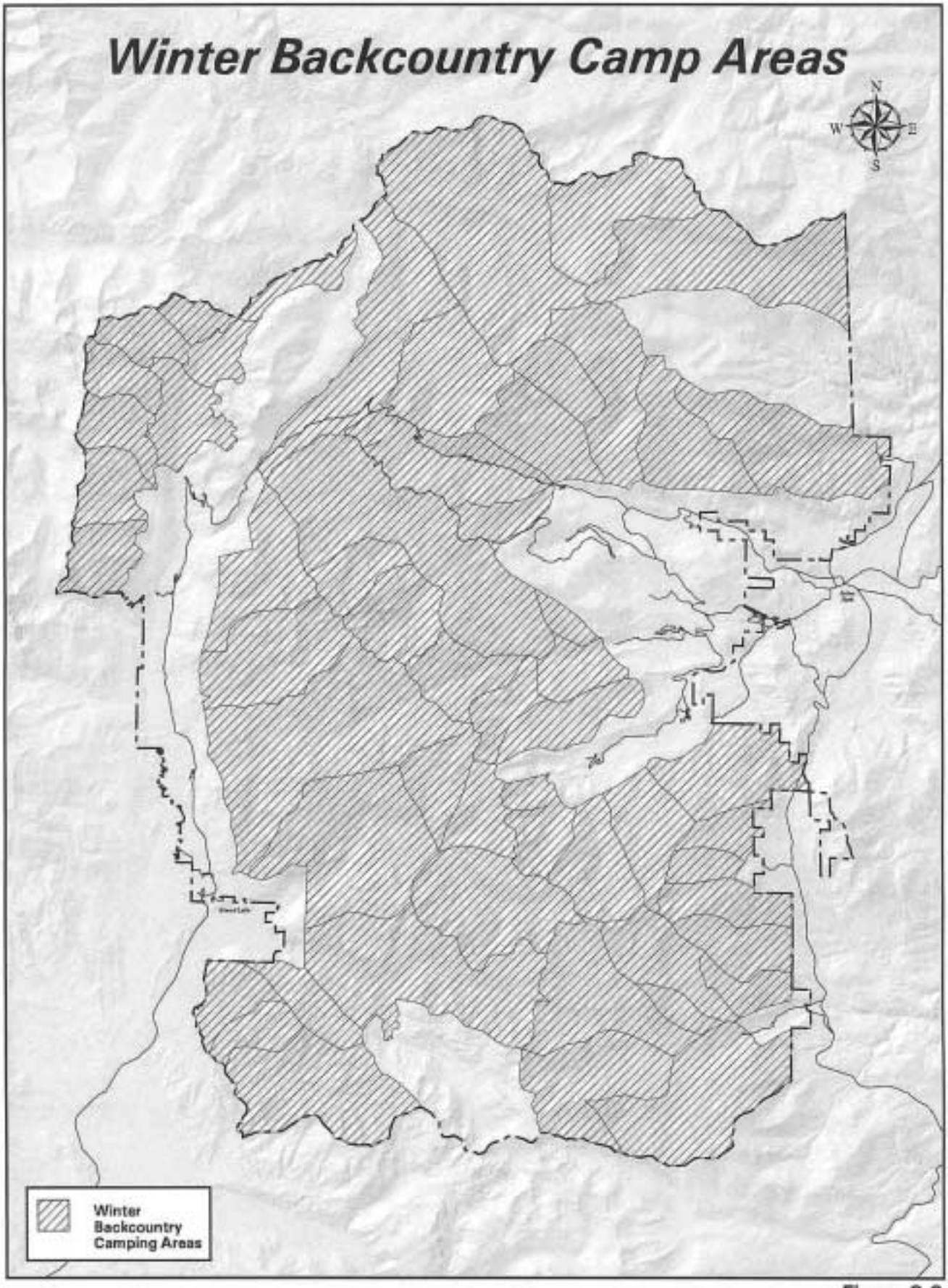
Winter Backcountry Camp Areas
N
W
E
S
Winter
Backcountry
Camping Areas

Figure 2-3

2.1.4.5 Camp Area and Site Management

As outlined by the Section 2.1.4.4, Backcountry Permit and Reservation System, there are five types of backcountry camping in the Park. It is recognized that with use come impacts. It is incumbent upon the Park to manage camping areas and sites in a way to mitigate associated impacts. Each class of camping requires different types of management techniques to ensure minimum impacts to the wilderness resource.

A main concern of backcountry management is impact to the resource. In most respects this should take precedence over visitor desires, which can be more instantly manipulated and satisfied than can be the restoration of a heavily impacted area. A delicate marsh heavily impacted may take hundreds of years to restore itself, when it might have taken only a short season to heavily impact it from misuse by the visitor. Other types of backcountry impacts could be the change in wildlife migration routes, human intrusion into a rare bird nesting site or the major destruction of a small meadow by an ill-placed campsite.

Therefore, managers need to consider ways to prevent further erosion, site spread, vegetation destruction, and other impacts to areas used for trailside camps and the creation of sites in crosscountry and bivouac areas. Primarily this will be done to protect and preserve the resource, but it may have a secondary benefit of upgrading a designated campsite to the point that it makes it more "campable" (e.g., flat tent pad, no roots, or rocks which would preclude pitching a tent, etc.)

Any new management action, pertaining to camp areas/sites (e.g., addition of a tent pad, privy), requires the completion of a Backcountry Camp Area/Site Proposal (ROMO-168) that will be submitted to the Wilderness Program Specialist for review. Depending on the scope of the action, it may also require a Project Proposal/Clearance review and/or a Minimum Requirement Analysis (ROMO-180).

2.1.4.5.1 Improvements. In order to minimize impacts in and around camp areas, some improvements are necessary at designated individual, group, and stock camp areas. Improvements will not be provided in crosscountry, bivouac or winter camping areas, as specific camp spots are not desired or designated.

Improvements can include tent pads, privies, metal fire grates, hitchrails and posts and food storage devices. Picnic tables will not be provided and the construction of "camp furniture" will not be allowed; any that appears will be dismantled.

2.1.4.5.2 Designated Camp Area/Sites. The use of the camp area/sites is managed under the Backcountry Permit System (Section 2.1.4.4). Designated camp area/sites receive the most use and require the most management action and maintenance. Management actions should be limited to the least amount necessary to maximize resource protection, while providing a safe, campable area. Each camp area will be evaluated on an individual basis as to what management actions should take place within established guidelines.

Designated (individual and group) camp areas will only be allowed within Management Class 3, except for Little Rock Lake, Moore Park, Rabbit Ears, Peregrine, Cub Lake, Arch Rocks, Mill Creek Basin and Upper Mill Creek. Camp areas should be at least a half-mile apart. Each camp area will have from one to a maximum of six campsites. Campsites within the camp area should be out of sight and sound of each other as much as possible. An eight inch tall, silver metal arrowhead and post will mark each campsite. Campers must camp within 15 feet of the

arrowhead or on established tent pads. Each individual campsite in a camp area will not exceed 800 square feet of bare ground in the core area. Each group campsites will not exceed 1200 square feet. Exceptions to standards for bare ground square footage may occasionally be granted through Project Proposal/Clearance review, if wilderness resources will be better protected by a larger size site.

There will be no net gain in the number of designated camp areas. If a designated camp area or site is lost to natural processes it may be re-established. If a designated camp area or site does not meet established standards (e.g., within 200 feet of water) or if there is another environmentally preferred location, it may be relocated, unless the relocation would cause a greater overall impact to the area. Relocations will be evaluated on an individual basis. A camp area or site may be relocated if it is necessary for natural and cultural resource protection or for the enhancement of the wilderness experience. A Project Proposal/Clearance review and a Minimum Requirement Analysis are required.

New campsites at existing camp areas may be allowed. The type of a campsite may be converted to another type (e.g., wood fire site to no wood fire site, individual site to a group site). These actions be closely analyzed and will primarily occur to protect resources and mitigate impacts, not necessarily for the convenience of the user. A Project Proposal/Clearance review and a Minimum Requirement Analysis are required or adding, permanently closing, converting or moving a designated campsite.

Access trails. Access trails are defined as those trails that are designated and wanted. Access trails in and around camp areas should conform to trail standard level E or F (see Section 2.1.4.7.2). The include trails from the main trail, to water, to the privy, food storage area, other campsites and/or a scenic spot. Access trails to the camp area and sites will be identified along the main trail with a standard wooden camp area sign indicating the camp area name. All access trails in and around the camp area should be easily followed to prevent trail braiding and social trailing.

Access trails from the main trail to campsites will be marked with four inch plastic red arrowhead markers. These red arrowheads are not to be used to mark trails to water sources, as it could invite confusion and illegal satellite campsites to form. Tree blazes, cairns, flagging, or other non-natural markings are not to be used to mark any access trails. If needed to delineate trail tread, access trails may be lined with rocks or logs.

Trails to water sources should be laid out so they maintain the least gradient, minimize erosion problems, avoid difficult rocky areas, will cause the least damage to building and maintaining the trail tread. Current trail management techniques outlined in the Trails Management Plan should be followed. The trail should cause minimum damage, and cause no damage to the stream or water source.

Social Trails. Social trails are defined as those trails that are non-designated and undesirable. They are trails made by people short cutting to other campsites, water sources etc. They generally cause resource impacts such as soil erosion and vegetation damage. All attempts should be made to obliterate and rehabilitate any social trails in and around camp areas to prevent resource impacts and management problems.

Tent Pads. It has been shown through studies that the damage to the vegetation, erosion, etc will occur in a very short period of time even with minimum concentrated use (Wilderness Management, Hendee, Stankey, Lucas, USDA, NPS). Thus, hardening an area for tents or

construction of a tent pad may be necessary and allowed at some campsites. Each campsite should be evaluated individually to determine if a hardened area or tent pad is needed to prevent damage to vegetation, erosion, unwanted site spread and/or other resource impacts.

Each individual campsite should accommodate space for three tents. This may mean up to three hardened spaces or constructed tent pads to accommodate a group size of seven. Group campsites should be able to accommodate a group size of twelve. This may mean up to six hardened spaces or constructed tent pads. Each tent pad may be 100 square feet. If approved, tent pads may be combined to create a larger pad with overall size not exceeding the total size allowed for the number of pads.

In some cases, identifying and delineating a tent site/pad could be done by merely cleaning away forest debris, such as fallen limbs and twigs. Repeated, frequent use will keep the site clean and easily recognizable. If; however, site spread is occurring or has occurred, it may be necessary to further identify the site. Logs or rocks may be placed around the site; however, a problem with this method is that the logs are used for firewood and the rocks are used to line a fire ring. To prevent this, use large logs or rocks and bury the logs and rocks using the “iceberg technique” where a major part of the rock is buried with only a small, uninviting part of the rock left protruding above the ground. Whenever possible, materials used to harden a campsite, or access trail, should conform to trail construction standards.

Tent pads may consist of one to several cribbing logs to identity the area. They should blend in with surroundings. The cribbed area may or may not need fill material. If fill is needed it may be packed in or obtained locally, depending on the amount needed. If a borrow pit is necessary, the pit must be well out of the area, kept small in size, and be covered with forest debris to avoid visual unsightliness. Refer to Section 2.1.4.7.3 regarding borrow pit standards.

2.1.4.5.3 Stock Campsites. Users with horse, llama, burros, mules, and ponies can use all stock campsites, with the exception of Aspen Knoll, Ute Meadow, and Haynack, which are designated for llama use only. Campsite hardening, access trails, and site campability standards for stock campsites will be the same as for individual and group campsites. Each stock campsite in a camp area will not exceed 2,000 square feet of bare ground in the core area including the hitchrail area.

Hitchrails will be provided at or near each stock site to accommodate the appropriate number of stock (8 at individual stock camps and 16 at group stock camps) and will be used to confine stock overnight. Hitch posts, to accommodate 5 llama, will be provided at the llama-only campsites. Highlining, hobbling, loose herding, temporary corrals or other means of confinement are not allowed. Stock users are expected to clean up after their stock. This includes packing out any uneaten feed, spreading manure, and filling in any holes caused by pawing.

2.1.4.5.4 Crosscountry and Bivouac Areas. Crosscountry and Bivouac camping will only be allowed in designated areas in Management Class 2. Leave No Trace minimum camping techniques will be emphasized. A goal for crosscountry and bivouac areas is that camping is non-discernable. Since it only takes a few uses for impacts to occur, camping in crosscountry areas is limited to 1 night per camp spot and 2 nights per crosscountry area. Other criteria for crosscountry and bivouac areas are listed in Section 2.1.4.4.1. When impacts are discovered, they will be mitigated as soon as possible. Any improvements to camp spots, such as rock walls for wind breaks, will not be allowed and will be dismantled if found. It may be necessary to close an impacted spot to keep it from becoming highly impacted and allow it time to recover.

2.1.4.5.5 Winter Areas. Winter camping areas are allowed only in designated areas in Management Class 1, 2 and 3. Criteria and regulations on winter camping can be found in Section 2.1.4.4.2. Winter Leave No Trace minimum camping techniques will be emphasized. If any impacts from winter camping are found they will be mitigated as soon as possible. Construction of snow shelters (e.g., snow caves, igloos, pits etc.) is allowed; however, they should be destroyed upon leaving the area.

2.1.4.5.6 Monitoring. Camp area and site monitoring is imperative to proper management. The Backcountry Campsite Impact Assessment and Monitoring System (BCIAMS) was designed in 1988 and implemented in 1989 (Connor, 2000). The system was reviewed, and modifications made, in 1992, 1995, and 1998 (Devine, et. al., 2000). All campsites, crosscountry areas, and bivouac areas were inventoried and monitored each year from 1989-1991. In 1992 a rotational system was established, and each area/site is inventoried and monitored once every three years. BCIAMS will continue to be conducted as a way to assess impacts and guide the management of camp areas and sites.

Designated sites and rated in eight categories: vegetation/ground condition, tree/shrub damage, root exposure, social trails, access trail tread condition, illegal satellite sites, cleanliness and barren core camp area. Each campsite receives an impact rating score. The impact rating score range is from 0 to 24. The higher the score, the greater the impact. It is desirable that each campsite have a impact rating of no more than 12. Each District will prioritize campsites to be rehabilitated based on the BCIAMS impact rating and other management considerations.

Crosscountry and Bivouac areas are inventoried to see if impacts from repeated camping in an area is occurring. If impacts are found, they are rated on overall condition, distance to water, any illegal fire scars, social trails and any other impacts. Overall condition ratings range from 1 to 3. A rating of 1 is acceptable. If a site receives a rating of 2 or 3, rehabilitation work will be conducted to mitigate the impacts and restore the site to natural conditions.

2.1.4.6 Climbing Management

National Park Service policies recognize climbing as a legitimate recreational activity within national parks, including wilderness. Climbing has been a popular activity in and around the area known today as Rocky Mountain National Park since the 1800's. The wide variety of peaks and granite rock formations in the Park provide excellent opportunities for a wide spectrum of climbing including rock, big wall, snow and ice, bouldering and mountaineering. It is a mecca for local climbers, as well as those from around the world. Opportunities for climbing exist in all management classes.

With the advent of sport climbing in the United States, this recreational pursuit has increased significantly in recent years. As the attractiveness of the sport continues to grow, it becomes necessary to balance this recreational activity with responsible management of the Park's resources. In balancing preservation versus use, the objective is to allow climbing to continue as freely as possible, while minimizing impacts on environmental resources and other park visitors. Respect for the environment and a commitment to Leave No Trace climbing techniques are required of the climbing community to maintain a mutually beneficial partnership.

With its long history of climbing activity, RMNP and the surrounding area has long been known for a strong traditional climbing ethic and concern for the resource by its users. The local climbing community does not accept practices such as placing bolts on existing routes or establishing new bolt-intensive routes and chipping or gluing new holds. Clean-climbing

techniques are generally the norm. It is incumbent on the local climbing community, along with the Park, to inform and educate climbers new to the area of this fact for the ultimate protection and maintained access to climbing areas.

Many impacts (e.g., soil compaction and erosion, wildlife disturbance, noise) that are often related to climbing activities are also associated with other forms of recreation (e.g., fishing, backpacking, day hiking) while other impacts are directly related to climbing (use of chalk, fixed anchors). It is the intent of this section to focus on the impacts directly related to climbing and when necessary general impacts at specific climbing areas. Climbing bivouacs are covered in Section 2.1.4.4 Backcountry Permit and Reservation System.

Littering/Human Waste.
Non-degradable litter is common in all areas of visitation. Litter as it relates to climbing, is deposited by climbers, climbing spectators and at bivouac (bivy) sites. Athletic tape is sometimes found at the base of crack climbs due to its loss of adhesion. Ledges and the base of cliffs have been found to have fecal matter scattered around. Some bivy sites pose a problem, since waste cannot be buried. Decomposition of waste is a problem at high elevations due to cold temperatures. Exposed waste pose health problems to other climbers or wildlife and aesthetically degrades the user experience.

Climbers should clean up after themselves and pack out trash and garbage. Climbers will be encouraged to pack out human waste when in an area where cat holes or other appropriate means of human waste disposal (e.g., privies, smear technique in sun-exposed areas away from drainages and travel routes) are not available or appropriate.

Erosion.
Off the rock - climbers and mountaineers often bushwhack and scramble to gain access to the base of the cliff. Numerous steep approach trails have resulted. These access trails typically are braided with other trails to the same climb. Because they travel straight up the grade, water is diverted onto the trails, causing soil loss, trenching and loss of vegetation. At the base of climbs in high use areas (e.g., Lumpy Ridge), the ground is typically compacted and denuded of vegetation. Social trails often contour along the base of the rock formation to the start of other climbs.

Access trails to the base of well-known and heavily used climbing routes will be identified, delineated, hardened and maintained in order to prevent further erosion problems, loss of vegetation and to establish a pattern of use. In certain instances, signs may be placed to direct climbers away from problem or sensitive areas in order to protect resources. Social trails that have developed over long periods of time, but currently see infrequent use, will be rehabilitated to discourage future travel. Travel in high use areas (e.g., Lumpy Ridge, Management Class 4) will be on established access trails and corridors. Dispersed travel to the base of climbs will be encouraged in climbing areas where access trails are not provided.

On the rock - through continuous use, the rock surface becomes smoother and freer of lichens, moss and dirt. Ledges and cracks also loose dirt and vegetation from climbing traffic. Toe and finger holds become worn off, or are not in a useful location for some climbers. To make a climbing route more accommodating, a few climbers alter routes by gluing on artificial holds or they may chip or pry the rock to create or improve holds.

The gluing and chipping of holds will not be allowed. Aggressive, intentional "gardening" or cleaning the rock of soil and vegetation will not be allowed.

Social Impacts.
While climbing is widely accepted within RMNP, the activity has not previously been addressed through an approved policy or regulation. Under the Code of Federal Regulations, various aspects of climbing recreation are managed in order to protect park resources. Individually, climbers come from a broad spectrum of backgrounds with equally broad sets of values and ethics. This has occasionally led to conflicts among users. In many instances, climber-agency relations have suffered due to imposed regulations and/or restrictions to climbing or access. The climbing community and park staff will continue to work together to mitigate user conflicts.

Noise.
Climbers frequently utilize vocal signals to communicate specific needs during a climb to facilitate safe ascent or descent. Such noise can disrupt wildlife or impact hikers adjacent to climbing areas. Other noises (e.g., rock hammers) are also considered intrusive in the wilderness setting.

Climbers will be encouraged to be sensitive to the value of natural quiet. Rock hammers must be used judicially during sensitive times for wildlife (e.g., breeding, nesting) and in areas where other visitors may be disturbed.

Wildlife.
Many of the popular climbing areas in the Park are also prime habitat for some species of wildlife. Birds of prey frequently nest on rocks along and adjacent to established climbing routes. Concerns exist for both birds and climber safety.

The spring raptor area closures program has been a very successful means to reduce impacts. This program will continue. Temporary closures will be used to protect nesting raptors during critical phases of the courtship, nesting, and fledging periods. Prophylactic closures will occur in early spring of areas historically used by raptors. Raptor activity will be monitored and those areas or routes with current raptor use will be closed. Other areas where activity is discovered will also be closed. Closures will be in effect long enough to ensure protection and non-disturbance of the birds. Temporary closures may be effected for other wildlife protection as necessary.

Visual Impacts/Chalk.
Visual impacts associated with climbing vary depending on the viewer's attitude towards climbing in general and their proximity to the activity. Bright colored slings, shiny metal bolts, white chalk and the sight of climbers and ropes on an otherwise undisturbed formation can be viewed as intrusive. The use of chalk may also cause a change in pH when it comes in contact with lichens, inhibiting growth or destroying the plant.

Climbers will be encouraged to wear clothing and use protection, slings, and other equipment that blend in with the natural surroundings. The use of chalk will be allowed, however climbers will be encouraged to be sensitive to visual and environmental impacts that could occur.

Hardware/Equipment.
A wide range of equipment and hardware has been developed over time to be used as protection for the climber. Hammer driven pitons which widened and scarred cracks have been generally replaced by removable devices, assisting in "clean climbing" practices. However, the exploration of steeper, more difficult face climbing has led to an increase in the placement of fixed, artificial protection (e.g., bolts) by some climbers.

The use of removable and fixed anchors, as well as other climbing equipment, is appropriate in wilderness. However, fixed anchors must be placed judiciously and closely managed in order to prevent the degradation of wilderness resources and character. Where anchor points are necessary for climber safety, the use of removable equipment is desired and highly recommended. Fixed anchors should not be placed merely for convenience or to make an otherwise "unclimbable" route climbable.

Fixed anchors (e.g., webbing, bolts, pitons, chains) currently in place may remain. They may be replaced, or removed, by individual climbers, during a climb, or the NPS, during park operations. Safety remains a responsibility of the climber. The NPS will not, as policy or practice, monitor fixed anchors to evaluate their condition or accept any responsibility for fixed anchors.

The placement of new fixed anchors may be allowed when necessary to enable a safe rappel when no other means of decent is possible, to enable emergency retreat, during self rescue situations. The infrequent placement of new fixed anchors is allowed when ascending a route to connect terrain that is otherwise protected by removable anchors (e.g., one crack system or other natural feature to another) or when there are no features which will accommodate removable equipment but the occasional placement of a fixed anchor may provide a modicum of safety during the ascent (e.g., traditional face climbing). New, bolt intensive climbing routes (e.g., sport climbs, bolt ladders) are not appropriate in wilderness and should not be created. The Park may place and maintain fixed anchors for administrative and emergency purposes.

When a climber determines the need for anchor placement or replacement, this must be accomplished in compliance with regulated and permitted standards (e.g., power drills prohibited). At this time there is no permit or approval system in place, or proposed, with regard to the placement of fixed anchors; however, one may be developed and implemented if the Park determines it is necessary, through research and monitoring, to protect natural and cultural resources.

Patrol, Education and Enforcement program.
Without a visible patrol and education/enforcement program, educational efforts, policies and regulations will have minimal effect. An important aspect of the patrol function is the incorporation of education, research, monitoring and impact mitigation. Park patrols are predicated on the commitment to protect the resource, educate visitors, guard against illegal activities, provide necessary assistance and perform search and rescue functions in cases of emergency incidents. Patrols will focus primarily on 1) the education of visitors as to resource impact issues, minimum impact techniques and preventative search and rescue and 2) the enforcement of applicable laws and regulations when necessary and appropriate.

The Park will conduct a strong educational effort promoting minimum impact techniques and sound climbing ethics as outlined in the Conscious Climbing brochure and Leave No Trace Outdoor Skills and Ethics: Rock Climbing booklet. In essence, climbers will be encouraged to:

- Use colors that blend in with natural environment of the area
- Pack out all litter
- Use existing trails to approach climbs
- Know and respect environmentally sensitive areas (Raptor closures)
- Know and abide by all regulations
- Avoid placing permanent protection
- Be considerate of wildlife and other users

The Park will conduct preventative search and rescue programs proactively and upon request for local and regional groups and organizations.

As enforcement measures become necessary, the patrol staff will enforce applicable regulations (e.g., no power drills for bolt placement, no pets in the backcountry/wilderness, illegal guiding activities, violation of raptor closures, illegal camping and bivying, resource degradation for the purpose of enhancing a climbing route). The following regulations guide park management of climbing activities:

Title 36 CFR 2.1 Preservation of natural, cultural and archeological resources
Prohibits practices of possessing, destroying, injuring, defacing, removing, digging or disturbing (chipping, gluing or gardening) from its natural state any park features.

Title 36 CFR 2.2 (a)(2) Wildlife Protection
Prohibits feeding, touching, teasing, frightening or intentional disturbing of wildlife nesting, breeding or other activities.

Title 36 CFR 2.12 Audio Disturbances
Prohibits the practice of utilizing motorized equipment or machinery which creates unreasonable noise, particularly in undeveloped areas (motorized rock drills).

Title 36 CFR 1.5 (f) Closures and Public Use Limits
Temporary closures of specific climbing routes and areas will be enforced to insure prudent management of raptor nesting areas where they coincide with popular climbing routes.

Climbing is a “high risk” sport, and climbers are solely responsible for their own safety. While the National Park Service has the authority to provide search and rescue services to climbers in need of assistance, there is no legal requirement to do so. All rescue activities will be managed to provide necessary treatment to the sick and injured, keeping in mind “light on the land” and Leave No Trace rescue actions.

Research and Monitoring.
The last inventory of fixed anchors was completed in 1990. A current inventory will be conducted and updated at least every three years. The Park will develop and maintain an inventory and monitoring program to gather essential information on how climbing activities affects natural, cultural and ecological resources.

2.1.4.7 Trails Management

Two park goals are to provide visitor access to the park resources to a degree that enables the visitor to understand and appreciate the process they reflect, and to provide the opportunity to fully sample the various geographic regions, geological features and ecological attributes. Trails are the primary minimum impact tool used to achieve these goals of access to the backcountry/wilderness.

The objective is to provide a wide range of experiences with a certain level of expected trail conditions. Safety, resource compatibility, prevention of environmental degradation, and to certain extent, ease of travel, are all considerations for trail management.

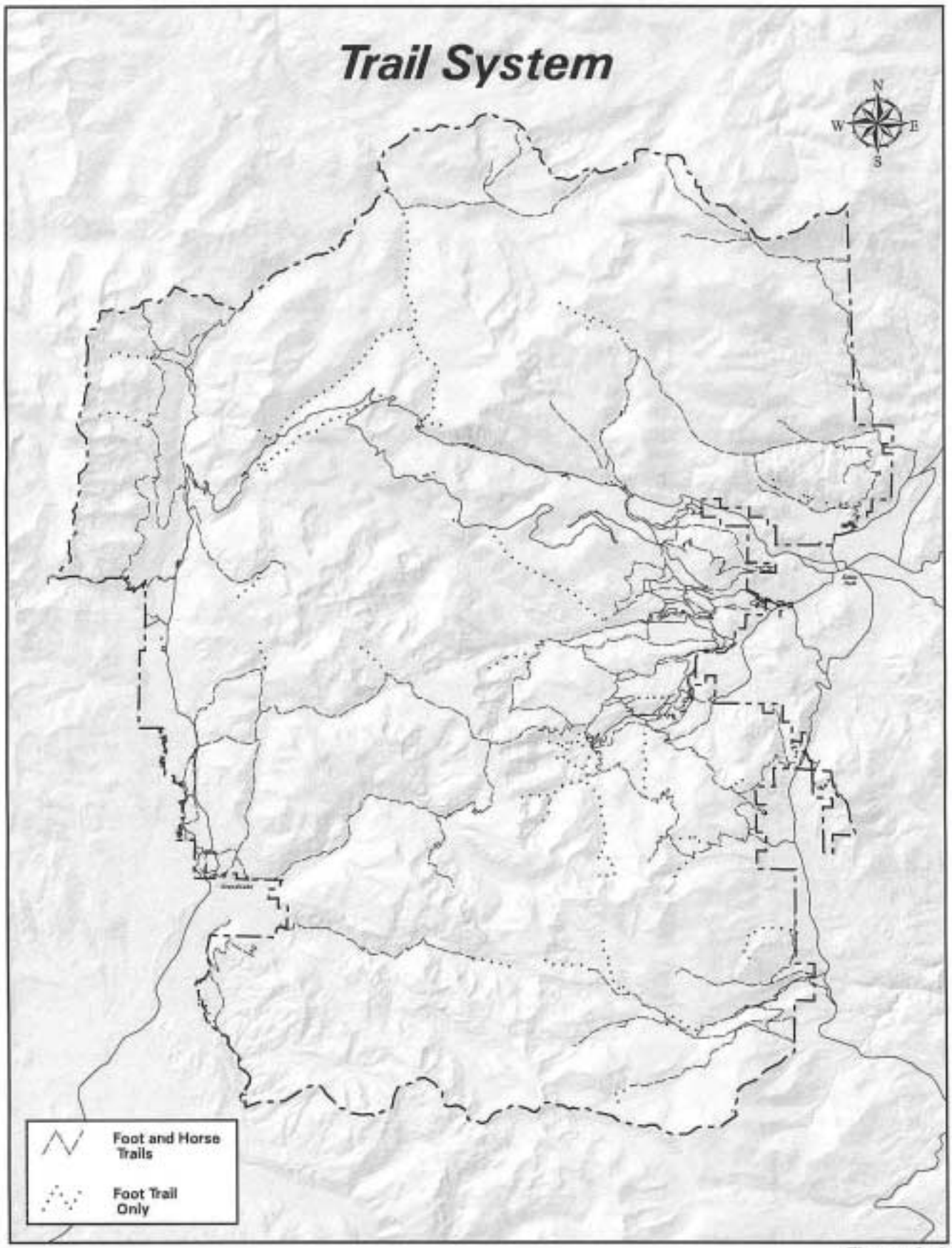

Figure 2-4

Trails are widely recognized as being consistent with wilderness. Controversy can center on the appropriateness of trail type. Research indicates that wilderness visitors favor low standard trails (somewhat like a game trail – narrow, varying grade, winding, not the shortest route) more than high-standard trails (wide, steady grades, fairly straight).

Trails serve to contain and consolidate wilderness use. Most recreational use occurs along the maintained and designated trail system (see Figure 2-4). The current trail system evolved from game trails used by the Native Americans, then explorers and herders, and finally adopted by the National Park Service, which now maintains over 350 miles of trail in the RMNP backcountry/wilderness. These trails are divided into different categories, based on intended use, with specific standards of maintenance, which are identified in the Park's Trail Plan (May 1982).

2.1.4.7.1 Criteria for Establishing Trail Standards. Trail management goals are to maintain existing trails at desired standards, with the possibility of upgrading some sections in the lower categories of maintenance. Current management goals do not call for additional trail segments to be designed and added to the maintained inventory either by new construction or formalizing increasingly popular routes (except in the recently acquired Lily Lake area), since the existed trail system provides a sufficient system to distribute use and allow visitors to experience park values.

In the 1982 Trail Plan, RMNP adopted specific trail standards based on the following criteria:

- Natural Resource Protection
- Cultural Resource Protection and Stabilization
- Management Zone Classification: Trail Character and Visitor Experience
- Recreational Use Type and Level
- Visitor Safety

Regarding visitor safety, NPS Management Policies (6:8), state that park visitors must accept wilderness largely on its own terms, without modern facilities provided for their comfort or convenience. Users must also accept certain risks, including possible dangers arising from wildlife, weather conditions, physical features, and other natural phenomena, that are inherent in the various elements and conditions that comprise a wilderness experience and primitive methods of travel.

2.1.4.7.2 Trail Standards. There are over 350 miles of maintained trails in the trail system at RMNP. The Trail System Maintenance and Reconstruction Plan 2000 details the complete list of trails, classification by trail standard and maintenance details, and trail mileage. A summary of this is found in Appendix C, Tables 6a and 6b of this plan.

There are six trail maintenance levels established by the 1982 Trail Plan and the Trail System Maintenance and Reconstruction Plan 2000 as follows:

Standard A. Very high "frontcountry" standard designed for large numbers of pedestrians, including disabled persons. Examples are Lily Lake, Sprague Lake, Coyote Valley, Bear Lake.

Standard B. High-standard pedestrian trail designed for minimum maintenance, despite heavy use. Examples are Alberta Falls, Calypso Cascades, Huffer's Hill (AVC), Toll Memorial, Adams Falls, etc.

Standard C. High-standard trail designed to withstand the impacts of large volumes of commercial horse use. Examples are Moraine Park, Glacier Creek, Aspenglen, Lower Tonahutu.

Standard D. High-standard trail carefully designed and aligned for minimum maintenance: intermediate horse and hiker volumes, requiring construction and clear delineation of the treadway throughout. Examples are the Continental Divide Trail -- North Inlet & Tonahutu, Flattop, East Inlet, Thunder Lake, Longs Peak.

Standard E. Typically a non-constructed trail that has evolved informally through use; may have been partly reconstructed at a higher standard; private horse traffic possible, although difficult in some places. Examples are North Fork, Black Canyon.

Standard F. A non-constructed, foot only trail that has evolved informally through use; unsafe or unsuitable for use by horses because of very boggy or steep, rocky areas, or for environmental protection; some may not be regarded as part of the official park trail system and may not appear on park maps (examples are paths leading from higher standard trails into crosscountry areas, climbers' access trails, and spur trails to most backcountry campsites); constructed structures minimal. Examples are Boulder-Grand Pass, Mt. Ida, Chiquita Pass - Mt. Yipsilon, climber's trails on Lumpy Ridge.

Standard A trails are not appropriate and allowed in backcountry/wilderness. They are only allowed in frontcountry areas (e.g., Lily Lake, Sprague Lake, Coyote Valley, Bear Lake). There will be no constructed and maintained trails in Management Classes 1 and 2. Some designated routes may occur in Management Class 2 and may be maintained to Standard F. Trail Standards D, E and F are allowed in Management Class 3. Trail Standards B through F are allowed in Management Class 4. See Appendix F, Table 1 for more detail.

The 1982 Trail Plan further describes the construction and maintenance details of each trail standard, including treadway surface, grade/erosion control, wet areas, stream crossings, and other considerations. This description is located in Appendix D of the 1982 Trail Plan, The Trail System Maintenance and Reconstruction Plan 2000 and is reprinted in Appendix F, Table 2 of this plan.

2.1.4.7.3 Trail Work and Maintenance. Annual trail maintenance goals are to open and maintain every trail in the Park. Maintenance consists of clearing each trail of downfall, opening drains and drainage systems, minor restoration of tread, reconstruction of waterbars and other structures as required, and inventorying the trail for priority work. Reconstruction project work is prioritized for those areas where visitor safety and resource protection are most jeopardized.

Work on park trails is generally allowed via the categorical exclusion for established trails under NEPA and Section 106 of the National Historic Preservation Act as outlined in the Servicewide Programmatic Agreement July 17, 1995, stipulation IV.B.(6). A positive working relationship with the park cultural resource specialist will be maintained and identification of cultural resource indicators will be a basic part of a trail leader orientation. Protocols for work crews have been established which serves as a guide in the protection of cultural resources and enables work to proceed smoothly (Appendix B).

Trails will be maintained, constructed, or reconstructed to the standards established in the Rocky Mountain National Park Trail Plan (1982), the Trails Management Plan (1984), the Trail System Maintenance and Reconstruction Plan 2000 and the NPS Trails Management

Handbook (1983). Basic trail work and maintenance concepts and techniques are summarized below:

New trails. The Park will not generally design and construct new trails in the backcountry/wilderness except for trail reroutes or if critical to protect natural or cultural resources. The need for new trails will be evaluated on a case-by-case basis when necessary to balance visitor use and resource protection. New trail construction will require Project Proposal/Clearance review and approval and may require appropriate NEPA compliance (e.g., Environmental Assessment) and a Minimum Requirement Analysis (ROMO-180).

The marking of informal trails with plastic flagging, cairns, or other devices is prohibited. The only exceptions are by park management for emergency purposes (e.g., search and rescue and fire management) or when specifically approved in a research permit. Any marking must be removed immediately after the emergency operation or upon completion of the research. Historic cairns on the Flattop, Continental Divide, Ute and other trails will be maintained.

Reroutes. Routine rerouting of trail sections up to 100 feet to improve trail alignment is approved in accordance with the following trail reroute location guidelines. Reroutes of greater than 100 feet require Project Proposal/Clearance review and approval. Any reroute requires an archeological survey.

- **Grades.** All trail grades should be adjusted according to parent material and should not parallel slopes on unconsolidated soils. There should be less gradient on unconsolidated material.

- **Natural Drainage.** Subtle grade changes should be used to provide natural drainage. Avoid straight alignment both vertical and horizontal.

- **Streams or lakes.** Trails should be a minimum of 100 feet from streams or lakes, unless impossible due to terrain limitations. Leave some lakes and other attractions inaccessible by trail.

- **Meadows.** Wet meadows and soils subject to constant or prolonged wetness should be avoided. If such areas are unavoidable due to terrain, consider rock causeway or log turnpike structures to harden the trail tread.

- **Fords.** Trail locations should take advantage of safe fords, and, where feasible, fords should be designed for improved safe stock passage and to keep maintenance problems and erosion potential to a minimum.

- **Hiker camps.** Trails that are too close to camps will be considered for relocation.

- **Sensitive plants.** Trails will avoid sensitive plant populations. The sensitive plant inventory will be consulted before building new, or rerouting, existing trails. The 1982 Trail Plan references some sensitive plant locations (North Inlet). An updated map with locations of sensitive plants is currently being developed.

- **Cultural resources.** Trails will avoid sensitive cultural resource sites. The cultural resource inventory and park cultural resource specialist will be consulted before building new or rerouting existing trails.

As a result of a natural disaster (e.g., rockslide, avalanche) or an emergency, a trail may be rerouted outside of its established Management Class. The Management Class boundaries will be adjusted accordingly. This type of reroute will require Project Proposal/Clearance review and approval and any appropriate NEPA compliance (e.g., Environmental Assessment) and a Minimum Requirement Analysis (ROMO-180).

Non-maintained trails. Non-maintained trails will not be opened unless the proposed location and design is reviewed and approved through the Minimum Requirement Process. Unless abandoned trails are approved for reestablishment, only the 350 miles of regularly maintained trails are considered safe and will be signed and marked on maps. Publishers of guidebooks will be encouraged to do the same.

Trail crew impacts. Trail crew operations will avoid unacceptable impact on the resources and disturbance to the visitor.

Routine trail maintenance. Routine trail maintenance will include the removal of rocks and downed trees, clearing of brush, drainage system maintenance including waterbar cleaning and construction, restoration of damaged or eroded trail tread, reconstruction of rock walls, new construction of rock walls where conditions warrant, and bridge and footlog repairs and reconstruction. All tasks will be completed in accordance with annual work plans and availability of funds.

Erosion control. Erosion control will receive the highest priority in trail maintenance. All waterbars will be cleaned and repaired as project work is scheduled for that section of the trail. New waterbars will be constructed from rock; when rock is not available, logs may be used.

Loose rock. When loose rock is removed from the treadway, it will be put over the edge of the trail, usually on the lower side, in a safe manner which allows it to be available to be used in future tread reconstruction projects.

Fill material and borrow pits. Fill materials will be brought in from outside the Park whenever possible (U.S. Department of the Interior, National Park Service 1991a, Special Directive 91; and NPS Management Policies) to minimize the need to use borrow pits. This may involve the use of mechanical transport (e.g., helicopter) if material is not available on site and imported material is necessary to construct a sustainable trail surface. The Park will make every effort to avoid the introduction of exotic plant species as a result of using fill material from outside of the Park. Prior to bringing any fill material into the Park from a specific outside source, park staff should inspect it for the potential presence of exotic plant species and weed seeds and take measures to mitigate any possible introduction of such into the Park. In addition, any fill material must not come from an archeological site or from soils which might contain stone tool raw materials, a possible ARPA violation. In the future, the Park may require certification from the fill material providers that no archeological sites have been impacted in its excavation.

When a small amount of fill is needed, it should be obtained from waterbar (trail drainage) runoff areas or other trail tread wash out areas whenever possible. Work crews are not to gather fill materials from borrow pits on terraces or other flat areas along streams or lakes (areas of high potential for containing archeological sites), or in the vicinity of known prehistoric or historic archeological sites. Old borrow pits that are in unacceptable locations will be rehabilitated with logs, natural debris, and soil and will be revegetated with native plants where appropriate.

Trail tread. Restored trail tread will be filled to the original surface level by constructing a series of check steps to lock the restored material in place. Material will be obtained from former maintenance stockpiles and from areas adjacent to the trail, unless the volume of material needed creates a visual or physical impact. Wherever possible, material will be obtained from concealed, sustainable, locations such as minor drainages and waterbar runoff areas. Borrow pits will not be dug into the side of a trail. As trails are rerouted, the abandoned trail tread will be thoroughly rehabilitated.

2.1.4.7.4 Non-Maintained Routes. Areas without trails will not be made more accessible by new trail construction. Non-maintained routes that develop informally over time off the maintained trail system on popular crosscountry routes, will be watched for serious degradation, and may be modified to minimize accelerated impact. The trail crews, resources management crews, and Ranger staffs may accomplish monitoring and minor maintenance of these trails to a maximum of Trail Standard F.

The condition of the non-maintained routes has evolved as their popularity and use has increased. In order to provide a more primitive and unconfined type of experience, these routes will not be maintained in the future except in the situations where the impacts from use presents a potential source of degradation of the resources.

Where serious degradation is occurring on such routes, the following alternatives will be considered through the Minimum Requirement Process:

- Minimal maintenance to trail Standard F to correct the problem
- Minor construction to correct the problem
- Reroute portions or all of the non-maintained route
- Closure and rehabilitation of portions or all of the non-maintained route
- Addition to the maintained trail inventory and reconstruction and maintenance to Standard E.

2.1.4.7.5 Bridges and Footlogs. There are currently approximately 107 bridges and 190 footlogs in the RMNP backcountry/wilderness, constructed of native timbers, treated wood, and in many instance, steel beams. Appendix C, Table 9 details the complete list of bridges and footlogs by location. The bridges and footlogs have been constructed in locations that would present significant safety hazards under normal conditions, as well as resource impact, if a bridge were not there.

No new additional bridges will be built unless significant resource damage has occurred at a site. Any proposal for a new bridge will require the completion of a Minimum Requirement Analysis Worksheet (ROMO-180) as part of the Project Proposal/Clearance Process. Hardening of stream banks will be the preferred initial method of preventing this impact. It is the intent to use traditional type and style of bridge and footlog if replacement is needed. Construction material may be cut on site if it does not severely impact the resource, but for large projects, it is more desirable to bring material in from outside the Park area.

2.1.4.7.6 Bridge and Footlog Standards. Rocky Mountain National Park has adopted an approved bridge style that sustains the appearance of the historic backcountry bridges in the Park. This style is depicted in the NPS Trails Management Handbook (1983), sketch 14. The construction techniques and materials have been adapted to use more sustainable materials, protecting the immediate environment of the bridge from repeated logging for large materials.

Historic Rocky Mountain National Park style. The historic appearance is maintained using drywall rock abutments, bridge stringers with an appearance of logs (typically I-beams faced with partial logs), plank decking, and native material posts and rails, joined with traditional log joinery.

Existing bridges. Bridges that are in existence will be maintained. A list of existing bridges is found in Appendix C, Table 9. Existing bridges will be replaced if damaged and replacement is the best alternative. Replacement bridges shall conform to the historic style and rustic appearance that are compatible with the natural setting. Native materials, especially for minor bridges and footlogs, may be used if impacts are minimized.

Approved materials. Recommended and approved materials for major bridge replacement include steel I-beam stringers and pressure treated 3" x 12" deck. Approved materials for major bridge replacement and reconstruction are to be imported to the site whenever possible to avoid unnecessary impacts to the surrounding wilderness at the site. Post and railing materials may be obtained on site to keep the appearance of the bridge appropriate to the wilderness environment.

New/removal. All requests for new bridges or for removal of a bridge requires the completion of a Minimum Requirement Analysis Worksheet (ROMO-180) as part of the Project Proposal/Clearance Process.

Footlogs. The need for additional footlogs will be evaluated on a case-by-case basis, taking into account resource damage and visitor safety. Where footlogs are needed to access camp areas, they should be as minimal and unobtrusive as possible. Single foot logs are adequate for most situations. These should be leveled on top and cross-hashed to provide secure footing. If the crossing warrants a bridge, then standards outlined in the Trail Management Plan should be followed. The Area or District Ranger will be consulted.

2.1.4.7.7 Historic Trails and Bridges. Some trails have been nominated, or may be considered for nomination, to the National Register of Historic Places. These trails will be preserved and protected while stabilizing the trail structures for safety and historic preservation. In reconstruction, particular care and attention will be given to matching the historic appearance of new rockwork to adjacent historic sections. Historic cairns on the Flattop, Continental Divide, Ute and other trails will be maintained.

Rocky Mountain National Park has adopted an approved bridge style that sustains the appearance of the historic backcountry bridges in the Park. This style is depicted in the NPS Trails Management Handbook (1983), sketch 14.

2.1.4.7.8 Equipment and Tool Use. In order to adhere to Section 4(c) of the Wilderness Act, the Minimum Requirement Concept will be followed during trail work planning and operations. In all cases, the trail crew will seek to avoid, minimize or reduce the use of motorized equipment and mechanical transport, or their effect, in wilderness by searching for workable hand tools and techniques compatible with wilderness environments. Training to that effect is important and will be part of each season's orientation for all park trail workers. The use of traditional and primitive tools (e.g., shovels, rock bars, picks, pick mattocks, hammers from 1 to 16 lb.; Pulaskis, Macleods, and other fire tools; handsaws of various styles; basic rigging equipment including grip-hoists, come-alongs, all kinds of blocks and tackle, chain, wire rope, rope, and cable) will be emphasized.

The use of motorized equipment, mechanical transport, motorboats, or aircraft may be allowed if determined to be the minimum tool that causes the least overall impact to wilderness resources and character. Any use will be analyzed using the Minimum Requirement Process. For actions which motorized equipment and mechanical transport uses are approved, they will be planned to minimize impacts to park users and resources by utilizing the least obtrusive and impacting schedules. Season of year, day of week, and time of day will be considered. When approved for use, motorized equipment should be used sparingly and turned off when not in immediate use.

Any use of motorized equipment and mechanized transport for special projects (e.g., major reconstruction projects, major bridge or footlog construction or clearing of heavy downfall) requires the completion of a Minimum Requirement Analysis Worksheet (ROMO-180) as part of the Project Proposal/Clearance Process. Equipment and tool selection will be included as a component of any proposed special project in wilderness.

The use of the following motorized equipment, as outlined below, has been analyzed and is pre-approved for use during annual trail opening and routine trail operations. Any deviation from this will require a separate Minimum Requirement Analysis to be completed.

- **Chainsaws.** Chainsaws are allowed for the expeditious seasonal clearing of park trails of downfall to prevent resource impacts caused by park visitors being forced off-trail and establishing unwanted routes.

- **Rock drills.** Motorized rock drills are allowed as the minimum tools feasible for maintaining and reconstructing trails in the rugged rocky areas of RMNP, where major rock drilling or chipping is necessary.

- **Human powered wheelbarrows and carts.** These forms of mechanical transport are approved to be used to haul fill material and supplies to work sites when other means (e.g., stock) are not available or will create more impacts.

The use of motorized equipment and mechanical transport for annual trail opening and routine trail operations, other than those discussed above (e.g., vehicles, loaders, power wheelbarrows, generators, power winches and additional rigging equipment), will require review and approval for each proposed use following the Minimum Requirement Process (Section 2.1.4.1).

Helicopter use to transport appropriate trail tread material and bridge materials to project sites will be reviewed on a case-by-case basis and may be determined to be the minimum tool in some cases. Any proposed use will require the completion of a Minimum Requirement Analysis Worksheet (ROMO-180) and Flight Request Form (ROMO-47) as part of the Project Proposal/Clearance Process. Any approval will be based upon careful review of overall impacts to wilderness resources and character of the alternatives.

Explosives use is allowed for routine trail opening, trail construction and reconstruction and other major trail maintenance activities. All explosives use will be in full compliance with the National Park Service Explosives Use Program, as outlined in NPS-65.

2.1.4.7.9 Administrative Stock Use. Administrative stock (horses, mules and llamas) use for purposes such as resupplying patrol cabins and establishing, moving, and resupplying work crew camps is allowed on all park trails. In general, administrative stock is not allowed off trail except during emergency situations or for temporary hitching during the loading or unloading of

supplies. A minimum impact technique for securing stock will be used to mitigate any resource damage that would occur.

2.1.4.7.10 Monitoring. The focus of trail management is on visitor safety, system maintenance, and specific problem segments. The probability that any trail segment will deteriorate is a function of the trail's immediate environment, its design and maintenance, and the amount, type, and timing of use it receives. The factors that most influence trail conditions are trail location, design, and preventive maintenance. The principal solution to trail problems involves increasing the ability of the trail to withstand use (through improved engineering and construction) or changing the location of the trail to one that is more capable of withstanding use. Information is collected annually concerning trail facilities (e.g., bridges and footlogs), tread conditions, and erosion. Problem trail segments are identified, and those segments are either redesigned and reconstructed or relocated. The Park currently maintains and annually updates a survey of trail problem areas, and recommended solutions. This prioritized survey list is used to request and allocate funding. It is included in the Trail System Maintenance and Reconstruction Plan 2000.

2.1.4.8 Facilities

Wilderness, as defined by the Wilderness Act of 1964, is undeveloped federal land retaining its primeval character and influence, without permanent improvements. Accordingly, authorizations of NPS administrative facilities located within the wilderness boundaries shall be limited to the minimum number essential to meet the minimum requirements for effective administration of the wilderness area and the protection of the natural resources of the Park. A decision to construct, maintain, replace, or remove an administrative facility or structure shall be based primarily on whether such a facility is required to preserve wilderness character or values or is essential to ensure public safety and/or protection of the natural resource. The consideration of administrative convenience, economy of operations, or convenience to the public shall be subordinate issues to the primary issue of wilderness protection and values. In addition to the requirements of the Wilderness Act, decisions to maintain or remove an historic structure must further comply with cultural resource protection laws and policies.

As defined in Section 2.1.1 all structures such as cabins, fire lookouts, shelters, tent platform camps, and toilets are located in Management Class 3 and 4. In Management Class 2 areas, again by definition, only the minimum facilities necessary to protect the resource and delineate routes shall be allowed (e.g., minimal signs or cairns). In Management Class 1 areas no permanent structures of any kind shall be allowed except in the case of an identified cultural resources.

Administrative facilities shall be maintained and/or constructed only as deemed necessary to meet the minimum requirements needed to provide for the preservation of wilderness values and character and as additionally necessary to provide for the protection of the natural resource and to provide for visitor safety. In general, administrative convenience shall be considered a subordinate issue to the preservation of wilderness character.

2.1.4.8.1 Patrol Cabins and Tent Platform Camps. There are currently five patrol cabins within the wilderness boundary located at Thunder Lake, Chasm Meadows, Fern Lake, Lawn Lake, and North Fork. These structures are listed on the Park's List of Classified Structures (Appendix C, Table 10) and as such must comply with cultural resource protection policies. Current uses and preservation of these cabins and their associated support structures (e.g., toilets, corrals, etc.) shall be maintained. In the event; however, that a structure is damaged or

destroyed by fire, wind, avalanche or other natural disaster, the decision to replace the structure shall be based primarily on whether the structure is necessary for the administration of the area in order to preserve wilderness character and values, not solely on matters of administrative convenience. Patrol cabins shall be limited to existing locations; no additional patrol cabins shall be built.

There are currently four tent platform camps in the Park located at East Inlet, North Inlet, Tonahutu, and Hague Creek. These structures are temporary in nature. Any decision to reconstruct or improve tent platform camps shall be based upon whether the structure is the minimum necessary to preserve wilderness character and values, not solely on matters of administrative convenience. Tent platforms shall be limited to their existing locations, no additional locations will be allowed.

2.1.4.8.2 Fire Lookouts. No new fire lookouts shall be built within the wilderness boundary. Shadow Mountain Lookout is the only fire lookout in the Park and is listed on the Park's List of Classified Structures and is a significant historic resource. As such it shall be preserved and maintained in compliance with cultural resource protection laws and regulations. In maintaining this structure, consideration of appropriate minimum tools will be examined.

In the event that Shadow Mountain Lookout is damaged or destroyed by fire, wind, avalanche or other natural disaster, the decision to restore or replace it shall be based primarily on whether it is necessary for the administration of the area in order to preserve wilderness character and values, not solely on matters of administrative convenience.

2.1.4.8.3 Public Shelters. The Agnes Vaille shelter, located at the Keyhole on the very heavily traveled Longs Peak Trail, is the only public shelter within the wilderness boundary. This shelter is on the Park's List of Classified Structures and as such must comply with cultural resource protection policies. Decisions regarding the maintenance of this structure must take into account wilderness values, cultural resources values, minimum requirements and visitor safety issues.

No new public shelters will be built within the wilderness boundary.

2.1.4.8.4 Radio Repeaters. There are two radio repeaters within the backcountry/wilderness boundary. They are located at the summit of Twin Sisters and at Red Mountain. The Twin Sisters structure is a former fire lookout cabin that is shared with the USFS and BLM to house radio repeater equipment.

These structures are considered essential for public safety and administrative use. Repairs and improvements to these facilities will be accomplished using the Minimum Requirement Process. Generally, new radio repeaters, or other communications towers, equipment or facilities, will not be allowed unless approved following analysis through the Minimum Requirement Process.

2.1.4.8.5 Corrals and Hitchrails. Corrals located near patrol cabins and camps are permitted to avoid resource damage and conflicts with private and commercial stock users. Due to concerns about transmission of disease and maintenance issues, the corrals are for park stock only. Private and commercial users must use hitchrails. A list of corrals and hitch rails are in Appendix C, Tables 7 and 8.

Corrals are to be built from treated posts and rails hauled in to the site. They are to be built in the least obtrusive location as possible. A small metal water tank is permitted and should be a muted color.

Hitchrails are allowed at stock camp areas and at day use destination areas. They will generally be three sided structures built using local materials if it does not substantially impact the area. Treated timbers may be hauled in order to protect local resources.

2.1.4.8.6 Human Waste Management Systems. Human waste and the activities related to its disposal can result in significant impacts to wilderness resources and the visitors' wilderness experience. Improper disposal of human waste can result in nutrients and pathogens contaminating surface waters, ground water, and soils. Development of social trails to access cat holes and toilet sites, digging toilet holes, and the excavation of urine deposit sites by wildlife all result in impacts to vegetation and soils. The development of social trails and toilet holes may also impact cultural resources. Impacts to wildlife result when wildlife ingests fecal material. The presence and strong smells of toilet paper and fecal material on the soil, rock, or snow surface impact the aesthetics of wilderness. Toilet structures intrude on the wilderness setting, and the use of helicopters to transport toilet structures impacts its natural quiet.
The level of visitor use is the primary factor affecting the degree of human waste related impacts. Methods selected for the disposal of human waste also directly influence the nature and quantity of resulting impacts. A major emphasis must first be placed on educating wilderness users in proper sanitation practices (e.g., pack-it-out, cat hole) before a toilet facility (e.g., pit, composting or solar) is considered for an area. If alternatives to toilets are ineffective at reducing unacceptable impacts, toilets may be placed or replaced to resolve health and sanitation problems or prevent serious resource damage.

Toilets may only be located in Management Class 3 and occasionally in Management Class 4 when placement of a toilet at a trailhead does not resolve the problem. Only the minimum number of toilets necessary to meet wilderness management objectives are allowed. The minimum type and structure design is to be selected. Where practicable, toilets should be located out of view of any main trail, to limit visual impact on visitors travelling the trail corridor. Toilets currently in place will be periodically evaluated to determine if they are still needed; if not, they will be removed.

A Backcountry Area/Site Proposal (ROMO-168) and a Minimum Requirement Analysis Worksheet (ROMO-180) is required for the addition of a new toilet in a new location, or the placement of a different type of toilet than presently exists. Digging a new hole for an existing pit privy requires a Backcountry Area/Site Proposal (ROMO-168).

There are five types of toilet systems that will be considered and may be used depending on the circumstances: the pack it out method, cat hole system, pit toilet or privy, dehydrating/composting toilet and solar toilet.

- **Pack-it-out method.** This method is the best for minimizing resource impacts; however, currently it is the least desirable. Advances in technology of degradable bags, gelling agents, odor neutralizers, decay catalysts, and ability to dispose of in trash containers will make this method more acceptable to visitors. Over time more backcountry users may use this method. Park staff should encourage this method when at all possible. Park work crews using temporary spike camps should use some sort of pack-it-out method to minimize resource impacts.

- **Cat hole system.** The cat hole human waste disposal method is only effective if carried out correctly. Human waste should be buried 6-8 inches in organic soil and disposed of at least 200 feet (70 adult steps) from water. In Management Classes 1 and 2 the cat hole system is the preferred method, along with pack-it-out method.

  The cat hole system is also preferred in Management Classes 3 and 4 where the combination of education and visitor use levels is successful in limiting unacceptable impacts. In locations where water quality degradation, recurring toilet paper blooms and visible feces, and multiple visitor complaints cannot be reduced through these two methods, an alternative human waste system will be considered. In areas where the cat hole system is selected for disposal of human waste, the goal will be for no toilet paper or human waste to be visible on the soil, rock, or snow surface and no water quality impacts to occur.

- **Pit toilet or privy system.** The pit toilet system has the potential to significantly impact wilderness resources. Toilets shall be considered on a case-by-case basis at designated backcountry campsites or at heavily visited areas (e.g., Ouzel Falls, the Pool, Lulu City) where protection of the natural resource is threatened by high use. High water tables, minimal soil depths at higher altitudes, and archaeological resources may make appropriate siting of pit toilets difficult.

  Pit toilets will be placed at least 200 feet from water. Privies should not be dug into the water table. Current privies that have ground water infiltration will be removed and relocated. Privy pits will be as deep as can be hand dug. Explosives and motorized equipment will not be used in construction. The diameter of the hole will not exceed the standard one-seater toilet size. Pit toilets may be placed in or near designated camp areas if visitor use levels exceed 200 visitor use nights per year.

  Stools, with white seats, on a plywood base will be standard for privies. Privacy screening should be provided only if necessary, such as in high-use areas or where there is minimal natural vegetative screening, and kept to the minimum appropriate. Constructed screening may range from a single low wall to a full outhouse structure. Screening walls should be made of natural materials to blend into the surrounding environment. Structures should be made of wood, resistant to the elements, and visually appropriate in a rustic design. All screening or structures should be light enough in weight to be moved relatively easily and modular so they can be moved in pieces. The size should be functionally adequate but kept to the minimum necessary. As with all facilities, toilets should be the minimum structure necessary to meet management objectives. Full outhouse structures should be keep to a minimum. Current outhouse structures will be evaluated to determine if they are still necessary.

  Pit toilets currently in place will be assessed for their continued need and risk to water quality. Those at high risk of contaminating water will be relocated. Pit toilets that cannot be relocated to meet the siting criteria will be replaced with dehydrating/composting toilets. If pits fill at a rate that requires toilets to be moved more than once in three years, or one pit toilet cannot adequately handle the waste produced in a camping area, either an alternative toilet system will be installed or visitor use levels will be restricted in the area.

- **Dehydrating/composting toilets.** Composting and dehydrating toilets provide new options for managing human waste. These systems may result in less impact than pits

toilets. If a toilet is determined necessary, and a pit toilet will result in unacceptable impacts to wilderness resources, a dehydrating/composting toilet should be considered.

These types of toilets are a good alternative and should be considered in areas with little or no soil, high water tables, or in confined areas where digging new pits are no longer practical or desired. Current composting/dehydrating toilet designs require a certain level of regular attention and can not withstand high use. Bulking agents (e.g., peat moss) are required that need to be added and mixed in. These requirements must also be considered in the placement of composting/dehydrating toilets.

- **Solar toilets.** Human waste disposal in the high altitude, fragile, alpine areas and on bedrock (e.g., the Boulderfield, Chasm Junction, Chasm Meadows, Gem Lake) has long been a problem. In 1983 solar toilets were installed above treeline in the Longs Peak area in an attempt to cope with the harsh environment and high numbers of visitors attempting to climb Longs Peak. They have proven to be a highly effective method of human waste disposal under these circumstances. As advances are made in solar technology, the Park will consider improvements to existing solar toilets as long as the protection of wilderness is not compromised (e.g., visual intrusion). Other locations may be evaluated that may benefit from solar toilet technology.

Wilderness managers will keep abreast of new technology for human waste management to determine availability of more effective systems to meet wilderness goals. New innovations in human waste management may be considered if the benefits of such devices (e.g., photovoltaics, fans, small pumps, etc.) significantly improve protection of the natural resource. A list of current privy locations and types is in Appendix C, Table 11.

2.1.4.8.7 Food Protection Devices. Feeding of wildlife by visitors, both overtly and inadvertently, can significantly affect wildlife by altering natural diet and causing nuisance behavior to develop. Loss of food supplies and equipment and potentially dangerous interactions between visitors and animals can adversely affect the visitors' wilderness experience. Food protection systems can be an important tool in minimizing unacceptable interactions.

Visitors and park staff are required to secure food and other scented items (e.g., toothpaste, deodorant) from wildlife when not immediately being prepared, eaten, or otherwise used. Hanging items, 10 feet high and 4 feet out, or using a portable food storage container is recommended.

If unacceptable impacts between visitors and wildlife occur, or potential for problems is high, visitors may be required to carry and use portable food storage systems or use fixed food storage systems provided. Alternatively, areas may be closed if there are unacceptable impacts to wildlife or visitor safety is jeopardized.

Food storage devices (e.g., “bear” poles and storage containers) may be placed at designated camp areas. These devices may only be located where a demonstrated need exists and should be removed when determined that they are no longer necessary. They are to be kept to the minimum design necessary. Resource impacts may result from the design and placement of such systems. A Backcountry Area/Site Proposal (ROMO-168) and a Minimum Requirement Analysis Worksheet (ROMO-180) may be required before a device is put in place.

2.1.4.8.8 Can Camps and Caches. Can camps are caches of camping and emergency equipment typically stored in metal trash cans or other weather proof containers in remote areas

for use by park staff. They are intended to expedite preparedness for patrols, searches or rescues.

The number of can camps and caches should be kept to a minimum. The establishment of new can camps and caches will be analyzed using the Minimum Requirement Process. They shall be removed when determined to be no longer needed.

The public is prohibited from establishing and using food or equipment caches.

2.1.4.8.9 Work Crew Camps. To effectively conduct work in the backcountry/wilderness, it is necessary for park work crews (e.g., ranger or resources rehabilitation, trail or fire project, approved research, archeological survey) to occasionally occupy designated campsites or set up temporary spike camps. The use of spike camps for greater than 7 total days for special projects should be discussed in the appropriate Project Proposal/ Clearance Process, including a Minimum Requirement Analysis, and gain approval.

The use of designated campsites is preferable; however, to reduce conflicts with public use, in high demand areas, the use of designated campsites should be kept to a minimum during high use periods, generally mid June through mid September. When the use of designated campsites is needed, they can be reserved through the Backcountry Campsite Reservation System, before public reservations, prior to March 1st. After March 1st they can be reserved contingent upon availability. Any deviation from backcountry camping guidelines (e.g., length of stay, group size) requires review of the Wilderness Program Specialist or Backcountry Office Manager and may require approval from the Superintendent.

Spike camps are to be temporary in nature. When spike camps are needed, the project leader, in consultation with the Wilderness Program Specialist and the appropriate District Ranger, will scout out and select a location well in advance to find the most suitable area close to the work site. Leave No Trace camping techniques will be used at all spike camps. No permanent structures will be constructed to support the camp. Temporary structures (e.g., raised platforms and walkways) may be used to protect sensitive resources (e.g., tundra), but will be removed. Amenities are to be kept to the minimum level necessary and serve as an example of minimum impact practices. Equipment, such as tents and tarps, should blend in with the natural environment. Spike camps will be located out of sight and sound of any trail or designated camp area, below treeline, 200 feet (70 adult steps) from any water source and in a durable area.

The crew size will be determined by the scope of the project; however, generally it should be kept to a maximum of 7 persons. Any deviation from this requires the approval of the Superintendent. A pack-it-out human waste system is preferred when the spike camp is used for more than five days. For shorter duration or if the area is suitable, the cathole method may be used. Food, trash and scented items must be properly protected from wildlife at all times (e.g., wildlife proof storage containers or the hanging method). Campfires generally are not allowed. They may be allowed if the spike camp is in within a mile of a designated wood fire campsite or approved by the Superintendent. In those circumstances, an elevated fire pan will be required. Administrative stock may be used to support the spike camp, but generally not be allowed to be kept overnight. Repeated use of the same spike camp location is discouraged, except when it is the only suitable site close to a multi-year work project. Any impacts to the area will be immediately rehabilitated once the spike camp is vacated for the season or at the completion of a multi-year project.

2.1.4.8.10 Research Facilities and Equipment. Research facilities and equipment shall be considered on a case-by-case basis and shall be of the minimum size and configuration necessary to achieve the desired research results. Existing research policy will be used to determine whether a proposed research project will be allowed; however, in general, research projects which involve significant facilities and equipment are discouraged and shall be approved only if the project has significant benefit to the Park and cannot be accomplished outside the wilderness boundary. All research equipment and facilities shall be temporary in nature and designed to facilitate easy removal. Administrative convenience shall not be considered as a determining factor in the decision to allow research facilities or equipment within the wilderness boundary.

2.1.4.8.11 Helispots. No permanent helispots shall be constructed within the wilderness boundary. Temporary landing areas for helicopters may be used to meet the minimum requirements of emergency situations and to provide for public safety. Site improvements determined to be essential for safety reasons during individual emergency situations may be authorized by the Superintendent, but the site shall be restored to natural condition as soon as possible after the emergency has ended. Site improvements will not be allowed for non-emergency helicopter landings.

2.1.4.8.12 Route and Other Markings. Cairns may be used as necessary to define a route or to provide for public safety; however, the construction of new cairns is discouraged except in cases where it is necessary to protect the natural resource. They should be no bigger than one foot high, with the exception of the historic cairns on Flattop Mountain that will be maintained in their historic fashion. The historic cairns on the Flattop, Continental Divide, Ute and other trails will be maintained. When staff finds cairns off trail and in remote areas, they should determine if the cairns are historic or not before a decision is made to dismantle them.

The red and yellow paint markings known as the "fried eggs" along the route to the summit of Longs Peak between the Keyhole and the Trough and the painted white circle and arrow known as "Clark's Arrow", in the Loft between Mount Meeker and Longs Peak, will be allowed.

Flagging and other temporary markings in any area are prohibited except during emergency operations or as approved for research and monitoring. If used, they must be removed once the activity has concluded.

2.1.4.8.13 Signs. Certain signs in the backcountry/wilderness are allowed to provide orientation, safety and regulatory information. Signs are necessary to manage and protect resources and visitors; however, they should not unduly intrude on the backcountry/wilderness scene as stated in the 1988 document Design Standards for Backcountry Signs. That document provides guidelines for park backcountry/wilderness signs with respect to sign types, materials, content, approval and implementation. The Backcountry/Wilderness Management Plan will take precedence in the event of any inconsistencies.

There are approximately 1200 signs in the backcountry/wilderness. In general, signs shall not be used within the Management Class 1 areas, except signs marking the boundary, shall be infrequently used in the Management Class 2 areas, and used as necessary in Management Class 3 and 4 areas. Where signs are used they shall be compatible with the natural environment and of the minimum size practicable.

Existing interpretive signs are generally incompatible with wilderness values and shall be removed when the opportunity arises. No new interpretive signs shall be installed within the

wilderness. Interpretive signs may be placed along the following frontcountry Interpretive Nature Trails: Coyote Valley, Huffers Hill, Toll Memorial, Forest Canyon, Lily Lake, Sprague Lake and Bear Lake.

Signs intended to protect natural and cultural resources (e.g., tundra, archeological sites) shall be of minimum size and shall not include interpretive messages.

The interpretive sign at Bluebird Lake was installed to interpret the history of the historic Bluebird Dam as part of the agreement that allowed demolition of the dam. The interpretive sign near Calypso Cascades was installed to interpret the Ouzel Fire of 1978. When these signs have served their useful life or have significantly deteriorated they shall be removed and not replaced.

2.1.4.8.14 Fencing and Retaining Walls. Fences and retaining walls detract from the wilderness scene and are generally not allowed. On a case-by-case basis, in order to protect resources or provide for visitor safety, they may be allowed if other techniques (e.g., education, signing) are not adequate or feasible. Fencing should be removed when no longer needed.

Any proposal to erect fencing or retaining walls requires the completion of a Minimum Requirement Analysis Worksheet and must go through the Project Proposal/Compliance Process. The proposal will specify the reason for the fence, its exact location, the type of fence, the amount of fence and the tools needed for construction.

Fencing may be constructed of wood or rock that best blends into the surrounding area. Materials for fencing and retaining walls may be obtained near the site or hauled in. Wooden fencing may be in the form of the "Stevens fence", buck and rail, or post and rail. Rock retaining walls should be as small and low as possible to achieve the desired objective. Minimum tool techniques should be used during construction.

Historic fences will be documented and then allowed to disintegrate in place. Likewise, rock walls, cairns and other features that may be either historic or prehistoric in age shall not be disturbed.

2.1.4.8.15 Snotel Sites. Snotel sites may be allowed in backcountry/wilderness areas. There are currently 5 snotel sites, installed in the late 1970's, within the backcountry/wilderness: Copeland Lake, Bear Lake, Willow Park, Lake Irene, and Phantom Ranch (Appendix C, Table 10). Any proposed relocation of these existing sites or installation of a new site will require the completion of a Minimum Requirement Analysis Worksheet and must go through the Project Proposal/Compliance Process. Appropriate NEPA compliance may be required (e.g., Environmental Assessment). Instrumentation installed at any site will be kept to a minimum. All maintenance trips to and maintenance of a site will be done in compliance with the Minimum Requirement Concept.

2.1.4.8.16 Use of Minimum Tools for Facility Maintenance. In general, the maintenance, rehabilitation, and reconstruction of any backcountry/wilderness structure shall be accomplished using the minimum tool necessary for the job. This requires analysis of the impacts of the tools to be used on wilderness values. Issues such as duration and intensity of noise levels, means for transporting materials and tools to the job site, use of local materials versus materials brought to the site, etc., shall be considered in the determination of minimum tool. The consideration of minimum tool will be addressed when a Project Proposal/Clearance form is circulated for review by the park staff.

Convenience alone shall not be considered sufficient justification for the use of motorized equipment and mechanical transport. However, it is recognized that certain modern tools may expedite a project significantly and thereby minimize the duration of disturbance to wilderness values. In such cases that these tools are approved for use, efforts will be made to minimize the duration and intensity of the disturbance. Refer to Section 2.1.4.1 for detailed information on the Minimum Requirement Concept and Analysis.

2.1.4.9 Research and Resource Monitoring

The Wilderness Act states that Wilderness shall be devoted to specific public purposes including scientific, educational, and conservation use. Management Policies outline that "the National Park Service will fully support the value of wilderness areas as natural outdoor laboratories". Scientific activities will be encouraged in the wilderness, including those scientific activities (inventorying, monitoring, and research) that involve a potential impact to wilderness resources or values (including access, ground disturbance use of equipment, animal welfare, etc) when it is clearly demonstrated that the benefits of what can be learned outweigh short term impacts on the wilderness resource and values. All scientific activities will be accomplished in compliance with NPS Management Policies, Director's Orders, and guidelines specified in this plan.

Research projects may be approved and conducted in wilderness, according to policy, when the following requirements are met: 1) the research activities are otherwise allowable under federal laws and regulations; 2) there is no alternative to conducting the research in wilderness; 3) the project will not adversely affect physical or biological resources, ecosystem processes, or aesthetic values over an area or duration greater than necessary to meet research objectives; and 4) the project will not interfere with recreational, scenic, or conservation purposes of the wilderness over a broad area or long duration.

2.1.4.9.1 General guidelines. Wilderness provides the opportunity to study natural processes that are still relatively unaltered by human effects, yet research projects and their associated activities may adversely impact wilderness resources and the visitor's wilderness experience. All proposed scientific activities will be reviewed by the Park's Research Administrator and may require being processed through the Project Proposal/Clearance Process. All aspects of scientific activities (e.g., project, facilities and equipment) must follow the Minimum Requirement Concept identified in Section 2.1.4.1. Scientific activities must be conducted using the minimum techniques and tools necessary for the minimum time necessary to meet wilderness and research objectives. Proposals from non-Park researchers to conduct research within the wilderness require a Research Permit. Researchers are required to follow Backcountry/ Wilderness Management Plan guidelines and regulations (e.g., group size, backcountry camping, Leave No Trace ethics, and techniques).

Manipulative research that could potentially disrupt natural processes will only be allowed if the policy requirements are met and the research will benefit protection or management of wilderness resources or character. Manipulative research is to be kept to the minimum necessary to meet wilderness and research objectives. Approval for manipulative research will be based on the potential amount of disruption to natural processes, the type and extent of other adverse impacts on wilderness conditions, the value of the research for wilderness protection and management or overall benefit to society as a whole and the potential for restoration. Research involving ground disturbance (e.g., test pits, large excavations) must be approved in advance and all such excavations must be backfilled, the surface re-contoured and the area re-vegetated.

All scientific activities will be accomplished in accordance with terms and conditions adopted at the time the research permit is approved. A checklist of information and requirements pertaining to conducting research in wilderness will be developed. This will be given to potential researchers to better educate them on the wilderness resource and sideboards that must be followed. Research being conducted in wilderness will be reviewed annually to determine if the project still meets policy criteria, if the research objectives have changed, if equipment or facilities are still necessary, if the timeline for the project needs to be altered and what the research results have shown. Any modification to the original activity will require additional approval.

2.1.4.9.2 Facilities/equipment. Research devices are sometimes required in order to carry out research projects, but they can intrude upon the visitor's wilderness experience as well as impact wilderness resources. Management Policies state that research and monitoring devices may be installed and operated in wilderness if the desired information is essential and cannot be obtained outside wilderness, and the proposed device is the minimum tool necessary to meet the project objectives safely and successfully.

When determining if research projects will be approved, consideration will be given to what research facilities will be required. Criteria for determining whether research equipment or facilities are appropriate will be based on the value of the research for wilderness protection and management, the length of time the equipment will remain, the relative intrusion of such equipment in the wilderness setting, the ease of removal and the potential for site restoration. Facilities or equipment must meet Backcountry/Wilderness Management Plan facility standards identified in Section 2.1.4.8.

All equipment must be temporary; no hardened sites will be permitted. Research equipment should be placed out of sight and sound of the trail corridors and visitor use areas to the maximum extent possible. Permanent equipment caches are not allowed in wilderness. Long term research will only be permitted if it is shown to be of over-riding benefit to proper park management and with the express written consent of the Superintendent. Temporary marking (e.g., flagging, cairns) of plots, equipment and access routes may be allowed if approved in the research permit. Markings will be kept to an absolute minimum and removed immediately when no longer needed. The responsible researcher is required to restore any impacts to the research site and is responsible for removal of all equipment when it is no longer essential.

Research equipment presently in place will be evaluated according to these criteria to determine if removal is prescribed. If removal is warranted, the Park together with the researchers will determine the responsible party for carrying out removal action, payment and target date for removal. For ongoing projects, the use of research equipment will be reviewed on an annual basis to determine if it is still necessary and if it still meets the Minimum Requirement Concept.

2.1.4.9.3 Aircraft use. Aircraft will only be used for research and monitoring purposes if it is the minimum tool necessary to achieve wilderness and research or inventory and monitoring objectives, and without aircraft support the activity cannot be safely or successfully accomplished. All scientific activities that propose the use of aircraft will discuss, including alternatives to aircraft, and justify such use, when submitting preliminary proposals. A completed Flight Request Form (ROMO-47) will be required with the final proposal for review and approval.

2.1.4.9.4 Research Natural Areas. Three Research Natural Areas, all within recommended wilderness, were established in the Park in the 1970's: Paradise Park, Specimen Mountain, and

West Creek. These areas were set aside as prime examples of natural ecosystems in the Southern Rocky Mountains and are considered to have significant genetic resources that have value for long-term baseline studies. They are part of a worldwide system of natural areas for scientific and educational purposes that has been established by the International Biological Program. All three are within Management Class 1.

They are managed to provide the greatest possible protection of ecosystem integrity. Natural processes are allowed to function and act as important baselines, against which human caused changes elsewhere can be measured, without human interference. Activities in the Research Natural Areas will be restricted to non-manipulative research, education, and other activities that will not detract from the area's values.

Only foot traffic is allowed. Stock use, aircraft use and overnight camping is not allowed, except in an emergency or if specifically approved by the Superintendent. Day-use is not encouraged and trails will not constructed or maintained. An exception is the hiking trail to the crater on Specimen Mountain. Permanent structures and facilities are not allowed.

2.1.4.10 Wilderness Interpretation and Education

Interpretation can best be defined in the words of Freeman Tilden, in Interpreting Our Heritage as “An educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information.”

Wilderness education is perhaps the most important tool for ensuring the protection of wilderness resources and character. National Park Service Management Policy calls for an effective public wilderness education program to be developed and maintained.

The program is to:

"…promote and perpetuate public awareness of, and appreciation for, wilderness character, resources and ethics, while providing for acceptable use limits…".

The program is also to focus on:

"…fostering an understanding of the concept of wilderness that includes respect for the resource, willingness to exercise self-restraint in demanding access to it, and an ability to adhere to appropriate, minimum-impact techniques; and encourage the public to use and accept wilderness on its own terms…".

Rocky Mountain National Park is dedicated and mandated to provide interpretive and educational activities that assist the visitor in understanding the problems and issues of management and resource values, as well as promoting safety consciousness, enjoyment, and respect for the Park. Wilderness values were one of the primary reasons the Park was founded and enabled. Through the Park’s Interpretive program, these values are shared with the American public and park visitors from around the world.

Through the Park’s Outreach Program, this mandate is expanded to reaching other publics that may never visit, or that live in neighboring communities. Coordination with neighboring land management agencies, which administer wilderness, will be a priority to ensure consistency in wilderness educational messages.

The Park will follow guidance set forth in the newly developed NPS Wilderness Education and Partnership Plan. There are three basic objectives for educational programs administered by the National Park Service:

- To foster public understanding and appreciation of the National Parks and their significant cultural, natural, and recreational values and through this understanding, support preserving them.
- To encourage and facilitate appropriate, safe, and minimum impact use of the parks.
- To promote public understanding and acceptance of the Service's policies and programs.

2.1.4.10.1 Themes. Interpretive themes provide a broad base to communicate specific messages to ensure the preservation and protection of wilderness values. Significance statements about the wilderness are the guides to specific topics and programs. These are the stories through which the values of wilderness are conveyed to the public and NPS staff. The themes are the building blocks for interpretive products and services. Themes are intended to encompass wilderness as a whole, but at the same time used to focus in on specific park issues of concern.

Rocky Mountain National Park's Interpretation and Educational Program will be based on NPS Wilderness Educational and Partnership Plan and park specific wilderness themes. Individuals will have the freedom to use the educational style and technique which works for them; however, the specific personal and non-personal services will tier off of and capture the essence of the broader themes which include:

- Some wildlands are most valuable when left in their natural state. Visitors will be encouraged to examine the content and intent of the Wilderness Act and the National Wilderness Preservation System.
- Wilderness is a foundation for a healthy and diverse ecosystem. It plays a significant role in the overall health of natural ecosystems.
- Wilderness is preserved in order to retain its primeval character and natural conditions, which is a special place for humans to examine their relationship to the natural world.
- Wilderness offers opportunities for personal renewal, inspiration, artistic expression, pride of ownership of a shared heritage, and the prospect of hope for the future.
- Wilderness provides opportunity for physical and mental challenge, risk and reward, renewal, self-reliance, solitude, and serves as a haven from the pressures of modern society.
- Individual and societal support to the idea of wilderness and appropriate use and behavior is imperative to the future of wilderness. Visitors will be encouraged to develop and participate in Leave No Trace travel and camping ethics.
- Wilderness provides a unique setting for teaching ecosystem stewardship and interdisciplinary subject matter. Wilderness education will include the mitigation of impacts to wilderness resources.
- Wilderness is a place where research can uncover information about natural processes and living systems in a relatively undisturbed setting.
- Humans can become connected to the past through cultural and archeological study and discover how humans interaction with wildlands occurred.

2.1.4.10.2 Audiences. Rocky Mountain National Park will take a multi-faceted approach to wilderness education and outreach that will span all management divisions, and will be directed

at a wide variety of audiences. These efforts will be directed not only at park visitors, but will target populations that might never visit the Park, but who may live in the area, region, or other parts of the country. Efforts will also be made to educate park staff on the meaning and scope of wilderness preservation as it applies to the mission of RMNP, and the National Park Service. The NPS identifies 7 broad audiences. Each may be broken into more specific target audiences. These include:

- NPS, concessionaire, and cooperating association staffs
- Wilderness visitors
- Park visitors
- Student education program participants (e.g., schools, Girl and Boy Scouts)
- Neighboring communities
- Urban communities
- Non-government organizations including friends groups

The new NPS Wilderness Education and Partnership Plan will be the cornerstone of internal and external education efforts.

2.1.4.10.3 Internal Education. In order to build support for the concept of wilderness management in RMNP, the logical starting point is educating park, concessionaire, and cooperating association staffs about the need for and ramifications of aligning management decisions with consideration of the Wilderness Act. Employees are also citizens of the surrounding gateway communities, and often times find themselves acting as "ambassadors" for the Park in their day-to-day lives. Their daily conversations with friends, neighbors, and relatives has a profound impact upon perceptions of the Park in the local community. It is essential that all employees have a working knowledge of the management requirements of a wilderness area such as Rocky Mountain. More importantly, helping employees develop a deep appreciation of wilderness as an enduring resource is imperative.

The exceptional wilderness character of the backcountry of RMNP is often easy to take for granted. The compelling story of wilderness and its heritage in historical context to development of the continent must be conveyed. The Park at every opportunity should discuss the basic requirements of wilderness management and messages of the Park with employees.

Internal education efforts will include all employee, division and work unit meetings. The Park Wilderness Program Specialist, and other staff with an in-depth knowledge of wilderness, will be available to talk with individuals or groups of employees and provide park specific training. Wilderness topics and issues should be a part of annual seasonal training sessions (e.g., ranger, trail crew, resource crew, interpreter). Wilderness information will be incorporated in seasonal handbooks.

Employees are encouraged to attend regional and national wilderness training courses as well as participant in local university and long distance wilderness correspondence courses with the approval of their supervisor. Outreach programs and training to park volunteers (individuals and groups), concessionaires and the Rocky Mountain Nature Association should be conducted as necessary.

2.1.4.10.4 External Education. Educational efforts will serve both the visiting and non-visiting public. These efforts can be categorized as "personal', and "non-personal" services.

2.1.4.10.5 Personal Services. Personal Services are those that involve direct contact between park staff or those acting in conjunction with the Park, and the public. These services include interpretive, education, and outreach programs, and other special programs. All services that occur within the backcountry/wilderness will be conducted within group size recommendations established by this plan (Section 2.1.3.1.1). The following are on-going or planned wilderness education efforts.

Formal Interpretive Programs. Rocky Mountain National Park offers a variety of programs that focus either directly on wilderness as a resource, or use related themes to convey wilderness values. Examples of programs which indirectly provide wilderness messages include:

General programs about ecology such as:

- Nature walks.
- Wildlife programs about Rocky Mountain mammals and their need for undeveloped habitat.
- Cultural history programs which describe the interaction of early peoples with nature in primitive settings.
- Photography programs by Kodak which use landscape aesthetics.
- Children's Junior Ranger programs which provide "hands-on" activities about wilderness ethics, and
- Evening programs in which people rediscover the wilderness of the night sky.

The Park offers an hour and a half long interpretive program to the visiting public called Treading Lightly, which is offered in the evening at various campground amphitheaters. The program discusses wilderness ethics and presents the Leave No Trace principals of wilderness travel.

Roving Interpretive Programs. These offer the possibility of giving short message impressions about wilderness to front country visitors at overlooks, campgrounds, and visitor centers. Seasonal rangers will be trained to emphasize these values in their visitor contacts.

Leave No Trace Programs. The Park will conduct Leave No Trace presentations to local community groups and organizations. The Park's Education and Outreach Program will be an instrumental part of sharing Leave No Trace messages. The emphasis with this program is with youth groups such as the scouts and other outdoor groups. Through the Park's Rocky Mountain Corps of Discovery, children from underrepresented populations have experienced Leave No Trace through ranger lead hiking and camping activities. The principles of Leave No Trace are listed in Appendix G.

Education Programs. The Park's Heart of the Rockies Education Program provides curriculum based activities to school aged children. The program uses the "Wilderness Box" activity trunk developed by the Forest Service's Region 2 office as an adjunct to certain units of study. The Wilderness Box is used mostly in visits to schools by park rangers.

Outreach Program. Each year the Park's Outreach Program presents programs to many diverse community organizations about management issues. Wilderness programs are presented to Rotary and Lions Clubs, Chambers of Commerce, conservation groups such as Audubon and the Sierra Club, and civic group such as the League of Women Voters.

Lyceum Programs. The Park has an active Lyceum Program that offers Saturday night programs to the general public at the Beaver Meadows/Headquarters Visitor Center. Outside speakers of renown make presentations about topics in their field. Future plans call for Lyceum speakers about wilderness.

Artist-In Residence Program. The Artist-In-Residence program attracts nationally recognized artist who work with a variety of mediums to express the inspiration of RMNP. Many visual artists have produced works depicting the grandeur of the Park's wilderness landscape. These artists share the production of their works with visitors as part of the experience. This program should have a special "wilderness landscapes" theme for an upcoming season.

Rocky Mountain Seminars. The Rocky Mountain Nature Association, a non-profit friends groups of RMNP, sponsors an acclaimed seminar series during the summers. Many of the nature seminars offer indirect wilderness themes. An effort should be made to offer a multi-day seminar specifically about wilderness values as a backcountry experience.

Elderhostel. The Park should participate in Elderhostel programs coordinated by the YMCA of the Rockies. Rangers can lead participants on guided hikes in the Park, and have emphasized wilderness ethics and values.

March For The Parks. Each year the March For The Parks walk raises money for non-profit organizations that support national parks. A wilderness theme year should be used to generate public support for wilderness management of RMNP.

2.1.4.10.6 Non-personal Services. Non-personal services are those which contact both visitors and non-visitors through other than face-to-face means. Examples include print and electronic media, permanent exhibits, temporary displays, and information kiosks.

Park Film. The Park's orientation film that is shown continually in the Beaver Meadows/Headquarters Visitor Center is dated and will be replaced in the near future. At that time, it should include a stronger wilderness message and focus.

Press Packets. These should be developed and distributed by the Park's Public Information Officer to an extensive media contact list. The packet would include an official briefing paper containing the Superintendent's statement about the wilderness values of RMNP.

High Country Headlines. The Park produces a seasonal newspaper distributed to all visitors who pass through the entrance gates, mailings and to many other through outreach programs. The paper has featured articles about the wilderness values of RMNP, and Leave No Trace techniques. These stories will continue to be featured in future issues.

Permanent Exhibits. Currently, no permanent exhibits dealing solely with wilderness are offered in the Park's visitor center. Future facility renovations should incorporate wilderness theme exhibits.

Temporary Displays. A temporary conference type display indirectly featuring wilderness values has been produced and used in different venues. The display can be modified to emphasize a more direct wilderness message. The display could be set up at venues in the gateway communities such as Chamber of Commerce information centers, libraries, and commercial conference facilities.

Site Bulletins. A site bulletin about the wilderness values and resources of the Park should be produced for public distribution. The Park already has a large variety of site bulletins about different topics, and it may be more appropriate to infuse wilderness messages into the existing publications. Leave No Trace messages should be included in all appropriate bulletins.

Printed Informational Pieces. The Park is considering producing specialty information pieces about the Park and interpretive program offerings to be distributed to local guest facilities and restaurants. A wilderness piece should be included in these publications.
Infomercial on local Cable TV channel. The Park should work with the local cable TV station to produce a short informational piece about wilderness and Leave No Trace to be aired periodically.

Sales Items. The Rocky Mountain Nature Association will be encouraged to procure and offer sales items that promote wilderness and Leave No Trace.

Internet Web Site. The RMNP web site will include a description of the Park's wilderness resource, the significance and benefits of wilderness and how to enjoy wilderness without damaging it. The site will provide links to other important wilderness and related web sites.

2.1.4.11 Wilderness Management Coordination

Approximately 95% of RMNP (2,917 acres designated wilderness; approximately 248,464 acres recommended wilderness) is to be managed under the same Wilderness Act mandate that establishes the congressional guidance for managing Wilderness Areas.

Forty-two Wilderness Areas, totaling almost 3.3 million acres are located in the State of Colorado. Four of those are administered by the NPS totaling 60,066 acres. Within the NPS Intermountain Region there are approximately 600,000 acres of designated wilderness and approximately 5.5 million acres of proposed or recommended wilderness. Six U.S. Forest Service administered wilderness areas lie adjacent to RMNP: Indian Peaks, 73,291 acres; Rawah, 73,068 acres; Comanche Peak, 66,791 acres; Never Summers, 20,747 acres; Neota, 9,924 acres; Cache La Poudre, 9,238 acres.

The RMNP wilderness ecosystem is similar to these 6 adjacent wilderness areas as it includes glaciated peaks and valleys, alpine tundra, subalpine meadows, spruce-fir, ponderosa and lodgepole forests. A wilderness management objective for RMNP is to cooperate and coordinate the management of the Park's wilderness with management of the adjacent U.S. Forest Service wilderness areas. Where appropriate, consistent management objectives, standards, techniques, practices, guidelines and regulations will be sought, with consideration given to the differences in respective laws and policies. Information, techniques and ideas will be freely shared and discussed that will lead to better protection and management of wilderness areas administered by both agencies.

Intra-agency and interagency wilderness management communication will be fostered through individual communication and local and regional workshops. Park staff will work closely with the Interagency Arthur Carhart National Wilderness Training Center and the Aldo Leopold Wilderness Research Institute in order to stay current on wilderness issues. Coordination with other National Park Service areas, with designated and non-designated wilderness, will be actively pursued at the Washington, Regional and park levels.

Coordination will also include working with other local, state, regional and national non-government organizations, communities and agencies to preserve wilderness resources and values.

2.1.4.12 Establish Backcountry/Wilderness Steering Committee

A primary wilderness management objective for RMNP is to coordinate the various park operations and wilderness functions to manage and protect natural and cultural resources in wilderness and preserve wilderness character.

In order to accomplish this, a park Backcountry/Wilderness Steering Committee will be established. The committee will be chaired by the Park Wilderness Program Specialist and composed of a representative from each of the following work units: four Ranger Districts, one Resource Management Specialist in the Division of Resource Management and Research, one District Interpreter, Cultural Resource Specialist, Trails Foreman and others that the Superintendent may appoint. The committee will provide a forum for discussion and review of backcountry/wilderness related issues and provide recommendations to the Superintendent.

A State of the Backcountry/Wilderness Report will be compiled annually, summarizing the condition of the wilderness, the activities, actions and work taken place, their effectiveness in maintaining and restoring wilderness conditions, staffing, training and other information as determined necessary. The status of wilderness resources will be derived from the on-going monitoring of resource, visitor experience and managerial conditions. The State of the Backcountry/Wilderness Report will compare existing wilderness conditions to Backcountry/ Wilderness Management Plan standards. The report will assist in establishing future annual work plans.

2.2 Alternative B – No Action Alternative/Current Management

This alternative would continue management of wilderness at RMNP under the 1984 Backcountry Management Plan and the current implementation of other unwritten guidelines and policies. There would be no comprehensive Backcountry/Wilderness Management Plan in effect, and proposed activities in wilderness would be reviewed and approved on a case-by-case basis, based on policies and guidelines that are not formalized, but generally followed. Decisions regarding use of wilderness could therefore be inconsistent and would depend on the nature of the activity and the current administration's or staff's interpretation of the policies and guidelines. In general, larger or more complex projects that require senior management approval would undergo minimum requirement/minimal tool analyses, but smaller projects may not. Certain resources would not have specific written standards or thresholds (e.g., bare ground areas in camp areas). Management Classes would not be developed, and there would be no parkwide monitoring and associated standards to determine when certain wilderness conditions would be considered unacceptable (e.g., campsite monitoring). This alternative would not provide a documented sequence of management actions or standards necessary for the most effective and consistent protection of wilderness values.

The following describes the primary differences between the No Action Alternative and the proposed plan, organized and referenced by the headings used under Section 2.1. The descriptions provide a summary of the current management status or actions in wilderness that would remain the same under Alternative B.

2.2.1 Management Classes/Desired Future Conditions

Current management does not delineate the backcountry/wilderness resource into Management Classes and standards for each. All standards or actions will be consistent throughout all areas of the backcountry/wilderness. Current management will continue to identify different backcountry/wilderness camping zones and the Research Natural Areas with specific standards. All other areas will be managed the same.

2.2.2 Resource Conditions

2.2.2.1 Vegetation/Soils

There is no monitoring system to track vegetation damage and soil erosion at day use areas and no standards for presence of bare ground use areas and maximum size. None have been developed. The appropriate number and location of day use areas may not be determined.

The use of native materials is encouraged. There are no guidelines for the procurement and use of native materials except for restoring disturbed sites as outlined in the 1994 Vegetation Restoration Management Plan. The project leader will determine the type and source of native materials to be used in a particular project (e.g., tent pad cribbing, hitchrails, sign posts)

2.2.2.2 Fish and Wildlife

There are no written guidelines for proper food storage and garbage handling procedures. The District Ranger will make management decisions on a case-by-case basis. This could create inconsistencies in education and actions taken.

2.2.2.3 Aquatic Resources

There is a non-written standard of 100 feet for the distance camp areas and privies are located from a water source. Many designated camp areas do not meet this standard; however there is no plan to relocate them. Field staff determine the location for new or relocated camp areas and privies. There will be no formal water-monitoring program for the backcountry/wilderness.

2.2.2.4 Fire

The 1992 Fire Management Plan speaks to minimum-impact suppression techniques; however, there is no requirement to analyze the use of mechanical transport and motorized equipment during wildland fire operations. Suppression forces as necessary will determine use. There is no Delegation of Authority for an outside Incident Command Team.

2.2.2.5 Cultural

The 1998 Resource Management Plan addresses the overall protection of cultural resources within the backcountry/wilderness. The National Historic Preservation Act, implementing Code of Federal Regulations, and NPS-28 provide general guidance. However, there is no written guidance specifically for general park projects that may impact cultural sites in wilderness. There is no consistent protocol for project work crews. Work crews contact the Park Archeologist as they determine necessary.

2.2.3 Visitor Experience Conditions

2.2.3.1 Solitude

The opportunity for solitude is not addressed. There are no Management Classes that identify areas where solitude is more likely experienced.

2.2.3.1.1 Group Size. Group size is addressed for backcountry overnight stays and commercial horse day trips. There is no recommended or required group size limit for day hikers.

2.2.3.2 Risk and Challenge

There is no mention of risk and challenge in current management plans. There are no Management Classes that identify the range of risk and challenge visitors may experience in the backcountry/wilderness.

2.2.3.3 Access/Visitor Activities/Special Uses

2.2.3.3.1 Day Use. New activities that may emerge are not evaluated to determine if they are appropriate for wilderness. Specific studies on day use that have been identified in the Resource Management Plan are not being planned or conducted. There is no direction for a day use monitoring system to be developed.

2.2.3.3.2 Road Closures. There is no consistent guidance on the closure of roads to various uses at different times of year. Closures may change from year to year depending on current management direction.

2.2.3.3.3 Winter Use. Routes that skiers and snowshoers use that do not follow the park trail system or roads may be cleared and enhanced to make travel easier. There is no written guidance on the marking of popular winter trails and routes. Currently, snow machines are allowed on Trail Ridge Road between Timber Creek Trailhead to Milner Pass when it is converted to winter backcountry road status. A Snowmobile Management Plan is currently being developed to address this issue.

2.2.3.3.4 Summit Registers. There is no written guidance. The general public or local clubs and organizations often place summit registers on prominent peaks and high points with park approval or knowledge.

2.2.3.4 Impacts from Civilization

Issues on the use of new technology, visual quality and natural quiet are not addressed in the current Backcountry Management Plan.

2.2.4 Administrative Conditions and Management Activities

2.2.4.1 Minimum Requirement Concept

There is no guidance on the Minimum Requirement Concept or an established Analysis Process. Park management and staff many times make decisions about appropriate actions in wilderness and/or what methods to use, without a formal written analysis to document the

decision. There is no policy on what type of tool use is appropriate in wilderness and when they may be used. The project leader usually determines which tools to use and when independently.

2.2.4.2 Aircraft Use

There is no detailed guidance on the use of aircraft, flight requests, flight scheduling, flight paths, landing sites, documentation and monitoring with regards to minimum requirement. Some projects or actions are added to approved flights, without being approved themselves, to use up contract guaranteed minimum flight time if it is available.

2.2.4.3 Backcountry Permit and Reservation System

The computerized backcountry camping permit and reservation system and Special Park Use Recovery Initiative (backcountry permit administrative fee program) were established after the 1984 Backcountry Management Plan was written and are not formally addressed. Overnight stock group size is 5 people and 5 stock for individual stock sites and 12 people and 20 stock for group stock sites. These numbers were originally put in place as an experiment years ago with no formal basis.

2.2.4.4 Camp Area and Site Management

Though the Backcountry Campsite Impact Assessment and Monitoring System has been in place since the late 1980's, there are no established standards for the overall desired condition of designated camp areas, including vegetation/ ground impact, tree/shrub damage, root exposure, social trails, access trials, illegal satellite sites barren core camp area and overall rating score.

New camp areas may be added to accommodate increased use and there are generally no restrictions on where these new camp areas may be located.

2.2.4.5 Climbing Management

There is no climbing management plan for the Park. A Climbing Task Force Report was prepared in 1990 but never implemented.

2.2.4.6 Trails Management

Trail management is addressed in detail in the 1982 Trails Plan with little mention of wilderness. Trail standards are not restricted to any particular area of the Park, ultimately allowing the upgrading or constructing of a trail, of any standard, anywhere in the backcountry/wilderness.

The Minimum Requirement Concept and minimum tool use is not discussed. Programmatic approval for certain equipment and tools is not in place. Any type of equipment or tool is used at the discretion of the project leader with no formal minimum requirement analysis. Many times convenience and economic efficiency are used to determine the appropriate tool.

2.2.4.7 Facilities Management

2.2.4.7.1 Patrol Cabins and Tent Platform Camps. There is no written guidance on the construction of new or rebuilding of patrol cabins and tent platform camps if destroyed as a result of natural disaster.

2.2.4.7.2 Fire Lookouts. There is no written guidance on the construction of new or rebuilding of fire lookouts if destroyed as a result of natural disaster.

2.2.4.7.3 Corrals and Hitchrails. There is no written guidance on the standards for, construction or use of corrals.

2.2.4.7.4 Human Waste Management Systems. The pit privy is generally the standard toilet used in the backcountry/ wilderness. There are no standards for the type of systems to be considered. Location and installation of privies is at the discretion of the District Ranger. When a privy is, full a new one is generally dug nearby. Current privies and potential sites are not being evaluated for potential risks to water quality.

2.2.4.7.5 Food Protection Devices. There is no standard or approval process for food storage devices. The type and placement is at the discretion of the District Ranger.

2.2.4.7.6 Can Camps and Caches. Can camps may be placed in the backcountry/wilderness anytime, anywhere at the discretion of a Division Chief, District Ranger or Work Crew Leader.

2.2.4.7.7 Work Crew Camps. There are no standards for using, locating, or determining which activities are allowed at work crew camps. Work crew camps are determined necessary and located by project leaders. Campfires are allowed.

2.2.4.7.8 Signs. Interpretative signs currently in place in the backcountry/wilderness will remain in place.

2.2.4.7.9 Fencing/Retaining Walls. There are no standards for fencing or retaining wall construction in the backcountry/wilderness. Minor fencing is constructed when determined necessary by the District or Area Ranger or project leader. There is no formal review or approval process that is followed.

2.2.4.8 Research and Resource Monitoring

There is no checklist of wilderness issues and sideboards for researchers to follow in preparing research proposals. Many researchers do not even realize 95% of RMNP is in some form of wilderness classification and what that means. There is no requirement for addressing the Minimum Requirement Concept and no guidance on the placement of research equipment or the review of equipment currently in place to determine if it is still necessary.

2.2.4.9 Interpretation and Education

Park specific wilderness themes have not been identified. The variety of audiences and how to reach them with the wilderness message have not been identified. A full range of services and products specific to wilderness has not been established.

2.2.4.10 Establish Backcountry/Wilderness Steering Committee

There is no Backcountry/Wilderness Steering Committee to discuss and address wilderness issues as they arise. Issues are discussed informally which leads to inconsistency. There is no formal document that compiles and summarizes backcountry/wilderness issues, activities and actions for a given year.

Table 2-1

Comparison of Standards between Alternatives

Indicator	Standard				
	Alternative A				Alternative B
	Management Class 1	Management Class 2	Management Class 3	Management Class 4	
Day Use Sites, Bare Ground					
Presence of bare ground use areas	None	Designated areas at destination sites			Anywhere created
Maximum size	No bare ground	50 sq. ft.	100 sq. ft.	150 sq. ft.	No standard
Group Size Limits (* recommended maximum)					
Maximum overnight group size	No camping allowed	7 Crosscountry areas, 4 Bivouac areas	7 Individual sites, 12 Group sites	No camping allowed	Same as Alternative A
Maximum overnight stock group size	No camping allowed	No stock camping allowed	6 people/8 stock individual sites, 12 people/16 stock group sites	No stock camping allowed	5 people/5 stock individual sites, 12 people/20 stock individual sites
Maximum day stock group size	Stock no allowed	Stock no allowed	20	20	20
Maximum day use group size	7*	7*	20*	None	No standard
Campsite Size and Tent Pads					
Maximum campsite size	No camping allowed	0 sq. ft.	Individual site 800 sq. ft. Group site 1200 sq. ft. Stock site 2000 sq. ft.	No camping allowed	No standard
Tent pad	Not applicable	None	Individual sites up to 3 Group sites up to 6	Not applicable	No standard
Tent pad size	Not applicable	Not applicable	100 sq. ft.	Not applicable	No standard
Designated Campsites (** Backcountry Campsite Impact Assessment and Monitoring System)					
Camping	No camping allowed	Crosscountry and Bivouac Areas	Designated Sites	No camping allowed	Same as Alternative A
Distance from water source	No camping allowed	200 feet	200 feet	No camping allowed	100 feet
Vegetation/ Ground	Not applicable	No impact	Bare Ground	Not applicable	No standard
Tree/Shrub Damage	Not applicable	No impact	1 - 20% damaged	Not applicable	No standard
Root Exposure	Not applicable	None	1 - 20% of trees/shrubs with exposed roots	Not applicable	No standard
Social Trail(s)	Not applicable	0	No more than 1 discernable	Not applicable	No standard
Access Trail(s) Tread	Not applicable	No access trails	3 - 6" deep and/or 18 - 24" wide	Not applicable	No standard
Illegal Satellite Site(s)	Not applicable	0	1	Not applicable	No standard
Cleanliness	Not applicable	No impact	1 fire scar some ashes scattered 1 - 2 feces/tp visible	Not applicable	No standard
Barren Core Camp Area (sq ft)	Not applicable	0 sq. ft.	400' - 800' 800' - 1,200'	Not applicable	No standard
BCIAMS** Impact Rating Score	Not applicable	1	<12	Not applicable	No standard

3.0 DESCRIPTION OF THE BACKCOUNTRY/WILDERNESS RESOURCE (Affected Environment)

3.0 DESCRIPTION OF THE BACKCOUNTRY/WILDERNESS RESOURCE (Affected Environment)

3.1 Regional Context and General Description

Rocky Mountain National Park (RMNP or the Park) encompasses 265,769.14 acres (107,556 hectares) and is located in north-central Colorado in portions of Larimer, Boulder, and Grand Counties. The towns of Allenspark, Glen Haven, Estes Park, Meeker Park, and Grand Lake are found along its borders. Within RMNP, 95 percent of the land is either designated, recommended, or potential wilderness. The lands bordering RMNP are a mixture of state, local, private, and federal holdings. About 62 percent of the Park boundary borders National Forest land, with 70 percent of the adjacent Forest lands managed as designated wilderness. The rest of the Park boundary borders subdivisions, summer camps, and burgeoning town populations. Figures 1-1, 1-2, and 1-3 (Chapter 1.0) depict the Park's location, wilderness areas, and adjoining wilderness areas.

Rocky Mountain National Park is easily accessible from the Denver metropolitan area, some 65 miles (105 kilometers) to the southeast. Interstates 25, 70 and 76, which converge in Denver, provide rapid access for visitors coming from all regions of the United States. Local highways that provide access to RMNP include State Highways 7, 34, and 36. Because of RMNP's popularity and its proximity to communities along the Colorado Front Range, visitation is exceeding three million annually. Visitation at RMNP is approximately the same as Yellowstone National Park, although RMNP is about one eighth the size of Yellowstone.

3.2 Natural, Cultural and Social Aspects of the Wilderness Resource

3.2.1 Geology, Soils, and Vegetation

Rocky Mountain National Park features an exceptionally scenic portion of the Southern Rocky Mountains that were formed in this area by a series of granitic batholiths intruded into precambrian micashists and pegmatites. Igneous metamorphic rock and glacial till generally characterize the geology of RMNP. Elevations within RMNP range from roughly 8,000 to 14,000 feet (2,440 to 4,270 meters), and nearly one-third of RMNP lies at an elevation of over 11,000 feet (3,355 meters), or in the alpine tundra zone. Precipitation in the form of snow occurs for approximately nine months of the year in the alpine tundra zone, and snow has been known to occur at these elevations during any month.

The Continental Divide bisects RMNP from roughly north to south, and acts as a border between two distinct geologic areas on the east and west sides of the Park. The eastern side of RMNP is characterized by steep cliffs with U-shaped valleys that were altered by episodes of localized pleistocene glaciation. The freeze-thaw cycle is the predominant erosive factor in the shaping of the rocks, and the rough granite, crystalline cracks, and rounded structures make many cliffs popular for technical rock climbing. The eastern slope also lies in a slight rainshadow that receives about 15 inches (38 centimeters) of precipitation annually, and is subject to high Chinook winds throughout the winter. On the western side of the Park, the mountains recede gradually into the Kawuneeche Valley. The western slope receives more precipitation than the eastern side with approximately 20 inches (51 centimeters) of precipitation annually and deeper snows.

An Order 2 soil survey was completed at the lower elevations of RMNP and an Order 3 soil survey was completed for other areas of RMNP in 1998 (NRCS 1999). Most soils in the Park are classified under the cryic soil temperature regime, or soils that have a mean annual temperature higher than 0°C but lower than 8°C (NRCS 1994). According to field data, some soils at high elevations and under spruce-fir forest may meet the requirements of the isofrigid soil temperature regime, or soils that have a mean annual soil temperature that is lower than 8°C. Soils in RMNP tend to be relatively infertile and sandy with poor development of the decomposed parent granitic substrates. Low-lying and swale areas tend to have the best soil development.

Three general soil types exist within RMNP (NRCS 1999):

- **Cryochrepts** are well drained with moderately rapid permeability and slow runoff. This soil type is generally found in the glacial till areas and is deep to very deep. There may be large stones and boulders on the surface and in the profile. The erosion hazard is slight to moderate.

- **Cryoboralfs** are moderately- to well-drained with moderate permeability and moderate runoff. The erosion hazard is moderate.

- **Cryaquepts** are poorly to very poorly drained, with slow to moderate permeability and slow runoff. They are found in wetter, and flatter areas. The erosion hazard is slight unless slopes are denuded of vegetation.

Rocky Mountain National Park is something of a botanical crossroads due to its variations in elevation, soils, and climate, and is comprised of approximately 60% forest, 13% alpine tundra, 18% exposed rock, and 9% mixture of habitats. There are nine distinct floras within RMNP including ponderosa pine, lodgepole pine, spruce/fir, alpine tundra, aspen, riparian/willow, wet meadow, upland shrub/grasses, and high-elevation willow. Of these, the major vegetation types consist of ponderosa pine and grass/shrubland habitat from 7,800 to 8,500 feet (2,380 to 2,600 meters), lodgepole pine from 8,500 to 9,500 feet (2,600 to 2,900 meters), spruce/fir from 9,500 to 11,500 feet (2,900 to 3,500 meters), and alpine tundra over 11,500 feet (3,500 meters). In addition, roughly 18 percent of RMNP is rock. Approximately 1,025 vascular plants have been identified at RMNP.

The Continental Divide that bisects RMNP from north to south acts as a border between two distinct vegetation zones. The eastern side of RMNP features a mixture of dry and wet grasslands, montane forests, lodgepole pine, spruce/fir, and tundra. The western side is more elevated and moist, lacking dry valleys and montane forests, and contains primarily lodgepole pine, with spruce/fir and tundra.

Historic use of RMNP significantly impacted native plant communities and allowed the introduction of noxious weeds. For example, Moraine Park at one time had a nine-hole golf course. The golf course closed in the late 1960s, but today 20 percent of the plant composition in the meadow is exotic plants, several of which are invasive noxious weeds.

3.2.2 Wetlands, Floodplains, and Aquatic Resources

Rocky Mountain National Park is located at the headwaters of four major river basins; the Big Thompson, North Fork of the Colorado, North Fork of the St. Vrain, and the Cache La Poudre

Rivers. The Continental Divide bisects RMNP into two different watersheds, east and west. The North Fork of the Colorado River is located west of the Continental Divide, and the other three river basins are located east of the Continental Divide. Any water flowing west eventually drains into the Colorado River, and water flowing east drains into the Missouri and Mississippi Rivers.

The aquatic ecosystem in RMNP consists of 147 lakes, which contain a surface area about 1,103 acres (450 hectares) and 473 miles (757 kilometers) of stream. Historically, the water quality of the lakes and streams in RMNP has been excellent with only minor degradation due to natural siltation. Today however, visitor use and atmospheric conditions are negatively altering water quality. A number of trails and roads in RMNP lead to lakes or follow along streams, and visitors use is resulting in negative affects to aquatic communities including water quality degradation, riparian vegetation damage, and accelerated streambank erosion. Water quality degradation is most common where campsites and privies are located close to streams. A study conducted in the Park showed that Giardia contamination could be present near beaver ponds or areas of frequent or extensive human activities (NPS 1986). Other water bodies where water quality degradation has occurred include Chasm Lake and Fall River.

Originally, many of the high elevation lakes and streams in RMNP had no fish life. Today however, at least 51 of the lakes in RMNP contain trout populations, due in part to stocking by original settlers or early park managers. Up until 1969, fish stocking was performed only with exotic trout which displaced many of the native species. In the late 1970's, park managers stopped stocking with exotic trout and began to reintroduce native trout.

The aquatic/riparian areas of RMNP exhibit some of the most diverse habitat in the Park for flora and fauna. Populations of beaver exist in the streams and lakes of RMNP, but populations have fluctuated dramatically over time due to exploitation by early explorers, disease, and the draining of riparian habitat by humans. Visitor use is having a negative effect on riparian communities in RMNP, and several noxious weeds are invading these resources due to disturbance caused by visitors and wildlife.

Per Executive Order 11988 (Floodplain Management) and Executive Order 11990 (Protection of Wetlands), encroachments or modifications of 100-year floodplains and wetlands on NPS-administered lands are to be avoided where practicable. Wetland types that occur in RMNP include alpine willow, riparian bog, riparian meadow, riparian willow, blue spruce, and open water streams.

3.2.3 Wildlife and Threatened, Endangered, and Special Status Species

Rocky Mountain National Park has a great diversity of fauna with 260 species of birds, 66 species of mammals, 11 species of fish, 5 species of amphibians, and one species of reptile. Elk, bighorn sheep, moose, and deer are the large ungulates found within RMNP. The upper montane zone (7,800 to 9,000 feet) forms the primary winter range for deer and elk at RMNP. Moose are found on the west side of RMNP principally in the Kawuneeche Valley. Bighorn sheep, the symbol of RMNP, are particularly sensitive to human disturbances. Other common mammals found at RMNP include the chickaree, coyote, bobcat, mountain lion, chipmunk, and golden-mantled ground squirrel.

With 260 species of birds, RMNP offers a great variety of habitats to support this avian diversity including three major life zones (montane, sub-alpine, and alpine) and plant communities ranging from willow carrs, ponderosa pine, lodgepole pine/spruce-fir forests, and alpine tundra. Some of the highest diversity and density of birds at RMNP are found in aspen and ponderosa pine habitat.

Many songbirds rely on this habitat for nesting. A few of the more common species of birds at RMNP include the American robin, broad-tailed hummingbird, red-tailed hawk, black-billed magpie, Stellar's jay, dark-eyed junco, pine siskin, and mountain chickadee.

The Endangered Species Act requires NPS to identify and manage federally listed threatened or endangered species. NPS at RMNP also manages state-listed threatened or endangered species, species of concern, and species that are sensitive or rare to RMNP. There are 69 endangered, threatened, or rare species known to occur at RMNP including three species of amphibians, 16 species of birds, three species of fish, seven species of mammals, 12 species of invertebrates (insects), one species of mollusk, and 27 species of plants. Appendix A provides a detailed list of the threatened, endangered, and special status species (flora and fauna) at RMNP.

3.2.4 Natural Quiet, Sounds, and Lights

Rocky Mountain National Park contains various tangible natural and cultural features, such as animals, plants, waters, geologic features, and historic buildings. The Park also contains intangible qualities such as natural quiet, solitude, space, light, night sky, and scenery. Both tangible and intangible resources are equally important in management decisions affecting park resources.

In much of RMNP and especially the backcountry, the dominant sounds are of wind, rustling vegetation, and animal calls. The wilderness areas are free of most man-made noises from machinery and motor vehicles. A noise study was completed for RMNP with regards to aircraft overflights, and Section 126 of an Omnibus Bill signed in 1998 permanently banned commercial air tours over RMNP.

Night sky free from light pollution is considered an important resource. With increasing development along the Front Range and other metropolis areas, it has been increasingly difficult to find areas with no artificial lighting at night. The wilderness at RMNP provides the opportunity to view the surrounding scenery in natural light and the night sky with stars, comets, and meteor showers without the interference of artificial lighting.

About 95 percent of RMNP is proposed or designated wilderness, where natural quiet and natural light are considered important resources. The NPS strives to preserve the natural quiet, the natural sounds, and the natural light associated with the physical and biological resources of the Parks. Activities causing excessive or unnecessary unnatural sounds in and adjacent to parks are monitored, and actions are taken to prevent or minimize unnatural sounds that adversely affect park resource or values or visitors' enjoyment of them (NPS 77, 1994).

3.2.5 Air Quality

The Clean Air Act amendment of 1977 recognizes the need to protect visibility and air quality in National Parks. By definition, wilderness areas and National Parks, including RMNP, are mandatory Class I areas, providing for the least amount of development that could potentially affect air quality. Visibility is impaired in RMNP about 90 percent of the time, primarily due to outside sources including Colorado's Front Range, and as far away as Mexico, Texas, Los Angeles, and California. The average summer (June-August) viewing distance from RMNP is 83 miles (111 kilometers), 50 percent of the time. Viewing distances can vary from a high of 120 miles (194 kilometers) on a clear day to a low of 30 miles (49 kilometers) on a high pollution day (RMP 1998).

Increasing development around the park boundary, as well as along the Front Range from Colorado Springs north to Fort Collins, affects air quality at RMNP particularly when winds blow from the northeast, east, and southeast. Recent research indicates that air pollution may be altering soils and native plant composition, which in turn may be promoting the growth of certain annual exotic plants (Stohlgren et.al., 1998). Research also indicates that nitrogen deposition along the Front Range of Colorado, including RMNP, is greater than any other states west of the Mississippi River, except for parts of California (Williams et. al. 1996).

In 1993, RMNP exceeded the National Ambient Air Quality Standard (NAAQS) of .12 parts per million (ppm) for ozone. This was the first exceedance since ozone monitoring began. Ozone can be harmful to humans, wildlife, and particularly damaging to some species of plants at levels above .08 ppm (Peterson and Arbaugh, 1989). Since 1987, ozone levels of .08 ppm and above have occurred at least 130 times. There is a concern that with the development occurring along the Front Range, particularly in the Denver/Boulder area, that more exceedances of ozone could occur.

Research in RMNP at Loch Vale indicates nitrate levels are increasing in the high elevation lakes. This could have a negative affect on native plants and cause an increase in exotic plants. Nitrogen saturation is occurring throughout high-elevation catchments of the Colorado Front Range. Data from Loch Vale indicates winter precipitation does not appear to be harmful at this time, but snowpacks accumulate up to seven months a year and melt off within a short period of time, causing a pulse of contaminants. Nitrogen saturation in forested ecosystems has been linked to serious environmental impacts, causing damage to foliage, premature needle drop, and decline in tree vigor (Williams et al., 1996).

Atmospheric deposition (acid rain or acid precipitation) occurs at RMNP, particularly during the summer months. The average pH measured from precipitation near Park Headquarters and also at Loch Vale is below 5.0 during the summer months, or below natural levels (Keigley and Porter 1986, Baron, 1991). The effects of acid rain on resources in RMNP including air quality, wildlife, water quality, vegetation, and the ecosystem are being studied, and are varied and complex (Fish and Wildlife Service 1982).

3.2.6 Cultural Resources

Archeological Resources

To date, of the 265,769.14 acres (451 square miles) in RMNP, only about 10 square miles has been surveyed for prehistoric or historic archeological sites. Over 500 prehistoric and historic archeological sites have been recorded as of the summer of 2000. However, few have been tested or evaluated for the National Register of Historic Places and the understanding of RMNP's prehistory is only known from small and incomplete surface collections.

Present evidence indicates that RMNP and the surrounding area was utilized for hunting and gathering activities over a period of about 10,000 years. Current information suggests that occupations were mostly in the summer and fall of the year. Of the archeological sites that have been recorded to date, most are campsites and isolated finds, but game drives and probable vision-quest sites are known. Other site types include isolated hearths, cairns, trails, culturally peeled trees, and collapsed wickiups. It is estimated that RMNP is likely to contain several thousand sites of all types.

Excavation has only been conducted on three sites in RMNP, and from less than a dozen sites in the mountains outside the Park. Such excavations are important for management and interpretation and provide necessary knowledge about the high-altitude prehistoric occupations for all time periods in RMNP.

Ethnographic Resources

Ethnographic data for this area is not well documented and little is known about cultures that were in the area prior to Euroamerican settlement beginning in 1860. The first settlers entering the area in 1860 made no mention of Native American activities. The Ute are suspected as having been the original inhabitants of the area, and may have been in the mountains for at least 6,000 years. Culturally peeled trees and the remains of collapsed wickiups have been recorded and suggest historic Ute occupations to possibly as late as 1890. A report of a pack trip through RMNP in 1914 with several Arapaho indicated that the area has been used on a continuing basis by the Arapaho from ca. 1790 to about 1860. The report of the trip also suggests that visitors may have included the Pawnee and Sioux. Recent research has indicated that people of Apache affiliation were in the Park, at least sporadically, beginning about AD 1500.

A continuing study involving contemporary Ute and Arapaho is being conducted with on-site visits and on-going consultation with tribal representatives. The study is designed such that confidential information will remain so. Information on Native American occupations is critical to managing the Native American Traditional Cultural Properties and sacred sites.

Historic Resources

Rocky Mountain National Park contains 146 historic structures which are eligible for listing or enrolled in the National Register of Historic Places (NRHP), 18 of these historic structures are presently identified within the backcountry or recommended wilderness. Other sites and remnants include glimpses of mining activities of prospectors, ranches of early homesteaders, rustic mountain lodges and hotels of entrepreneurs and buildings of the original park administration.

Several historic trans-mountain water diversion projects also exist within RMNP backcountry or recommended wilderness. One of the most significant is the Grand Ditch which runs for 14.3-mile on the east side of the Never Summer Range. The long ditch was begun in about 1895 and was completed in 1932. It crosses the Continental Divide and brings water from the west slope to the eastern plains. The Grand Ditch, Specimen Ditch, and the archeological remains of seven-associated ditch camps are National Register properties.

Cultural Landscapes

The McGraw Ranch is the only area in RMNP that has been documented as a cultural landscape. Part of the ranch is within recommended wilderness. Other areas within the backcountry and wilderness may be identified and considered for cultural landscape inventories in the future (e.g., Grand River Ditch, Fern Lake, Lawn Lake, North Fork, Thunder Lake Patrol Cabins and Reichhardt Property).

Historic Trails

Several trails, used by Native Americans, are known to have been in existence well before the turn of the century. The Ute (or Child's) Trail begins in Upper Beaver Meadows and extends over

Forest Canyon Pass to Beaver Creek north of the Timber Creek Campground. The Ute Trail roughly parallels Trail Ridge Road. The Deer Trail split from the Child's Trail at Poudre Lake and traversed Milner Pass to Deer Creek and the North Fork of the Colorado. The present Flat Top Trail incorporates most of the protohistoric Big Trail from Bierstadt Lake and over the divide and down into Big Meadows. The Dog Trail followed the Fall River. It is suspected that these, and many other trails, had their origin in prehistoric times.

3.2.7 Local Socioeconomics

Rocky Mountain National Park is one of the more popular tourist attractions in the State of Colorado. Based on the NPS Money Generation Model, about $206.7 million in revenue is generated each year from visitors, and about 4,135 people related to the tourist industry are employed in the counties surrounding RMNP including Boulder, Larimer and Grand counties. The average amount of money spent in the area is about $150 for 24 hours, or roughly $90 on lodging and $60 on food, retail, and other amenities.

Along the East Slope of the Front Range is the growing metropolitan area that extends from Cheyenne, Wyoming, on the north, to Pueblo, Colorado, on the south. There are about three million people living in this area, all within a relatively short driving distance to RMNP. The Town of Estes Park is the gateway community on the east side of RMNP and Grand Lake is the gateway community on the west side. The full-time population is 5,229 within the Estes Park town limits and 10,038 in the Estes Valley (including Estes Park). The full time population in Grand Lake is 500 and about 5,000 in the area between Grand Lake and Granby.

3.2.8 Visitor Use and Experience

Humans have visited the land within the boundaries of RMNP for over 11,000 years. The first visitors were in search of game and used game trails that lead over the Continental Divide. It was not until the mid-1800's that early explorers began to visit the Park, and it was not until the late 1800s when the area was first homesteaded. Visitors have been coming to the area for recreational purposes for over 100 years.

Visitation at RMNP has been increasing since 1915 when the Park was established. There were 13,000 visitors the first year RMNP opened. For the past decade, visitation has been increasing approximately two percent per year. Since 1994, visitation at RMNP has exceeded 3 million visitors a year. Overnight use in the backcountry has also been increasing. In 1984, a total of 6,536 backcountry permits were issued, in comparison to 8,344 permits in 1998, a 28 percent increase.

Visitor exit surveys were conducted in 1994 and 1995 to assess visitor demographics and visitor experience (RMNP 1994). Feedback from these surveys allows park managers to maintain key attractions, establish park guidelines, estimate visitor needs, and provide an overall positive experience for visitors. Results of these surveys indicate that:

- The average age of visitors is 46 years old;
- 40 percent of visitors live in the intermountain region of the U.S.;
- 38 percent of visitors are from Colorado;
- 36 percent of visitors are from the Front Range in Colorado;
- The average length of stay for day users is 2 hours and 45 minutes;
- The average length of stay for overnight users is 3.33 days;

- The scenery is the main attraction for 72.6 percent of respondents;
- Photography is another main attraction for 48.8 percent of respondents; and
- The most important features at RMNP are natural scenery, clean air, clean water, wildlife, tranquility, undeveloped vistas, alpine tundra, and night sky.

3.2.9 Park Operations

Because 95 percent of RMNP is recommended or designated wilderness, many park operations require access into or through wilderness areas. Activities in these areas range from construction, maintenance, and monitoring, to emergency rescue operations. Park operations that occur most frequently in wilderness areas and /or have the most potential to affect wilderness areas include:

- **Backcountry Permit System Administration** which includes issuing permits for backcountry use per standards set in this Plan.

- **Campsite Management** which involves the rehabilitation, maintenance, and monitoring of existing or new campsites.

- **Trails** which includes maintenance and monitoring of existing or new trails, bridges, and foot logs.

- **Climbing** which involves the maintenance and monitoring of climbing routes and bolt systems.

- **Research and Resource Monitoring** which includes natural and cultural resource and research projects.

- **Aircraft Use** which includes routine and non-routine flights. Routine flights include trail projects, fire monitoring, and wildlife surveys. Non-routine flights include emergency rescue operations and fire maintenance.

- **Emergency Rescue Operations** which requires vehicular support via motor vehicle or aircraft into wilderness areas.

- **Facilities Management** which involves limited maintenance or construction of facilities located within the wilderness boundaries, including waste or food management systems.

- **Wilderness Interpretation and Education Programs** which allow for groups to be escorted into wilderness areas by a RMNP staff member to learn about the natural and cultural resources found in wilderness areas and how to protect those resources.

Currently, decisions relating to park operations in wilderness are guided by the 1984 Backcountry Management Plan, plus policies and guidelines that are not formalized, but generally followed. Larger projects requiring senior management approval undergo Minimum Requirement analysis, but other actions may occur without this review and approval, since there are no written standards for this process.

4.0 ENVIRONMENTAL CONSEQUENCES

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Impact Assessment Methodology

This chapter describes the effects, or potential impacts, on the natural, cultural and social aspects of the wilderness at Rocky Mountain National Park (RMNP or the Park) from implementation of the proposed action and the No Action Alternative considered in this EA. The topics discussed are the same as those described in Chapter 3, Affected Environment.

The various provisions of the alternatives were analyzed against the resources or activities that would be impacted by implementation of the alternatives. Impacts were identified and assessed based on a review of relevant scientific literature, previously prepared environmental documents, and the best professional judgement of EA team resource specialists.

Impacts are described in general terms and are qualified as short-term and long-term, adverse or beneficial, as appropriate. If any impacts could be considered significant, this is so noted. Impacts may be direct, indirect, or cumulative. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by the action and occur later in time or farther removed from the place, but are reasonably foreseeable. Cumulative impacts are impacts from the action added to other past, present, and reasonably foreseeable future actions and can result from individually minor, but collectively significant, actions taking place over time. Cumulative impacts are addressed at the end of this chapter.

Further site-specific proposals that may affect wilderness in RMNP after approval of this plan may require additional surveys or reviews and associated environmental compliance documentation. Additional environmental analysis will be completed where more site-specific analyses are warranted.

4.2 Impacts on the Natural, Cultural, and Social Aspects of the Wilderness Resource

Director's Order #55: Interpreting the National Park Service Organic Act, makes it clear that the preservation of the resources is paramount, and the provision of enjoyment to visitors is secondary. However, the 1915 Act establishing RMNP also directs the freest use of the park by visitors. The 1976 Master Plan for RMNP recognizes humans, where present, as part of the park ecosystem, but the major emphasis is on the perpetuation of natural processes. If unacceptable impacts occur to park resources from recreational activities, the park will make every effort possible to correct the problem.

The adoption and implementation of the proposed Backcountry/Wilderness Management Plan would enhance protection of all of the natural resources of RMNP by providing continuity of management throughout changes of park administration and staff. With an established written plan, there would be less uncertainty about appropriate activities in wilderness for both park staff and the public. The standards and guidelines included in the plan would help to eliminate variations in how, where, and to what extent activities or operations occur in park wilderness and to what extent resource protection is applied.

The following provides a more specific description of impacts expected to the natural, cultural, and social aspects of the wilderness resource.

4.2.1 Geology, Soils, and Vegetation

Alternative A: Proposed Action:

Adverse impacts to geology, soils, and vegetation as a result of authorized visitor and park staff use of wilderness may include soil compaction, vegetation trampling and loss, increased erosion, development of bare areas, and the introduction of invasive exotic plants, especially in more heavily used areas such as trails and campsites. Use of campfires can cause removal of biomass and alteration of soil chemistry, along with vegetation and soil disturbance from gathering firewood near campsites. Spike camps from fire suppression and other activities could cause impact vegetation and soil and cutting of trees and digging could occur in certain situations. Trails act as conduits for invasive species introductions and is the major source for introducing exotic plants into the backcountry. Most of these impacts would be direct, localized in extent, and but long-term, if corrective actions are not taken. Higher-use areas (Management Classes 3 and 4) would be most prone to these types of impacts due to the number of visitors and frequent use of these areas. Management Class 1 and 2 areas would also be prone to these types of impacts; however, the magnitude and occurrence of these impacts are likely to be less severe in these lower-use areas.

Climbing activities can also contribute to the degradation of soils and vegetation and can have adverse impacts on park geological features. Climbers who bushwhack to gain access to the base of cliffs can create steep approach trails that channel runoff, causing soil loss, trenching, and loss of vegetation. Heavy use at the base of cliffs, including the development of social trails that parallel the base, causes localized soil compaction and vegetation trampling/loss. Climbers also sometimes glue or chip in holds on the rock surface and place fixed anchors in the rock, thus altering the features of the Park's surface geology.

The proposed Backcountry/Wilderness Management Plan formalizes many of the protective measures now being implemented by park staff and includes additional standards to protect soils and vegetation of RMNP. These provisions are expected to result in beneficial, long-term impacts to the Park's soil and vegetation resources. The plan includes limits on the presence and size of bare ground areas, group sizes and campsite sizes, and prohibits the construction of new campsites, trails, and several other types of facilities. It requires use of the Minimum Requirement Concept and minimum tool analysis for working in the wilderness and includes a monitoring system to track vegetation damage and soil erosion at day use areas. Implementation of these and other standards and guidelines in the proposed plan would reduce or minimize bare ground areas, trail and campsite development in the backcountry, and vegetation trampling, thereby reducing erosion, soil compaction, and direct vegetation loss. Other provisions in the proposed plan that would benefit RMNP's soil and vegetation resources include the following:

- Site rehabilitation provisions in the plan, including monitoring vegetation damage and soil erosion at day use areas, will help to improve protection of the Park's vegetation and soils by requiring revegetation and soil stabilization at disturbed sites. This would also serve to limit the opportunity for the establishment of exotic plants and noxious weeds.

- Guidelines for procurement and use of native materials, including rock, soil, and wood, for campsite and trail maintenance would reduce adverse impacts to soil and vegetation from extensive or inappropriate uses of these materials.

- Education and wilderness interpretation programs will help increase public awareness of the importance of RMNP's soil and vegetation resources and will help reduce or modify

visitor activities that negatively impact these resources such as the development of social trails.

- The plan calls for hardening and maintenance of specific climbing access trails to prevent further erosion and loss of vegetation by establishing a pattern of use in one area. In certain instances, signs will be placed to direct climbers away from sensitive areas. Gluing and chipping of holds are specifically forbidden in the proposed plan.

Application of the Minimum Requirement Concept will limit use of mechanized equipment for maintenance and construction in the backcountry. This may mean that work crews must spend a longer time in the wilderness to accomplish the required operation, or that routes must be taken across wilderness to reach a more remote area, if helicopter use is not an option. This could have a short-term, adverse impact on vegetation and soils in the areas where crews are working.

Minimum requirement concept applications such as requiring the use of certified weed seed free hay by commercial liveries and also for private citizens who want to bring hay into the park and no hay allowed in the backcountry will minimize invasive exotic species impacts. Educating visitors about how they can prevent spreading seed in the backcountry will also benefit native vegetation.

Alternative B: No Action:

Under the No Action Alternative, current management policies and procedures would continue, with no specific standards for bare ground areas and no monitoring programs to track vegetation and soil damage in day use areas and campsites. Group sizes in day use areas would be handled on a case-by-case basis, with no formal recommendations on group size. There would be no comprehensive guidelines for the procurement and use of native materials, and no standards for locating work crew camps or for use of campfires in these camps. Climbing access trails would not be defined, hardened, and maintained, and there would be more social trails and dispersed impacts on soils and vegetation. Education programs relating to protection of wilderness resources, including soils and vegetation, would not be expanded. If mechanized equipment is used more frequently due to less consistent use of Minimum Requirement analysis, there may be greater adverse impacts from off-road vehicle (ORV) use, such as direct crushing of vegetation and soil compaction and rutting. However, if helicopter use is permitted for accessing remote areas, then this would reduce soil and vegetation impacts that would occur on the ground from work crews creating routes to remote areas. In general, there would be a greater chance of adverse impacts occurring, of the same type as described for Alternative A, with long-term, direct adverse impacts to vegetation and soils likely to occur along trails and in campsites and day use areas.

4.2.2 Wetlands, Floodplains, and Aquatic Resources

Alternative A: Proposed Action:

Use of wilderness by visitors and park staff may result in adverse impacts to aquatic resources, including water quality degradation, as a result of the introduction of soaps, food, and human wastes into streams, lakes, and wetlands. Increased sedimentation from bare ground areas, social trails, and streambank disturbance would also negatively impact water quality. Aquatic resources located nearest to campsites, trails, and day use areas would be most susceptible to direct water quality impacts as a result of human activity. Fire suppression during emergency situations could impact water from oil and gas from fire pumps, fire retardant. Most of these impacts would be direct, but not limited in extent due to pollutants or sedimentation being carried downstream or

dispersed through a water body. Some of these impacts, such as stream sedimentation and smothering of fish habitat, could be long-term if corrective actions are not taken. Higher-use areas (Management Classes 3 and 4) would be most prone to these types of impacts due to the number of visitors and frequent use of these areas. Management Class 1 and 2 areas would also be prone to these types of impacts; however, the magnitude and occurrence of these impacts are likely to be less severe in these lower-use areas.

Many of the provisions in the proposed Backcountry/Wilderness Management Plan that serve to protect soils and vegetation would also protect wetlands and aquatic resources. The limits on bare ground areas, development of trails, and group and campsite sizes would increase protection to park streams, lakes, and wetlands by limiting erosion and potential sedimentation impacts. The limits on new construction and provisions for site rehabilitation would also help to protect water quality by eliminating sources of sedimentation and runoff. Use of the Minimum Requirement Concept may limit use of mechanized equipment or vehicles for maintenance and construction, and the plan continues the prohibition of snowmobiles and motorized watercraft that may introduce pollutants such as oil and gasoline into the waters. However, similar to vegetation, if use of the Minimum Requirement Concept leads to a more lengthy stay or a different access route to accomplish a task, there may be short-term, minor adverse impacts to wetlands crossed by work crews or to aquatic resources located near spike camps.

The proposed plan specifically calls for protection and monitoring of water quality and aquatic life in RMNP. Camps, privies, washing, and disposal of wastes are prohibited within 200 feet of surface waters, providing a buffer to reduce the introduction of human waste, soaps, or food wastes into park waters. All of these provisions would result in continued and improved protection to RMNP's aquatic resources, a long-term beneficial impact.

Finally, the provisions for education and interpretive programs would help educate both park staff and visitors about the importance of the clean water and functional wetlands and floodplains provided by wilderness. Education on the proper disposal of human and food wastes and water conservation would especially help in maintaining the Park's water quality standards.

Alternative B: No Action:

Under the No Action alternative, current management policies and procedures would continue, with no specific standards established for the proximity of camps to surface waters resulting in potential adverse impacts to water resources. There would be no formal monitoring programs for park waters, trails, or campsites, which could lead to water quality degradation as a result of overused or mistreated areas. Group sizes in day use areas would be handled on a case-by-case basis, with no formal recommendations on group size. Education programs relating to the protection of aquatic resources, including the proper disposal of wastes and use of water, would not be expanded. If mechanized equipment is used more frequently due to less consistent use of Minimum Requirement Concept, there may be greater adverse impacts to water resources as a result of introducing pollutants and chemicals into the waters. In general, there would be a greater chance of long-term adverse impacts occurring as a result of human activity near or in park waters under Alternative B.

4.2.3 Wildlife and Threatened, Endangered, or Special Status Species

Alternative A: Proposed Action:

Impacts to wildlife and wildlife habitat may result from the use of the wilderness by visitors and park staff. Increasing numbers of humans using the backcountry in RMNP may prevent some wildlife species from taking advantage of foraging opportunities within their home ranges, even where habitat remains intact. RMNP is concerned about the effect that recreation may be having on the natural environment, including wildlife. Human activities continue to expand into wildlife habitats in the park, and trails can cause habitat fragmentation. To minimize the impacts of recreation, park managers need to be aware of the effects of recreation activities and to understand how to mitigate them. Little information exists on the direct and indirect impacts of recreation on most wildlife species. However, these effects may create potentially cumulative or synergistic impacts to wildlife populations. Effects would include energetic response to humans and human facilities, habituation to human activities, and attraction or conditioning to humans.

Trails and human presence on trails has a direct impact on wildlife and some wildlife may intentionally avoid areas around trails or camp areas thus limiting the use of the habitat in certain areas. Soil compaction, vegetation loss and trampling, the introduction of pollutants into waters near campsites, bare ground areas, and trails may have adverse impacts on the habitat that certain species of wildlife use for food and shelter. Unnatural noises and lights from human activity may also disturb or startle wildlife. In particular, climbers often use specific vocal signals to facilitate safe ascent or descent, and noise can also come from use of drills or rock hammers. These auditory intrusions can disturb wildlife in the area of the climb, especially in popular climbing areas that are also prime habitat for wildlife. In particular, raptors, which frequently nest on rocks near established climbing routes, can be easily disturbed.

Most of these impacts would be direct, localized in extent; however, some, such as habitat degradation, could be long-term if corrective actions are not taken. Similar to the other natural resources previously discusses, higher-use areas (Management Classes 3 and 4) would be most prone to these types of impacts to wildlife due to the number of visitors and frequent use of these areas. Management Class 1 and 2 areas would also be prone to these types of impacts; however, the magnitude and occurrence of these impacts are likely to be less severe in these areas that are less frequently used. However, in relatively remote Management Class 2 areas used by overnight climbing parties, wildlife may be more sensitive to unnatural sources of noise.

Implementation of the proposed plan will help limit adverse impacts on park wildlife, including those species and individuals that are threatened, endangered, or of special status, resulting in a long-term, beneficial impact. The plan includes provisions that help to preserve and protect habitat, such as no new trails, site rehabilitation, control of non-native species, and limits on campsite sizes and number of visitors in camps and on trails at any one time. Guidelines for proper food storage and garbage handling would provide the information needed to help eliminate wildlife encounters at campsites and reduce chances of wildlife becoming accustomed to the presence of visitors. Although this plan would not necessarily result in smaller group sizes than are currently allowed, it would formalize the recommended limits and standards, allowing for more consistent application of the guidelines and limits already in place. The listed recommendations for group size limits of day use visitors, stock groups, and overnight campers would help to reduce negative encounters between wildlife and humans, including the exposure of large mammals such as deer, elk, and sheep to disturbance or harassment. Smaller group sizes would also mean fewer adverse impacts to wildlife from unnatural sounds and lights in the wilderness. The restriction on pets in

wilderness would continue which could help to reduce potential encounters and conflicts with wildlife.

Several provisions are also in the plan that would serve to minimize impacts to wildlife from climbers. Vocal calls would be discouraged, and power drills would not be allowed. The spring raptor closures program would continue. There would be increased monitoring of raptor activity in high use climbing areas, which would be temporarily closed if the monitoring indicates that adverse impacts would occur if these areas remained open.

Application of the Minimum Requirement Concept and minimum tool requirement may likely result in less use of mechanized equipment and vehicles, which would eliminate many sources of noise and lights from motor vehicles, aircraft, chainsaws, and other mechanized tools. Also, less use of ORVs or other mechanized equipment for trail or facility maintenance would result in less chance of an unintentional taking of (running over) small, non-mobile species. However, with extended stays in the wilderness to accomplish the required task, there may be more, but negligible, impacts to wildlife from lower level (human) noise as opposed to aircraft noise. Most species will temporarily avoid the area used by the work crews and return when the disturbance is gone and any adverse impacts to the habitat would be short-term and localized.

Finally, the education and interpretation programs in the plan would most likely include information on preventing and minimizing disturbance to all wildlife, thereby reducing the number and severity of impacts to wildlife or threatened and endangered species from visitor use.

Alternative B: No Action:

Under the No Action alternative, current management policies and procedures would continue, with no written guidelines for proper food storage and garbage handling procedures. This could result in inconsistencies or improper techniques employed by park staff or visitors. There would be no specific standards for bare ground areas and no monitoring programs to track vegetation and soil damage in day use areas and campsites that wildlife may also use. There would be no written recommendation regarding group size restrictions, and education programs relating to protection of wildlife and wildlife habitat would not be expanded. Climbing activities that create disruptive noise (e.g., drills) may not be as closely controlled, and raptor monitoring may be less intense. If mechanized equipment such as ORVs is used more frequently due to less consistent use of Minimum Requirement analysis, there may be greater adverse impacts such as unnatural noises and lights, direct crushing of vegetation or non-mobile species, and the introduction of pollutants into wildlife habitat. If helicopter use is permitted for accessing remote areas, then this would reduce impacts to wildlife habitat and wildlife encounters that would occur on the ground from work crews creating routes to remote areas, but increase noise impacts over a broader area affected by the noise from the helicopters. Under the No Action alternative, there would be a greater chance of adverse impacts occurring with long-term, direct adverse impacts to wildlife habitat and potentially more frequent human encounters with wildlife.

4.2.4 Natural Quiet, Sounds, and Lights

Alternative A: Proposed Action:

Use of the wilderness by visitors and park staff may result in adverse impacts to the natural scenery and solitude of the backcountry. Use of lanterns, flashlights, and campfires may impact the natural light and dark sky, and human noises may impact the natural quiet of the wilderness. Unnatural noises and lights may disturb other visitors or wildlife and impact the solitude of the

wilderness. As discussed under Section 4.2.3 (above), the vocal calls, drilling, and hammering noises associated with climbers can be intrusive, and can cause adverse effects to park visitors as well as to wildlife. These impacts tend to be short-term, direct impacts that disappear once human activity ceases in the wilderness. Higher-use areas (Management Classes 3 and 4) would be most prone to these types of impacts due to the number of visitors and frequent use of these areas. Management Class 1 and 2 areas would also be prone to these types of impacts; however, the magnitude and occurrence of these impacts are likely to be less severe in these lower-use areas, except for high use climbing areas where noise impacts could be a substantial intrusion on the wilderness experience of non-climbers in the area.

Implementation of the proposed plan will help limit adverse impacts and help protect the natural solitude of the wilderness. The plan establishes a recommended group size that would not necessarily result in smaller group sizes than are currently allowed, but would formalize the recommended limits and standards, allowing for more consistent application of the guidelines and limits already in place. Smaller group sizes would result in fewer adverse impacts to wildlife or other visitors from unnatural sounds and lights in the wilderness. The plan discourages the use of technologies such cell phones, radios, and computers in order to preserve the natural quiet of the wilderness. The plan prohibits use of loud drills and emphasizes discretion in the use of vocal signals while climbing. Guidelines in the plan for the use of native materials would help preserve the natural appearance and setting of the wilderness.

Application of the Minimum Requirement Concept and minimum tool requirement may likely result in less use of mechanized equipment and vehicles, which would eliminate many sources of noise and lights from motor vehicles, aircraft, chainsaws, and other mechanized tools. Noise and unnatural light from work crews would have a short-term, adverse impact on wildlife; however, most species will temporarily avoid the area used by the work crews and return when the disturbance is gone.

Finally, the education and interpretation program in the plan would most likely include information on the preservation of wilderness qualities including natural sounds and lights, quiet, dark sky, and solitude for the benefit of both humans and wildlife.

Alternative B: No Action:

Current management policies and procedures would continue under the No Action alternative, and there would be a greater chance of adverse impacts occurring to the solitude of the wilderness as a result of noise or light pollution. Under the No Action alternative, there would be no formal recommendations for day use group sizes. Therefore, the likelihood of larger group size that tend to have greater impact on natural quiet and light would exist. There would be no comprehensive guidelines for the procurement and use of native materials to help preserve the natural setting, and there would be no written recommendations regarding limiting sources of noise from climbing activities or the use of technologies such as radios or cell phones in the wilderness. If mechanized equipment is used more frequently by park staff due to less consistent use of Minimum Requirement analysis, there may be greater adverse noise and light impacts from ORVs, chainsaws, hand-drills, and other power tools in the wilderness.

4.2.5 Air Quality

Alternative A: Proposed Action:

Implementation of the proposed plan is not expected to have noticeable impacts on the overall air quality at RMNP, since the air quality is primarily affected by sources outside the Park boundaries. Some minor to moderate, but temporary sources of air emissions would continue, such as smoke from prescribed burns and wildland fires and exhaust from visitor transportation system vehicles. The plan calls for protection, restoration, and monitoring of air quality, a continuation and formalization of what is currently taking place in RMNP. There are also a few specific measures that would result in very localized and/or short-term benefits to air quality. For example, the provisions included in the plan to protect vegetation cover and soil resources, such as the limits on bare ground areas, would reduce the potential for fugitive dust emissions from bare or disturbed soils. Campfire restrictions as outlined in the plan would help reduce the amount and location of smoke, and would limit campfires to summertime only. Limits on motorized equipment and vehicle use that might occur through implementation of the Minimum Requirement Concept would reduce exhaust emissions, also a localized, short-term beneficial impact to air quality.

Alternative B: No Action:

Current management policies and procedures would continue under the No Action alternative, with no formalization of what is currently taking place in RMNP with regards to protection, restoration, and monitoring of air quality. Campfire standards and bare ground limits would not be formally established which might lead to a greater frequency of campfires or larger bare ground areas that promote localized fugitive dust. A less consistent use of the Minimum Requirement Concept may result in the more frequent use of mechanized equipment and thus more exhaust emissions in the wilderness.

4.2.6 Cultural Resources

Alternative A: Proposed Action:

Adverse direct impacts to cultural resources from use of the wilderness can occur if visitors accidentally or intentionally disturb, vandalize, or remove artifacts or features associated with an historic or archaeological site, or a traditional cultural property. Some trails or campsites in RMNP provide visitors access to the proximity of various cultural resources whereby use or visitation of these resources may have a direct adverse impact on the site. Vandalism can occur if visitors move, remove, or rearrange rocks from prehistoric sites, or logs at the remains of historic cabins. Park staff conducting routine ground disturbing activities during maintenance of trails or campsites has the potential to disturb cultural and archaeological resources. Because the entirety of RMNP has not been surveyed for cultural resources, there are cultural resource sites that have not been identified. Therefore, visitors or park staff working in the wilderness may unknowingly discover or disturb a previously undocumented cultural resource site.

Provisions formalized in the proposed plan address protection and research measures for preserving cultural resources. Protection measures as outlined in the plan include the rehabilitation, reconstruction, and restoration of archaeological and historic sites, objects, and features. The removal of historic structures is warranted when the structure is deemed hazardous and the site has been documented. The plan also establishes guidelines for cultural resource inventories and research that may include monitoring, remote sensing, surveying, documentation, and data recovery. Maintenance and evaluation of cultural sites, especially historic structures,

would continue. Long-term research or restoration activities would require permission through the review the Project Proposal/Clearance Process.

Under the proposed plan, all cultural resource management activities and research would be subject to the Minimum Requirement Concept. This could have an adverse impact on cultural resources if the limits imposed restrict the amount of access to a site or limit the type of equipment (e.g., remote sensing equipment) that can be used at the site. Research would have to be deemed necessary and appropriate in wilderness under the plan and there may be instances where archaeological research could be restricted to protect other resources.

The plan contains other provisions that would result in long-term, beneficial impacts to cultural resources. For example, direct road closures could limit access to cultural resources and the possibility of looting or damage to these sites. The guidelines as set forth in the plan establish the use of native materials that enhance the natural setting of historic features and structures and traditional cultural properties as used by the Native Americans.

Limits on commercial services (also covered in the Commercial Services Management Plan) and restrictions on new trails and bridges would also serve to limit visitor access into wilderness and possible adverse impacts on cultural resources in the area. The proposed recommendation on day use group sizes, along with the limits currently set on other group sizes, would serve to reduce adverse impacts from large groups on unprotected resources. The planned wilderness education and interpretation programs would serve to educate park visitors and employees about the importance and sensitivity of cultural resources.

Alternative B: No Action:

Under the No Action alternative, current management policies and procedures would continue, with no written guidance for cultural resource management in wilderness. No consistent protocol would be established for project work crews other than contacting the park archaeologist as necessary. Group size recommendations and limits on commercial services would not be established, and comprehensive guidelines for use of native materials would not be formally addressed. In general, under the No Action alternative, there are fewer standards that are formally established for the protection and research of cultural resources.

4.2.7 Local Socioeconomics

Alternative A: Proposed Action:

Use of the wilderness by park visitors has an indirect positive effect on the local economy, since these visitors often obtain supplies, food, and lodging in the surrounding towns, and RMNP employs local residents. The proposed plan should have little, if any, overall effect on the local socioeconomic resource. Most of the provisions in the plan have been in effect for some time, since the Park is required to manage recommended wilderness in the same manner as designated wilderness. No significant adverse or beneficial effect has been noted, based on the current conditions, and no substantial change is expected from the implementation of any new plan provisions.

The group size limits in the proposed plan are the same as are currently imposed, with the day use limits proposed as recommended numbers only. The Backcountry Permit and Reservation System remains the same as was established in the 1984 Backcountry Management Plan. Trails would be more limited, since no new construction would be permitted, and the Minimum Requirement

Concept would be required for trail maintenance. However, the current system of trails provides a sufficient system to distribute use and allow visitors to experience the Park, and the basic provisions in the proposed plan do not alter that condition.

The proposed plan emphasizes wilderness interpretation and education programs at RMNP, which may attract visitors interested in this type of program, thus creating some additional economic benefits to local businesses. Other visitors may not want programs or may perceive the guidelines and NPS standards to be too restrictive for their desired wilderness experience. These users may be drawn to neighboring USFS areas. In any case, the number of visitors at RMNP is not expected to substantially change because of the adoption of the plan or to affect the local socioeconomic conditions.

Alternative B: No Action:

Under the No Action alternative, current management procedures and policies would remain the same, which would not be significantly different than the Proposed Action. No measurable beneficial or adverse impacts to socioeconomics would be expected under this alternative.

4.2.8 Visitor Use and Experience (including Natural Quiet, Sounds, and Lights)

Alternative A: Proposed Action:

The impacts of the permitted uses of wilderness described in the proposed plan on park visitors depend on the expectations and values of the individual visitor. The presence of visitors and park staff in wilderness results in unavoidable adverse impacts on several critical wilderness values, especially solitude. Camping and hiking, climbing activities, and performing work in wilderness can all result in visual and noise intrusions and can negatively affect visitor experience, especially if litter or other indications of use are left behind.

Climbing activities are associated with some unique potential adverse impacts on visitor experience in the Park, primarily because of visual impacts associated with climbing equipment and aids. Slings, bolts, white chalk, and athletic tape are visually intrusive in wilderness areas. Also, climbers sometimes scrape soil or rock form the climbing face, which can cause visual scars on the landscape. Climbers may also deposit fecal material at the base of cliffs or where it cannot be buried, which can result in both aesthetic and potential health impacts to park users. The magnitude of these impacts on visitor experience will vary, depending on the visitor's attitude toward climbing and their proximity to the climbing activity.

The Management Class system detailed in the proposed plan helps to provide the opportunity for different wilderness experiences in different areas of RMNP. The different classes are differentiated by the amount of risk, unnatural disturbance allowed, and challenge, and therefore vary considerably in the extent solitude that visitors may experience. Restricting certain activities, group sizes, and uses in the more pristine classes somewhat negatively impacts the personal freedom of the visitor. However, these restrictions result in a beneficial impact to users of these areas who desire a more primitive experience. For example, limits placed on group size are anticipated to enhance the visual quality and experience of the wilderness , since fewer individuals would be seen.

The proposed plan restricts certain activities or facilities that support recreational use (such as campsites, trails, bridges, signs) and practices/facilities that are associated with managing wilderness (trail clearing, ranger stations) in the more pristine classes or in all wilderness areas,

depending on the activity. The plan also place restrictions on visually obtrusive climbing aids and practices. These provisions would contribute to a beneficial impact to those users seeking a true wilderness experience, but possibly a negative impact to those users needing or wanting more developed facilities or to climbers needing or desiring more equipment to assist in their ascents and descents. For example, the proposed plan calls for no new signs or bridges in some areas. This would likely have a negative impact on those visitors who require more assistance in crossing streams and finding routes, and would result in the visitor needing a greater skill level for hiking and route finding to access these areas. However, other visitors desiring a more pristine outdoor experience see this as a benefit, allowing them to experience more challenges.

Of particular importance is the inclusion of the Minimum Requirement Concept requirement in the proposed plan. Specifically, only hand tools and traditional practices are allowed in Class 1 areas under non-emergency conditions, and all management actions in wilderness must complete a Minimum Requirement Analysis worksheet to review and approve what actions are appropriate and necessary. This provision may result in reduced use of mechanized equipment, including helicopters and other vehicles, in wilderness, thus reducing potential adverse noise and visual impacts to visitors from these sources.

The group size limitations in the plan are the same as currently used, with recommended maximum day use group sizes. If these limits are strictly followed, there may be a minor adverse impact to larger day use groups, but a beneficial impact to smaller groups not wanting to see or hear larger groups of visitors. The plan helps to maintain the wilderness experience by limiting exposure to noise and views of other campers.

Some provisions of the plan limit or place guidance on use of native materials, social trails, and bare ground and provide for site rehabilitation. These elements would help to limit adverse visual impacts to visitors by maintaining the more natural appearance of RMNP. The Leave No Trace program would also contribute to a long-term, beneficial visual impact on visitor experience in park wilderness.

Alternative B: No Action:

Current management practices and policies for wilderness would continue under the No Action alternative. There would be no formal guidelines for recommended group size limit, campground standards, or bare ground limits. This alternative also does not establish a protocol for Minimum Requirement Analysis procedures. Without these formalized guidelines, recommendations, and procedures, activities performed by the park staff in wilderness would not be standardized and may result in actions that could negatively impact the wilderness experience of visitors desiring a more primitive environment. Education and interpretation programs would not be expanded, which would limit visitor appreciation of wilderness and education about wilderness values and protection.

4.2.9 Park Operations

Alternative A: Proposed Action:

The use of wilderness by park visitors means that park operations must provide for a satisfying, but safe, experience in these areas. Therefore, many park operations in wilderness include such activities as maintenance of trails and facilities, monitoring of conditions, and emergency operations. The proximity of the wilderness to other public and private lands means the park must also conduct certain operations for risk management purposes such as the prescribed fire program and manual hazard fuel reduction. The proposed plan is expected to have both beneficial and

adverse impacts on park operations, since it will provide more specific, consistent direction, but also place limitations on management options in wilderness.
The most important long-term, beneficial impact on park operations is the plan's documentation and formalization of standards, limits, guidance, and policies for actions in wilderness. Park administration and personnel change over time, and the proposed plan would provide for continuity and consistency of management, decreasing variability and uncertainty about appropriate activities in wilderness. By attending training, implementing the Minimum Requirement Concept procedures and participating in the education/interpretation program and Wilderness Steering Committee called for in the plan, park staff would receive a beneficial impact personally and professionally from the increase in knowledge about RMNP's wilderness management needs.

Implementation of the plan's provisions would also have some adverse impacts on park operations. The use of the Minimum Requirement Concept analysis for all activities in wilderness may limit or eliminate some management options, especially options involving the use of mechanized equipment (including helicopters). This, in turn, may increase costs of construction, maintenance, or other activities, because of the increase in time and labor involved reaching remote sites or performing work with hand tools. The use of the process itself, including the consistent use of the Minimum Requirement Analysis worksheets and associated approvals and filing of documentation, would likely increase labor and office costs to some extent, but not significantly. There is the distinct possibility that more staff support may be needed for completion of certain operations under the Minimum Requirement Concept process and for the proposed enhanced education/interpretation programs and Steering Committee work. Indirectly, this would result in an indirect beneficial effect, since the plan's implementation will provide more documentation of staff and equipment needed to support appropriate budgetary decisions. This would help to ensure that wilderness management responsibilities are met in accordance with NPS Wilderness Management Guidelines.

There may be minor, adverse impacts on research and monitoring activities from implementing the Minimum Requirement Concept and certain limitations in the plan. Research activities often include collection or alteration of wilderness resources. Vegetation and soils can be altered directly as part of the research or through research-related activities such as travel to the site and camping. The presence of research equipment can intrude upon the quality of the visitor's wilderness experience. Restrictions placed on research activities and equipment may serve to limit impacts to resources and visitors, but the actual park operations may be negatively affected, either limiting research options or locations. Under the plan, there may be a greater number of areas where researchers would have less flexibility in their activities, given consistent application of Minimum Requirement analysis.

Alternative B: No Action:

Under the No Action alternative, current management policies and procedures for wilderness would continue, including no formalized guidelines for adhering to the Minimum Requirement Concept and completing Minimum Requirement Analysis worksheets for projects to be conducted in wilderness. Without these guidelines, there are no written protocols that formalize and standardize activities such as facility maintenance, trail, or campsite construction, and research projects. Park staff's actions would be subject to varying interpretation of unwritten standards, potentially resulting in inconsistent use and protection of the wilderness. If the Minimum Requirement Analysis process is not completed for all projects, there may be fewer labor costs, but there would also be incomplete documentation of staff and equipment needed to implement the management policies included in R.M. 41 and Directors Order #41. If education and interpretation programs and Wilderness Steering Committee are not expanded or established, park operations

could suffer if staff are not adequately prepared to answer visitor inquiries or if the program at RMNP does not follow mandated NPS policies.

4.3 Cumulative Impacts–All Resource Areas

Cumulative impacts result from the incremental impact of the proposed action, when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person (public or private) undertakes such other actions.

In the case of the implementation of the proposed plan, cumulative impacts include impacts from the use of RMNP wilderness allowed under the plan, plus impacts from the use of other wilderness areas and private lands surrounding RMNP, over the reasonably foreseeable future.

Rocky Mountain National Park is surrounded on nearly all borders by land managed by the U.S. Forest Service, much of which is wilderness (see Figure 1-3). A small portion of land around the Grand Lake area on the west side of the Park is privately held, as well as a larger strip on the eastern boundary of the Park running from approximately the YMCA camp to Allenspark. Development pressures on private lands in the area are intensifying as growth continues along the Front Range and the "baby boom" generation seeks mountain real estate to develop for recreational opportunities and retirement homes. Also, the USFS policies allow for more use in some cases in wilderness areas; e.g., campsites may be permitted in all areas of wilderness and fire may be permitted.

Implementation of the proposed plan would continue the cumulative, minor, adverse impacts that already exist due to the intrusion into wilderness by human visitors. However, the provisions in the plan and its consistent implementation would mitigate intrusions above and beyond the restrictions placed on private lands outside the Park and on some adjacent USFS wilderness, resulting in a cumulative beneficial impact to wilderness resources because of the increased resource protection and preservation of the wilderness character of the area. The plan would provide for long-term direction and guidance for activities in wilderness and there would be less chance to allow more use of the area, especially in Class 1 and 2 areas.

Alternative B would also result in cumulative minor adverse impacts and could also provide cumulative beneficial impacts, if unwritten standards and guidance are followed. However, if the interpretation of wilderness policy should change and varying emphasis is placed on wilderness preservation, cumulative adverse impacts to wilderness could occur.

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5.0 CONSULTATION AND COORDINATION

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In preparing the proposed Backcountry/Wilderness Management Plan/EA, the NPS consulted with internal NPS staff, other agencies, and the public, through public scoping meetings, public announcements, web page development, and solicitation of comments. Initial scoping information, mailers, and updates were sent to a mailing list of 161 individuals and the following groups and organizations:

Regional, State, and Local Agencies

- Eldorado Canyon State Park
- Colorado State Forest
- Colorado Division of Wildlife
- State Historic Preservation Officer
- Colorado State University
- Larimer County Parks
- Boulder Open Space
- Boulder Mountain Parks
- Town of Estes Park
- Town of Grand Lake
- Town of Estes Park Chamber and Resort Association
- Town of Grand Lake Chamber of Commerce

Federal Agencies

- National Park Service
  - Washington Office
  - Intermountain Regional Office
- US Forest Service
  - Region 2
  - Arapaho/Roosevelt National Forests
  - Boulder Ranger District
  - Canyon Lakes Ranger District
  - Sulphur Ranger District
  - Clear Creek Ranger District
  - Pawnee National Grasslands
- US Fish and Wildlife Service
- Arthur Carhart National Wilderness Training Center
- Aldo Leopold Wilderness Research Institute
- US Congressional Delegation

Special Use Permittees and Area Camps

- Colorado Outward Bound
- The Road Less Traveled. Inc.
- Wilderness Ranch
- Overland Travel
- Colorado Mountain School
- Cheley Camps
- YMCA of the Rockies
- Camp Chief Ouray
- Snow Mountain Ranch
- High Peaks Camp
- Covenant Heights
- Camp Timberline
- Eagle Rock School
- Estes Angler
- Estes Park Mountain Sports

Regional Environmental and Special Interest Groups

- Rocky Mountain Nature Association
- Sierra Club
- Wilderness Society
- Colorado Mountain Club
- Leave No Trace, Inc.
- Boy Scouts of America
- Girl Scouts of America
- Backcountry Horsemen of Colorado
- The Access Fund
- Boulder Area Trails Coalition
- Grand Lake Partners for Trails
- Headwaters Trail Alliance
- Continental Divide Trail Alliance
- National Outdoor Leadership School
- Loveland Mountain Club
- Colorado Fourteeners Initiative
- Wilderness Watch
- Northern Colorado Trail Riders
- American Mountain Foundation
- American Alpine Club
- Kent Mountain Adventures
- American Mountain Guides
- Desert Ice Mountain Guides
- National Parks and Conservation Association
- Trails Illustrated
- Indian Peaks Working Group
- Area Outdoor Shops

A draft of the Rocky Mountain National Park Backcountry/Wilderness Management Plan will be made available for a public review period. The purpose of the public review period is to ensure that all interested publics have an ample opportunity to review the proposed management actions identified within the Plan and provide the National Park Service with their thoughts, comments, suggestions, or recommendations on these proposals.

All comments and suggestions received during the public review period will be assessed by the National Park Service for their substance. Should significant comments and suggestions be received from the public, a decision will be made as to whether the draft document should be modified or amended to reflect these changes, or whether a full environmental impact statement should be prepared.

If no significant comments are received during the public review period from the general public, special interest groups, or other State and federal agencies, the draft Backcountry/Wilderness Management Plan will be finalized after the National Park Service completes a Finding of No Significant Impact (FONSI) document, as required by the National Environmental Protection Act of 1969. The proposed actions identified within the Backcountry/Wilderness Management Plan will then be implemented.

The public will be notified of the availability of the draft document through a variety of media vehicles including notices in local and regional newspapers and press releases sent to local TV and radio stations. Informational copies of the Plan will be available in the Boulder, Estes Park, Fort Collins, Grand Lake, Loveland, Longmont and Walden, Colorado public libraries; the Rocky Mountain National Park administrative offices in the Towns of Estes Park and Grand Lake, Colorado; and the National Park Service, Intermountain Regional Office in Lakewood, Colorado. Draft copies of the plan will be sent to anyone requesting one.

6.0 LIST OF PREPARERS AND PRINCIPAL CONTRIBUTORS

6.0 LIST OF PREPARERS AND PRINCIPAL CONTRIBUTORS

The Backcountry/Wilderness Management Plan Committee, led by Tim Devine, Wilderness Program Specialist, was the core team responsible for the development of the Backcountry/Wilderness Management Plan. Team members included:

- Steve Griswold, Trails Foreman, Olympic National Park, former RMNP Trails Foreman
- Bob Love, Colorado District Ranger
- Mark DeGregorio, Environmental Education Specialist
- Joe Arnold, Park Engineer
- Ken Czarnowski, Hydrologist
- Scot Bowen, Park Ranger, Shenandoah National Park, former RMNP North Fork Area Ranger
- John Chapman, Retired, former RMNP Assistant Superintendent

Additional assistance with plan development was provided by:

- Barry Sweet, Backcountry Office Manager
- Bill Butler, Archeologist and Cultural Resource Specialist
- Ron Thomas, GIS Specialist
- Carol Cross, Engineering Technician
- Dave Larson, Assistant Trails Foreman
- Doug Ridley, Fall River District Ranger
- Mark Magnuson, Wild Basin District Ranger
- Kurt Oliver, Thompson River District Ranger
- Jim Richardson, Park Ranger, Santa Monica Mountains NRA, former RMNP Colorado River District Backcountry Area Ranger

Major field work and countless hours of computer data entry and analysis were conducted by Kristen Meyer and Elena Hershey, Seasonal Wilderness Crew Members.

The public and Rocky Mountain National Park staff provided invaluable comments used to develop plan drafts and alternatives. NEPA guidance and essential comments were provided by Jeff Connor, Natural Resource Management Specialist.

Extensive document review was provided by Superintendent Randy Jones, Assistant Superintendent Tony Schetzsle and Division Chiefs Joe Evans, Resource Protection and Visitor Management; Bill Gwaltney, Interpretation; Ben Hawkins, Facilities Management and Larry Gamble, (Acting) Resource Management and Research.

Seasonal and permanent park staff inventoried and monitored wilderness conditions and assisted with computer data entry. Many Rocky Mountain National Park volunteers provided assistance in plan development, including wilderness monitoring and data entry and analysis.

General guidance and support was provided by NPS Wilderness Specialists Ruth Scott, Olympic National Park; Ralph Moore, Sequoia National Park; Laurel Boyers, Yosemite National Park; Roger Semler, Yukon-Charley Rivers/Gates of the Arctic National Park and Preserve; Steve Bair, Shenandoah National Park; and Greg Kroll, retired, former Arthur Carhart National Wilderness Training Center NPS representative.

Contract assistance in producing this document was provided by employees of URS Corporation : Nancy Van Dyke, Project Manager/Technical Writer; Cheryl Eckhardt, Technical Writer; and David Jones, Technical Reviewer.

Special thanks go to so many unnamed individuals whose love for the wild places of Rocky Mountain National Park have helped protect this precious place in the past, in the present, and for the future.

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APPENDICES

Appendix A
Endangered, Threatened and Rare Species (Revised March 2000)

Rocky Mountain National Park uses the following sources to identify endangered, threatened and rare species that must be protected if found within the proposed project site.

Agencies have a variety of ways of tracking and measuring the biological imperilment of species. The U.S. Fish and Wildlife Service (USFWS) determines if a given species needs protection under the Endangered Species Act. There are three primary categories to federal listing:

Federal Status Codes

LE **Federal Endangered** – Listed as endangered by the USFWS. The species is in danger of extinction throughout all or a significant portion of its range. Endangered species have legal protection under federal law.

LT **Federal Threatened** – Listed as threatened by the USFWS. The species is likely to become endangered within the foreseeable future. Threatened species have legal protection under federal law.

C **Federal Candidate** – The USFWS is considering federal listing.

The Colorado Division of Wildlife also maintains a list of imperiled species for the state of Colorado. There are three primary categories to state listing:

State Status Codes

E **State Endangered** – Listed as endangered by the Colorado Division of Wildlife. The species is in danger of extirpation throughout all or a significant portion of its range within the state of Colorado. State endangered species have legal protection under Colorado Revised Statues 33-2-105 Article 2.

T **State Threatened** – Listed as threatened by the Colorado Division of Wildlife. The species is likely to become endangered within the state of Colorado within the foreseeable future. State threatened species have legal protection under Colorado Revised Statues 33-2-105 Article 2.

SC **State Special Concern** – Listed as species of concern by the Colorado Division of Wildlife.

The Colorado Natural Heritage Program (CNHP), based in Fort Collins manages a large database and ranking system for Colorado species. Their ranking system has two primary components – a ranking for the global status of the species (G), and a ranking for that part of the range found within the state (S). Numeric extensions are added to these on a scale of 1 (extremely rare) to 5 (common).

Natural Heritage ranks should not be interpreted as legal designations. Although most species protected under state or federal endangered species laws are extremely rare, not all rare species receive legal protection.

Global Rank Codes

G1 Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or because of some factor of its biology making it especially vulnerable to extinction.
G2 Imperiled globally because of rarity (6 to 20 occurrences), or because of other factors demonstrably making it very vulnerable to extinction throughout its range.
G3 Vulnerable throughout its range or found locally in a restricted range (21 to 100 occurrences).
G4 Apparently secure globally, though it might be quite rare in parts of its range, especially at the periphery.
G5 Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
? Uncertainty about an assigned global rank.
T# Trinomial rank used for subspecies or varieties. These species are ranked on the same criteria as G1-G5.

State Rank Codes

S1 Critically imperiled in state because of extreme rarity (5 or fewer occurrences, or very few remaining individuals), or because of some factor of its biology making it especially vulnerable to extirpation from the state.
S2 Imperiled in state because of rarity (6 to 20 occurrences), or because of other factors demonstrably making it very vulnerable to extirpation from the state.
S3 Vulnerable in the state (21 to 100 occurrences).
S#B Refers to the breeding season imperilment of species that are not permanent residents.
S#N Refers to the non-breeding season imperilment of species that are not permanent residents.
SX Presumed extirpated from the state.
? Indicates uncertainty about an assigned state rank.

The Rocky Mountain National Park list of Endangered, Threatened and Rare Species does not include State Rank Codes S4 and S5 because these rankings indicate that the species is secure throughout its range.

Scientific Name	Common Name	Status		CNHP Rank	
		Federal	State	Global	State
Amphibians					
Bufo boreas Pop1	Boreal Toad	C	E	T1	S1
Rana pipiens	Northern Leopard Frog		SC	G5	S3
Rana sylvatica	Wood Frog			G5	S3
Birds					
Accipiter gentilis	Northern Goshawk			G5	S3B
Aegolius funereus	Boreal Owl			G5	S2
Amphispiza belli	Sage Sparrow			G5	S3B
Ardea herodias	Great Blue Heron			G5	S3B
Bucephala albeola	Bufflehead			G5	S1B
Bucephala islandica	Barrow's Goldeneye		SC	G5	S2B

Scientific Name	Common Name	Status		CNHP Rank	
		Federal	State	Global	State
Circus cyaneus	Northern Harrier			G5	S3B
Cypseloides niger	Black Swift			G4	S3B
Dendroica pensylvanica	Chestnut-Sided Warbler			G5	S2B
Falco peregrinus anatum	American Peregrine Falcon		SC	T4	S2B
Grus canadensis tabida	Greater Sandhill Crane		T	T4	S2B, S4N
Haliaeetus leucocephalus	Bald Eagle	LT	T	G4	S1B, S3N
Melanerpes erythrocephalus	Red-Headed Woodpecker			G5	S3B
Pandion haliaetus	Osprey			G5	S3B
Setophaga ruticilla	American Redstart			G5	S1B
Vireo olivaceus	Red-Eyed Vireo			G5	S3B
Fish					
Catostomus platyrhynchus	Mountain Sucker		*SC*	G5	S2?
Oncorhynchus clarki pleuriticus	Colorado River Cutthroat		SC	T3	S3
Oncorhynchus clarki stomias	Greenback Cutthroat	LT	T	T2T3	S2S3
Mammals					
Canis lupis	Gray Wolf	LE	E	G4	SX
Felis lynx canadensis	Lynx	LT	E	G5	S1
Gulo gulo	Wolverine	C	E	G4	S1
*Lutra canadensis**	Northern River Otter*		E	G5	S3S4
Sorex hoyimontanus	Pygmy Shrew			T2T3	S2
Sorex nanus	Dwarf Shrew			G4	S2S3
Ursus arctos	Grizzly or Brown Bear	LT	E	G4	SX
Invertebrates (Insects)					
Colorado luski	A Buckmoth			G?	S1?
Erebia theano ethela	Edward's Alpine			G4	S3
Hyles galli	Galium Sphinx Moth			G?	S3?
Oarisma edwardsii	Edwards's Skipperling			G4	S3
Oeneis polixenes	Polixenes Arctic			G5	S3
Pachysphinx modesta	Modest Sphinx Moth			G?	S3?
Paratrytone snowi	Snow's Skipper			G4	S3
Pyrgus ruralis	Two-Banded Skipper			G4	S3
Pyrgus xanthus	Xanthus Skipper			G3G4	S3

Scientific Name	Common Name	Status		CNHP Rank	
		Federal	State	Global	State
Speyeria cybele cybele	Great Spangled Fritillary			T5	S1
Speyeria hydaspe	Hydaspe Fritillary			G5	S2
Speyeria nokomis nokomis	Great Basin Silverspot Butterfly			T2	S1
Mollusk					
Acroloxus coloradensis	Rocky Mountain Capshell		SC	G?	S2
Plants					
Aletes humilis	Larimer Aletes			G2G3	S2S3
Aquilegia saximontana	Rocky Mountain Columbine			G3	S3
Botrychium echo	Reflected Moonwort			G2	S2
Bortychium lanceolatum var lanceolatum	Lance-Leaved Moonwort			T4	S2
Bortychium lunaria	Moonwort			G5	S2
Bortychium minganense	Mingan Moonwort			G4	S1
Bortychium pallidum	Pale Moonwort			G2	S2
Carex leptalea	Bristle-Stalk Sedge			G5	S1
Cyripedium fasciculatum	Purple's Lady's-Slipper			G4	S3
Cystopteris montana	Mountain Bladder Fern			G5	S1
Draba grayana	Gray's Peak Whitlow-Grass			G2	S2
Drymaria effusa var. depressa	Pinewoods Drymary			T4	S1
Dryopteris expansa	Spreading Wood Fern			G5	S1
Juncus tweedyi	Tweedy Rush			G3	S1
Juncus vaseyi	Vasey Rush			G5?	S1
Liatris ligulistylis	Gay-Feather			G5?	S1S2
Lilium philadelphicum	Wood Lily			G5	S3
Listera borealis	Northern Twayblade			G4	S2
Listera convallarioides	Broad-Leaved Twayblade			G5	S2
Mimulus gemmiparus	Weber Monkey Flower			G2	S2
Papaver kluanense occidentale	Alpine Poppy			T5	S2
Parnassia kotzebuei	Kotzebue Grass-of-Parnassus			G4	S2
Penstemon cyathophorus	Middle Park Penstemon			G3G4	S3

Scientific Name	Common Name	Status		CNHP Rank	
		Federal	State	Global	State
Potentilla effusa var. rupincola	Rocky Mountain Cinquefoil			T2	S2
Salix serissima	Autumn Willow			G4	S1
Sisyrinchium pallidum	Pale Blue-Eyed Grass			G3	S2
Viola selkirkii	Selkirk Violet			G5?	S1

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Appendix B
Backcountry/Wilderness Cultural Resources Protection Protocols

These protocols have been developed as a way to protect cultural resources while not delaying trail work and backcountry campsite restoration, establishing spike camps, or negatively impacting visitor use. The usual procedure when ground-disturbing activities are involved is that the park archeologist conducts a survey in advance of any action. However, that may be impractical with most of the trail and campsite restoration activities in the backcountry and wilderness, especially with numerous projects having to be accomplished in a very short season due to weather conditions. Following these protocols will also help document cultural resources per several Federal laws and National Park Service (NPS) regulations.

The Servicewide Programmatic Agreement of July 17, 1995 stipulates that no State Historic Preservation Office (SHPO) or other review outside the Park is required for trail work providing that the "undertaking meets requirements for programmatic exclusion under Stipulation IV.B.(6) for rehabilitation and widening of existing trails, walks, paths, and sidewalks within *previously disturbed* areas". No categorical exclusion exists for campsite restoration. However, we can use the " *previously disturbed* area" exclusion as a model for the following procedures for backcountry and wilderness work.

A survey is required for any new trail, any new designated campsite and any expansion of an existing designated campsite in "*previously undisturbed areas"*. A survey is usually not needed for normal trail rehabilitation unless it crosses a known site, routine campsite restoration if it stays within the original campsite footprint and the digging or relocating of privies if associated with a designated campsite providing the following protocols are observed. If in doubt, contact the park archeologist prior to conducting any work.

1. To avoid possible impacts to archeological sites, the work leader of any backcountry or wilderness project should contact the park archeologist prior to beginning any work to see if there are any known sites in the proximity of the project. If there are, the park archeologist will provide special instructions on how to proceed.

2. Work crews must be able to identify archeological items. As needed or requested, the park archeologist or other qualified person will conduct a training session for work crews on cultural resources topics such as the identification of prehistoric chipped stone tools, features, or structures. Anyone with questions or not familiar with these items should seek assistance before doing any trail work, campsite restoration or establishment of spike camps or similar work.

3. Work crews are not to gather borrow dirt to fix the trails or campsites from terraces or other flat areas along streams or lakes (areas of high potential for containing sites), or in the vicinity of known prehistoric or historic archeological sites.

4. Any dirt or rock brought into repair a trial or campsite must not come from an archeological site, a possible ARPA violation in its own right, or from soils which might contain stone tool raw materials. In the future, the park may require certification from the fill material providers that no archeological sites have been impacted in its excavation. This would help avoid being a party to an ARPA violation.

5. Rocks are not to be removed from any hearth, collapsed historic fireplace, rock cairn, or rock wall (e.g., if you find a pile of rocks, or rocks in circular or linear arrangement, leave them alone). Do not establish any sort of a camp in their vicinity if at all possible, the area may be on an archeological site.

6. Prehistoric items found in an existing trail or campsite are to be picked up and their location plotted on a map (a copy of a portion of a U.S. Geological Survey [USGS] is fine). If possible, photograph the item showing the location of the site in relation to some easily recognizable feature or landmark before it is collected. Once this is done, the work crew may proceed to work on the trail or campsite considering the above items. If anything is found, the park archeologist will record it and may check out the area to see if the trail or campsite has cut through or eroded into an existing site and make recommendations to management for possible future reroute, relocation or other protection measures.

   The prehistoric items most likely to be found are flakes and tools. It is important to note that there is no source (quarry) for chipped stone tool material in the park: (e.g., if it isn't granite, prehistoric Native Americans have possibly brought it into the park). When in doubt, pick it up and contact the park archeologist. Flakes are the small (ca. an inch or smaller in size), thin, flat, pieces of non-granite stone removed from a larger nodule. These larger nodules are tools and/or are made into formal tools such as arrowheads, scrapers, knives, and drills. Lyons sandstone (the salmon colored rock from the quarries near Lyons) has also been brought into the park by prehistoric inhabitants.

7. Structures and features that may be found in the park include rock line hearths, rock walls, rock cairns, U-shaped structures of rock, prehistoric wickiups of aspen and historic log structures. If any of these types of structures or features are found, photograph if possible, document the location and contact the park archeologist.

   The wickiups look like tipis but they are made of aspen, most are collapsed, but some are standing in the fork of a pine tree or against a large rock. Presently there are no known standing wickiups in the park. Collapsed wickiups have the following characteristics: they are usually found on benches, terraces, or ridges above meadows and usually are not located very close to water. The 10 to 12 foot long poles are almost always aspen and are very rarely cut with an ax. The collapsed pile looks like a pile of pick-up-sticks. If you mentally anchor the tree butts in the ground (they will form a rough circle about 8-10 feet in diameter), and then mentally raise them one by one, you should get a tipi-like structure. Do not physically try to raise them, avoid impacting the site.

8. If any bones suspected to be human are found they are to be covered up and otherwise protected. If the bones still have clothing on them they are probably fairly recent, do not disturb the area. Contact a law enforcement ranger and the park archeologist as soon as possible. They will determine the course of action to be taken. Do not use the radio if at all possible in either instance. The integrity and security of the site may depend upon it.

9. Privies at established campsites and day use destination areas may be relocated as needed, provided that if any archeological items are found, work must stop and the park archeologist notified. The park archeologist will determine if further survey is needed before the work may continue. The digging of privies in totally new locations require consultation with the park archeologist before the project begins.

10. The location of a temporary spike camp may require a survey. The park archeologist will be contacted well in advance to determine if there are any known cultural sites in the proposed area, if a survey is needed and if there are any specific protocols to follow. Generally, spike camps should not be located on terraces, above or within close proximity to permanent water (that is where sites are usually located), and care must be taken with locations on ridges well away from water. Spike camps may not be located in any area where any chipped stone tools or structures are found. If these items are found when looking for a spike camp location, follow the procedures in Item 6 and find another location for the spike camp. By practicing the Leave No Trace principles on minimum impact, archeological sites may be avoided altogether, which will result in not having a new archeological site to record and manage.

These protocols will be reviewed annually and revised as needed. These protocols may be rescinded at any time if they are not followed, do not work and/or if a site is ever impacted. This may result in a survey being required for all backcountry/wilderness projects, which will cause considerable delay in accomplishing the work.

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Appendix C
Table 1, Camp Area Summary

Designated Areas/Sites				
Individual		Camp Areas	Campsites	People
	East Side	60	109	763
	West Side	59	88	616
	Total	119	197	1379
Group		Camp Areas	Campsites	People
	East Side	10	10	120
	West Side	11	11	132
	Total	21	21	252
Accessible		Camp Areas	Campsites	People
	East Side	1	1	12
	West Side	0	0	0
	Total	1	1	12
Wood Fire		Camp Areas	Campsites	
	East Side	8	13	
	West Side	9	13	
	Total	17	26	

Stock Areas/Sites					
Individual		Camp Areas	Campsites	People	Stock
	East Side	3	3	18	24
	West Side	3	3	18	24
	Total	6	6	36	48
Group		Camp Areas	Campsites	People	Stock
	East Side	2	2	24	32
	West Side	2	2	24	32
	Total	4	4	48	64
Llama only		Camp Areas	Campsites	People	Stock
	East Side	2	2	14	10
	West Side	1	1	7	5
	Total	3	3	21	15
Wood Fire		Camp Areas	Campsites		
	East Side	8	13		
	West Side	9	13		
	Total	17	26		

Crosscountry Areas			
	Areas	Parties	People
East Side	9	16	112
West Side	14	32	224
Total	23	48	336

Summer Totals for Designated, Stock and Crosscountry Areas			
	Camp Areas	Campsites/Parties	People
East Side	80	136	1004
West Side	84	131	969
Total	164	267	1973

Bivouac Areas		
	Areas	People
East Side	11	88
West Side	0	0
Total	11	88

Winter Areas			
	Areas	Parties	People
East Side	32	136	1632
West Side	23	71	852
Total	55	207	2484

Appendix C
Table 2, Designated Camp Area/Sites

Code	Name	Number of Sites		Elevation in Feet
		Individual	Group	
(WF) designates sites where wood fires are allowed in metal grates, all other sites allow camp stoves only				
EAST SIDE OF THE PARK				
NORTH FORK AREA				
001	Boundary Creek (WF)	2		9,120
002	Kettle Tarn	2		9,200
003	Silvanmere (WF)	2		9,360
004	Halfway (WF)	2		9,360
005	Aspen Meadow Group (WF)		1	9,520
006	Happily Lost (WF)	1		9,560
007	Lost Falls (WF)	2		9,600
008	Sugarloaf	1		10,290
009	Stormy Peaks South	1		10,840
010	Stormy Peak	2	1	11,160
011	Lost Meadow (group/stock)	1	1	10,420
012	Lost Lake	4		10,714
013	Rabbit Ears	1		8,100
014	Peregrine	1		8,480
015	McGregor Mountain (WF)	2		9,040
016	Big Horn Mt. Group/Stock (WF)		1	10,620
MUMMY RANGE				
017	Lower Tileston	1		10,650
018	Tileston Meadows	2		10,800
019	Upper Chipmunk	2		10,640
020	Ypsilon Creek	1		9,560
021	Cutbank	1		9,620
022	Golden Banner	1		9,600
023	Lawn Lake (1 stock)	5		10,987
GORGE LAKES AREA				
024	Little Rock Lake	1		10,280
BEAR LAKE AREA				
025	Ute Meadow (llama)	1		10,000
026	Arch Rock	1		8,240
027	Old Forest Inn	2		8,400
028	Fern Lake	4	1	9,530

Code	Name	Number of Sites		Elevation in Feet
		Individual	Group	
029	Spruce Lake	2		9,670
030	Odessa Lake	2		10,020
031	Sourdough	1		10,600
032	Cub Creek	2		8,600
033	Mill Creek Basin	2		9,000
034	Upper Mill Creek	2		9,200
035	Wind River Bluff	1		8,800
036	Over the Hill	1		8,800
037	Upper Wind River	2		8,940
038	Boulder Brook	2	1	10,200
039	Glacier Gorge	1		10,000
040	Andrews Creek	1		10,560
H1	Sprauge Lake Camp ♿		1	8,760
LONGS PEAK AREA				
041	Moore Park	2		9,760
042	Goblins Forest	6		10,120
043	Battle Mountain Group		1	11,000
044	Boulderfield	9 sites: 2 (1 tent), 3 (2 tents), 4 (3 tents)		12,760
WILD BASIN AREA				
045	Hole-in-the-Wall	1		9,240
046	Campers Creek	1		9,600
047	Beaver Mill	1		9,640
048	Hunters Creek	1		9,760
049	Sandbeach Lake	4	1	10,283
050	Pine Ridge	2		8,880
051	Tahosa	1		9,040
052	Aspen Knoll (llama)	1		9,400
053	Siskin	1		9,460
054	North St. Vrain	2		9,560
055	Thunder Lake (1 stock)	4	1	10,574
056	Ouzel Lake	1		10,020
057	Upper Ouzel Creek	1		10,600
058	Finch Lake (group/stock)	2	1	9,912
059	Pear Creek	3		10,550
060	Pear Lake	1		10,582

Code	Name	Number of Sites		Elevation in Feet
		Individual	Group	
WEST SIDE OF THE PARK				
EAST INLET				
061	East Meadow (WF)	2		8,550
062	Lower East Inlet	2		8,640
063	Cats Lair	3		9,200
064	Gray Jay Group (WF)		1	9,650
065	Slickrock	1		10,000
066	Solitaire	1		10,120
067	Upper East Inlet	1		10,200
068	Lake Verna	1		10,280
NORTH INLET				
069	Summerland Park (WF)	1	1	8,535
070	Twinberry	2		8,680
071	Cascade Falls	1		8,840
072	Big Pool	2		9,160
073	Grouseberry	2		9,250
074	North Inlet Group (stock) (WF)		1	9,290
075	Foot Bridge (WF)	1		9,290
076	Ptarmigan	1		9,360
077	Porcupine (WF)	2		9,360
078	North Inlet Junction	3		9,600
079	North Inlet Falls	1		9,540
080	Pine Marten	2		9,560
081	July	3	1	10,760
TONAHUTU AREA				
082	Lodgepole	2		9,200
083	Paint Brush	2		9,320
084	South Meadows	1		9,360
085	Big Meadows Group		1	9,400
086	Sunset	1		9,550
087	Sunrise	1		9600
088	Lower Granite Falls	2		9760
089	Granite Falls	2		9840
090	Tonahutu Meadows	2		10050
091	Tonahutu Group (stock) (WF)		1	10160
092	Renegade	1		10200
093	Haynack (1 llama)	2		10760

Code	Name	Number of Sites		Elevation in Feet
		Individual	Group	
094	Timberline Group		1	10570
095	Onahu Creek	2		9,480
096	Upper Onahu	2		9,600
097	Onahu Bridge	2		9,650
TIMBER LAKE AREA				
098	Timber Creek	2		10,400
099	Jackstraw	2		10,760
100	Rockslide	1		10,960
101	Snowbird	2		11,010
NEVER SUMMER RANGE				
102	Valley View	2		10,260
103	Mosquito Creek	Permanently Closed		
104	Opposition Creek	1		10,440
105	Red Gulch Group		1	10,320
106	Hitchens Gulch	2		10,480
107	Dutch Town	1		10,760
108	Stage Road	1		9,530
109	Ditch Camp (group/stock)	2	1	10,160
110	Skeleton Gulch	1		10,560
111	Box Canyon	2		10,480
112	LaPoudre Pass	3		10,200
HAGUE CREEK AREA				
113	Cache	2		10,150
114	Chapin Creek Group		1	10,240
115	Hague Creek (group/stock)	2	1	9,720
116	Desolation	1		9,840
117	Flatiron (WF)	1		9,840
118	Mummy Pass Creek (WF)	2		10,640
119	Koenig (stock)	1		10,680
120	Mirror Lake	3		11,000

Appendix C
Table 3, Crosscountry Areas

EAST SIDE OF THE PARK			WEST SIDE OF THE PARK		
Code	**Name**	**Parties**	**Code**	**Name**	**Parties**
1A	South Cache La Poudre	1	1H	Cascade Creek	2
1B	Mount Dickinson	2	2H	Hague Creek	5
2B	Cow Creek	2	3H	Cache La Poudre	3
2C	Chiquita Creek	1	2J	Mosquito Creek	1
2D	Upper Forest Canyon	3	1K	Onahu Creek	1
3D	Lower Forest Canyon	4	1L	Nakai Peak	1
4D	Hayden Gorge	1	2L	Mount Patterson	3
1G	Hunters Creek	1	1M	North Inlet	4
2G	Cony Creek	1	2M	Ptarmigan Creek	1
			3M	Upper North Inlet	2
Parkwide Total: 23 areas, 48 parties allowed			4M	Ptarmigan Mountain	2
			1N	Mount Enentah	1
			3N	Echo Creek	2
			1P	Columbine Creek	4

Appendix C
Table 4, Bivouac Areas

Bivouac Area	Number of Climbers
Longs Peak Area	
Broadway, below the Diamond	10
Chasm View	6
Mills Glacier	20
Meeker Cirque	8
Black Lake Area	
McHenry Peak	6
Arrowhead (Lake Solitude)	6
Spearhead (Moon Pillar)	8
Chiefshead/Pagoda	4
Notchtop Peak Area	
Base of Notchtop	8
Sky Pond Area/Andrews Glacier	
Taylor/Powell Peaks	6
Sharkstooth Peak (Petit Grepon, Cathedral Spires)	6
(Loch Vale Pinnacle, Saber)	
Parkwide Total: 11 areas, 88 climbers	

Appendix C
Table 5, Winter Areas

EAST SIDE OF THE PARK			WEST SIDE OF THE PARK		
Code	**Name**	**# of parties**	**Code**	**Name**	**# of parties**
A2	South Fork Cache La Poudre	8	H2	Hague Creek	4
B1	North Fork of Big Thompson	9	H3	Chapin Creek	3
B5	Cow Creek	6	H4	La Poudre River	4
C1	Roaring River	6	J1	Specimen Creek	3
C2	Fay Lakes	5	J2	Colorado River	4
C3	Chiquita Creek	4	J4	Red Gulch	2
C4	Fall River	6	J5	Opposition Creek	2
C5	Sundance Creek	2	J6	Big Ditch Creek	2
C6	Black Canyon Creek	4	J7	Sawmill Creek	2
D1	Big Thompson River	9	J8	Lulu Creek	3
D2	Gorge Lakes	2	J9	Bennett Creek	2
D3	Hayden Creek	5	K1	Timber Creek	3
D4	Hidden River	3	K2	Onahu Creek	3
D5	Spruce Creek	3	L1	Tonahutu Creek	6
D6	Fern Creek	3	M1	North Inlet	6
D7	Beaver Creek	2	M2	Ptarmigan Creek	2
E1	Mill Creek	3	M3	MHallett Creek	2
E3	Haiyaha Creek	2	M4	MNorth Inlet Lakes	2
E4	Icy Brook	3	N1	East Inlet	6
E5	Glacier Creek	5	N3	Echo Creek	2
E6	Boulder Brook	4	P1	Ranger Creek	2
E7	Wind River	4	P2	Pole Creek	2
F1	Roaring Fork	3	P3	Columbine Creek	4
F2	Alpine Brook	6			
F3	Inn Brook	2			
F4	Cabin Creek	4			
G1	North St. Vrain	7			
G2	Hunters Creek	2			
G3	Campers Creek	2			
G4	Sandbeach Lake	2			
G5	Ouzel Creek	6			
G6	Coney Creek	4			

Appendix C
Table 6a, Trail Mileage Summary by Planning Unit and Standard

Planning Unit	Trail Standard						Total Mileage in Planning Unit
	A	B	C	D	E	F	
1. Front Range	1.2	5.5	28.4	48.4	10.5	6.3	100.3
2. Longs Peak	1.4	0	0	22.9	3.7	1.8	29.8
3. Wild Basin	0	0	0.3	27.1	11.1	1.8	40.3
4. West Valleys	0	0	0.6	46.3	16.7	4.1	67.7
5. Never Summer	0	0	0	21.4	4.0	3.3	28.7
6. Black Canyon/ Roaring River	0.3	0	0	13.2	13.4	1.5	28.4
7. Trail Ridge	0.7	0.5	0	0	5.9	5.0	12.1
8. Kawuneeche Valley	0.8	0	8.7	1.3	0	0.2	11
9. North Fork	0	0	0	5.2	8.0	0	13.2
10. Poudre	0	0	0	0	17.7	1.0	18.7
Total Mileage by Standard	4.4	6.0	38	185.8	91	25	*350.2 total parkwide*

Appendix C
Table 6b, Existing Trail System (September 2000)

Trail Segment	Trail Name	Standard	Length (miles)	Use (codes at end of table)
FR-1	Bear Lake-Dream Lake/Haiyaha Junction	B	1.0	f
FR-2	Dream Lake-Emerald lake	B	0.8	f
FR-3	Dream Lake-Lake Haiyaha	D	1.3	f
FR-4	Bear Lake to Bierstadt Junction	D	0.5	f/e
FR-5	Bear Lake Loop	A	0.5	f
FR-6	Flattop Mountain	D	1.7 2.0	all
FR-7	Lake Haiyaha to Mills/Loch junction	F	1.0	f
FR-8	Loch/Mills junction to Andrews/Sky Pond junction	D E	0.8 0.7	f/e f
FR-9	Andrews Glacier	E	3.0	f
FR-10	Sky Pond	E	1.0	f
FR-11	Black Lake	E	2.8	f
FR-12	Black Lake-Frozen Lake	F	1.0	f
FR-13	Old fire	F	0.8	f
FR-14	Bear Lake-Glacier Gorge-Loch/Mills junction	B D C	1.0 1.4 0.4	f/e f/e cl
FR-15	Glacier Basin campground-Sprague Lake	E	0.6	f
FR-16	Glacier Creek-Storm Pass (Storm Pass trail)	D	2.6	all
FR-17	Wind River	C	1.9	all
FR-18	East Glacier Creek	C	2.1	all
FR-19	Fern Lake trailhead-The Pool	D	1.8	all
FR-20	The Pool-Odessa Lake	D	2.5	all
FR-21	Spruce Lake/Loomis Lake	F	1.5	f
FR-22	Odessa Lake-Flattop Mountain junction	D	3.0	f/e
FR-23	Flattop Mountain trail junction-Cub Lake	D	2.0 1.7	all
FR-24	The Pool-Cub Lake trailhead	D	1.7 0.8	all
FR-25	Moraine Park	C	1.7	all
FR-26	Estes Cone			
FR-27	East and West Deer Mountain	D	3.8 1.0	all
FR-28	Moraine Park-Mill Creek Basin	D	2.5 0.8	all
FR-29	Bierstadt Lake	D	2.6 0.5	all
FR-30	Beaver Meadows/Moraine Park complex	C	9.0 6.0	all

Trail Segment	Trail Name	Standard	Length (miles)	Use (codes at end of table)
FR-33	Utility Area trails	B F	0.2 0.2	f f
FR-34	Moraine Park Museum Trail	B	0.4	f
FR-35	Sprague Lake connector trails	C B	1.2 1.8	cl all
FR-36	VTS to Bierstadt Lake	E	1.3 0.1	f all
FR-37	Bierstadt Lake trail-shuttle bus parking area	D	2.0	f
FR-38	Beaver Point	D	2.5	f/e
FR-39	West Glacier Creek	D	1.9	all
FR-40	Sprague Lake loop	A	0.7	f
FR-46	Boulder Brook	F	2.0	f
FR-49	Aspenglen Campground trails	B	0.3	f
FR-50	Fall River/Little Horsehoe Park	C	2.4 1.2	all
FR-51	Little Horseshoe Park-Lawn Lake trailhead	D	1.7	all
FR-52	Buck Creek	D	1.2 0.6	all
FR-53	North Deer Mountain	D	3.5	all
FR-57	Tuxedo Park-YMCA camp	C	0.5 0.5	all
FR-58	YMCA Camp-Glacier Basin campground	C	1.1 0.4	all
FR-59	Beaver Meadows-Deer Ridge parking	E	0.4 0.6	f/e
LP-1	Longs Peak ranger station-Jims Grove	D	2.5	all
LP-2	Jims Grove	F	1.8	f
LP-3	Boulderfield	D	1.7	all
LP-4	Jims Grove-Granite Pass	DD	0.7 0.7	all all
LP-5	North Longs Peak-upper portion	D	3.3	all
LP-6	North Longs Peak-lower portion	D	3.0	all
LP-7	Circle C Ranch-Eugenia Mine trail	D	0.3	all
LP-8	Columbine Ranch-Moore Park	D	1.0	all
LP-9	Eugenia Mine	D	1.4	all
LP-10	Chasm Lake	D	2.0	f
LP-12	Baldpate/Wind River Pass	E	0.5	all
LP-13	Aspen Brook	E	2.1	all
LP-14	Twin Sisters	D D	1.2 2.6	all all
LP-15	Lily Lake trail	A	1.4	f
LP-16	Lily Ridge trail	D	1.1	all

Trail Segment	Trail Name	Standard	Length (miles)	Use (codes at end of table)
LP-17	New Storm Pass	D	2.5	all
LP-18	Estes Cone	E	0.6	f
LP-19	Estes Cone junction-Moore Park	E	0.5	all
WB-1	Copeland Lake-Wild Basin ranger station	D C	2.1 0.3	all cl
WB-2	Wild Basin ranger station-Lion Lake junction	D	4.6	all
WB-3	Lion Lake	D	2.4	f
WB-5	Lion Lake junction-Thunder Lake	D	1.7	all
WB-6	Thunder Lake-timberline	F	1.0	f
WB-10	Bluebird Lake	D E E	2.2 0.7 0.3	all all f
WB-11	Ouzel Lake	D	0.4	all
WB-12	Confusion junction to Calypso Cascade	D	1.3	all
WB-13	North St. Vrain Campsite Trail	E	1.7	f and llama (to Aspen Knoll)
WB-14	Finch Lake trailhead-Calypso Cascade	D	4.2	all
WB-15	Allens Park-Confusion junction	D	1.7	all
WB-16	Confusion junction-Pear Lake	D E	2.3 2.0	all all
WB-17	Pear Lake-lower Hutcheson lake	F	0.8	f
WB-18	Access to Finch Lake trail	E	0.7	all
WB-19	Allens Park-Finch Lake trail connector	E	0.4	all
WB-20	Sandbeach Lake	D	4.2	all
WB-22	Horsetooth Peak	E	2.0	f
WB-23	Sandbeach Lake trail access	E	1.4	all
WB-25	Connector between WB-22 and WB-23	E	1.0	all
WB-26	Camp St. Malo-Horsetooth Peak trail	E	0.5	all
WB-27	St. Vrain Mountain	E	0.4	all
WV-1	Timber Lake	D	4.4	all
WV-2	Long Meadows	E *F*	2.5 *1.2*	f *f*
WV-3	South Tonahutu/Big Meadows/Onahu Creek connector	D D	6.0 0.8	all all
WV-4	East Shore trail Continental Divide Trail	D E	7.1 3.1	all all
WV-5	Livery Trails	C	0.6	all
WV-6	Green Mountain	D	1.8	all
WV-7	Onahu Creek	E	2.9	all
WV-8	Tonahutu Creek-Flattop junction Continental Divide Trail	D D E	1.5 3.0 2.7	all all all

Trail Segment	Trail Name	Standard	Length (miles)	Use (codes at end of table)
WV-9	Haynach Lakes	F	1.7	f/e
WV-10	North Inlet-Flattop junction Continental Divide Trail	D D E	2.0 6.0 4.4	all all all
WV-12	Nanita/Nakoni	D E F	2.1 1.1 0.6	all all f
WV-13	East Inlet, lower to Lone Pine Lake	D	4.7	f
WV-14	Adams Falls	D	0.8	f
WV-15	East Inlet, upper to Lake Verna	D	2.6	all
WV-16	East Inlet, to Fourth lake	F	1.8	all
WV-18	Shadow Mountain	D	3.5	all
NS-1	Thunder Pass	E	2.5	all
NS-2	Lulu City network	D	2.1	all
NS-3	Colorado River	D	2.9	all
NS-4	Grand Ditch road, middle section	D	5.2	all
NS-5	Red Mountain	D	3.2	all
NS-6	Grand Ditch road, northern section	D	3.2	all
NS-7	Little Yellowstone	E	1.5	all
NS-10	Skeleton Gulch	F	1.4	all
NS-11	Hitchens Gulch/Lake of the Clouds	D F	1.3 0.6	all f
NS-12	Grand Ditch road, southern section	D	4.8	all
RR-1	Lawn Lake, lower portion	D D	5.2 0.4	all all
RR-2	Lawn Lake, upper portion	D	0.6	all
RR-3	Crystal Lake, lower portion	E	1.0	f
RR-4	Crystal Lake, upper portion	E	0.5	f
RR-5	The Saddle	F	1.5	f
RR-6	Ypsilon Lake	D	3.1	all
RR-10	Endovalley trail	E	0.1	f
RR-12	Alluvial Fan trail	A	0.3	f
BC-1	Cow Creek, lower portion	D	1.9	f/e
BC-2	Bridal Veil Falls	E	1.1	f/e
BC-3	Black Canyon, upper portion	E	4.5	f/e
BC-4	North Gem Lake/Cow Creek	E	2.1 0.7	f/e
BC-5	Black Canyon/Cow Creek connector	E	1.7	f/e
BC-7	Balanced Rock	E	0.9	f/e
BC-12	Gem lake, upper portion	D D	0.8 0.4	all all
BC-13	Gem Lake, lower portion	D	0.4 0.2 0.2	all
BC-14	Gem Lake, west access	E	0.8	f/e

Trail Segment	Trail Name	Standard	Length (miles)	Use (codes at end of table)
BC-15	MacGregor Falls	D	1.0	f/e
BC-16	Black Canyon, lower portion	E	0.9 1.8 0.9	f/e
BC-17	Lumpy Ridge climber access trails	F	1.4	f
BC-18	MacGregor Ranch hiker bypass trail (no existing trail)	D	0.8	all
TR-2	Crater (Specimen Mountain)	E	1.0	f
TR-3	Ute Trail West (Alpine Visitors Center to Poudre Lake)	E	4.0	f
TR-4	Lake Irene	E	0.5	f
TR-5	Mount Ida	E	0.4	f
TR-6	Ute Trail East (Trail Ridge road to Upper Beaver Meadows trail)	F	4.0 1.0	f and llama (from UBM to Ute Meadows)
TR-7	Marmot Point (Alpine Visitors Center trail)	B	0.3	f
TR-8	Forest Canyon Overlook	A	0.2	f
TR-9	Toll Memorial Trail	A	0.4	f
TR-10	Abandoned Beaver Colony Boardwalk	A	0.1	f
TR-11	Chasm Falls trail	B	0.2	f
KA-1	Coyote Valley	A	0.8	f
KA-2	Valley, Green Mountain trail to Onahu Creek	C	1.0	all
KA-3	Valley and River trail network	C	5.5	cl
KA-4	Valley, below Winding River trailhead	C	1.8	cl
KA-5	Livery trail	C	0.3	cl
KA-6	Bowen-Baker access	D	1.3	all
KA-7	Livery trail	C	0.1	cl
KA-8	Timber Creek campground/Beaver Ponds picnic area	F	0.2	f
NF-1	Lost Lake, lower portion	D	3.1	all
NF-2	Lost Lake, upper portion	D	2.1	all
NF-3	Stormy Peaks, southern portion	E	2.7 0.8	f/e
NF-4	North Boundary, upper portion	E	2.4 1.2	f/e
NF-5	Husted			
NF-6	West Creek Falls	E	0.7	f/e
NF-11	North Boundary, lower portion	E	0.2	f/e
PO-1	Poudre River, lower portion	E	0.7	all
PO-2	Mummy Pass, lower portion	E	3.1	all
PO-3	Mummy Pass, upper portion	E	3.5	all
PO-4	Mirror Lake	E	1.7	f
PO-5	Comanche Peak	E	3.6	all
PO-6	Chapin Creek	E *F*	1.0 *2.5*	f *f*

Trail Segment	Trail Name	Standard	Length (miles)	Use (codes at end of table)
PO-7	Poudre River, upper portion	E *F*	1.0 *4.6*	f *f*
PO-9	Poudre River, middle portion	E	4.1	all
PO-11	Chapin Pass climbers' access	F	1.0	f
350.2 total miles of trail (62.2 miles foot only, 282.3 miles foot and stock, 5.7 foot and llama)				

* Use codes
f = foot traffic only
f/e = foot traffic and private stock only
all = foot traffic, private stock and limited commercial livery
cl = primarily commercial livery, foot and private stock OK

** *Italics* indicates trail segment not maintained and mileage not reflected in totals

Appendix C
Table 7, Hitchrails

Number	Location	Type	Year Constructed	Condition	Comments
H-1	Flattop Mountain	Triangle	1992	Good	Treated logs; 1/8 mile below summit on eastside
H-2	Loch Vale	Triangle			100 feet before Loch
H-3	Mills Lake/Loch Vale junction	Triangle			100 yards beyond junction towards Mills Lake
H-4	Bear Lake horse bypass	Triangle		Good	Treated logs; off bottom end of Bear Lake parking lot on north side
H-5	Bear Lake horse bypass	Triangle		Good	Treated logs; behind Bear Lake restrooms
H-6	Storm Pass	Triangle			1/2 mile north of Storm Pass
H-7	Storm Pass	Triangle	1991	Good	Treated logs, at Pass
H-8	Wind River	Triangle			3/8 mile south of East Portal
H-9	Fern Lake	Triangle x 2			2 hitchrails just below lake
H-10	Odessa Lake	Triangle			1/8 mile below lake on side trail
H-11	Mill Creek Basin	Triangle			On north side of Basin
H-12	The Pool	Triangle			50 yards beyond Pool
H-13	Deer Mountain	Triangle	1999	Good	Treated logs; at summit trail junction
H-14	Bierstadt Lake	Triangle			South side of lake
H-15	Bierstadt Lake	Single			North side of lake
H-16	Upper Beaver Meadows	Triangle x 2			Treated logs; north side of North Lateral Moraine
H-17	Beaver Mountain	Triangle	1990		On upper trail east of Beaver Mountain
H-18	Aspenglen/Little Horseshoe Park	Single, small	1995	Good	1/8 mile south of car bridge; for wranglers to tie up lead horse while checking saddles
H-19	Boulderfield	Triangle		Poor	
H-20	Longs Peak/ Chasm Lake junction	Triangle			
H-21	Moore Park	Triangle			At junction with Eugenia Mine and Storm Pass trails
H-22	Eugenia Mine	Triangle			At Mine site
H-23	Aspen Brook	Triangle x 2	1993	Good	At first meadow in bottom of drainage

Number	Location	Type	Year Constructed	Condition	Comments
H-24	Twin Sisters	Triangle			Just below saddle/treeline
H-25	Wild Basin Road/Horse unloading area	Single			At parking lot
H-26	Copeland Falls, southside	Triangle			On horse trail to falls
H-27	Copeland Falls/Thunder Lake	Triangle			Treated logs
H-28	Calypso Cascades/ Thunder Lake	Triangle			On spur trail below Cascades
H-29	Ouzel Falls/ Thunder Lake	Triangle			100 yards before Ouzel Falls
H-30	Thunder Lake	Triangle			100 yards before lake
H-31	Bluebird Lake	Triangle			Before Upper Ouzel campsite
H-32	Ouzel Lake	Triangle			At lake
H-33	Finch Lake	Triangle			At lake
H-34	Pear Lake	Triangle			At lake
H-36	Sandbeach Lake	Triangle	1991	Good	Treated logs; at trailhead
H-37	Sandbeach Lake	Triangle			At lake
H-38	Lawn Lake trailhead	Triangle		Good	Treated logs, at stock parking lot
H-39	Lawn Lake	Triangle			At lake
H-40	Ypsilon Lake	Triangle			Near Upper Chipmunk campsite
H-41	Bridel Veil Falls	Triangle			100 yards below falls
H-42	Black Canyon, upper portion	Triangle			At Big Horn Mountain Group campsite
H-43	Gem Lake	Single			Just north of the lake
H-44	MacGregor Falls	Single			1/8 mile before falls
H-45	Lost Lake	Triangle			At Lost Meadows group campsite
H-46	Lost Lake	Triangle			At Lost Lake
H-47	North Fork Cabin	Single			At North Fork cabin
H-48	West Creek Falls	Single			Before falls

Number	Location	Type	Year Constructed	Condition	Comments
H-49	Mummy Pass	Single		Fair	Hague Creek
H-50	Mirror Lake	Single	1988	Fair	Mirror Lake/Comanche Peak Trail intersection
H-51	Colorado River trailhead	Triangle	1990	Good	Treated log
H-52	Grand Ditch	Single	1986	Poor	Below Ditch Road at Hitchens Gulch
H-53	Big Meadows	Single	1990	Good	Just north of Green Mountain-Tonahutu trail intersection
H-54	Cascade Falls	Single	1993	Good	Just above falls
H-55	Hallett Creek	Triangle	1989	Good	Just above falls
H-56	Lake Nokoni	Single	1986	Fair	Just before lake
H-57	Lake Nanita	Single	1989	Fair	At the end of the trail
H-58	East Inlet trailhead	Single	1985	Fair	Near restroom
H-59	Lone Pine Lake	Single	1987	Fair	At the lake
H-60	Shadow Mountain Lookout	Single	1994	Fair	Just before the lookout
Parkwide Total: 45 triangle, 17 single					

Appendix C
Table 8, Corrals (Administrative Use Only)

Number	Location	Size	Year Constructed	Condition	Comments
C-1	Fern Lake cabin		1999	Good	All treated logs
C-2	Deer Haven/ Wild Basin		1988		At Ranger residence area
C-3	Thunder Lake cabin		1999	Good	All treated logs
C-4	Lawn Lake cabin		1997	Good	All treated logs
C-5	North Fork cabin		1994	Good	Posts and top rails treated logs, others native
C-6	La Poudre Pass cabin		1995	Good	All treated logs
C-7	Eastside Utility Area	4 horse corrals, 1 lama pen			
C-8	Westside Utility Area				
C-9	Colorado River District Utility Area	3 horse corrals	2000	New	Under construction south of maintenance shops
C-10	Colorado River District Utility Area	3 horse corrals		Fair	Relocation to new corrals set for 2001
C-11	Hague Creek Ranger Camp			Poor	Native post and rail
C-12	Tonahutu Ranger Camp			Fair	Native post and rail
Parkwide Total: 7 backcountry, 5 frontcountry					

Appendix C
Table 9, Bridge and Footlog Summary by Planning Unit

Planning Unit	Bridge type			Total span structures in Planning Unit
	Multi-Use	Footbridge	Footlog	
1. Front Range	23	6	106	135
2. Longs Peak	4	3	9	16
3. Wild Basin	14		25	39
4. West Valleys	21	13	18	52
5. Never Summer	10	5	7	22
6. Black Canyon/ Roaring River	1	2	11	14
7. Trail Ridge			3	3
8. Kawuneeche Valley		1		1
9. North Fork	2		8	10
10. Poudre	1	1	3	5
Parkwide Total:	76	31	190	297

Appendix C
Table 10, Structures

Structure Number	Status	Description	Location	Square Footage
43	Historic	Fire Lookout	Shadow Mountain	546
985		Generator Shed	Little Horseshoe Park	
17	Historic	Patrol Cabin	North Fork	360
200	Historic	Patrol Cabin	Lawn Lake	243
239	Historic	Patrol Cabin	Thunder Lake	240
27	Historic	Patrol Cabin	Willow Park	
14	Historic	Patrol Cabin	Fern Lake	490
162	Historic	Patrol Cabin (Shelter)	Chasm Lake	220
171		Pump House	Fall River Pass	210
846		Radio Repeater	Red Mountain - Grand Lake	32
204	Historic	Shelter (Agnes Vaille)	Longs Peak	110
948		SNO-TEL Data Site	Bear Lake	
957		SNO-TEL Data Site	Lake Irene	
986		SNO-TEL Data Site	Phantom Ranch	
		SNO-TEL Data Site	Copeland Lake	
		SNO-TEL Data Site	Willow Park	
258	Historic	Stable	Willow Park	
23	Historic	Stone Radio Repeater	Twin Sisters	132
949		Weather Data Shack	Bear Lake	
223		Wood Shed	North Fork	108
1016	Historic	Road/2 Irrigation Ditches	McGraw Ranch	
1041	Historic	Tea Room	Reichhardt Property	
1042	Historic	Cabin A	Reichhardt Property	
1044	Historic	Cabin B	Reichhardt Property	
1045	Historic	Homestead Cabin	Reichhardt Property	
	Historic	Mount Wuh Cabin	Mount Wuh	
	Historic	Powder Magazine	Ditch Camp 3	
	Historic	Blasting Cap Magazine	Ditch Camp 3	

Appendix C
Table 11, Privies

District	Location	Use D = day O = overnight	Description	RMNP Structure Number
Colorado River	Jackstraw	D/O	Outhouse	
Colorado River	North Inlet Junction	O	Outhouse	
Colorado River	Poudre Pass Cabin	D/O	Outhouse	
Colorado River	Poudre Pass Old Cabin	O	Outhouse	919
Colorado River	Shadow Mountain Lookout	D	Outhouse	228-228A
Colorado River	Shipler Cabins	D	Outhouse	
Colorado River	Poudre Pass	D/O	Outhouse-2 seater	920
Colorado River	Summerland Park	D/O	Pit, 3 walls, accessible	
Colorado River	Big Meadows	O	Pit, 3 walls	
Colorado River	Cascade Falls	D/O	Pit, 3 walls	
Colorado River	Chapin Creek	O	Pit, 3 walls	
Colorado River	Ditch Camp	D/O	Pit, 3 walls	
Colorado River	Gray Jay, group	D/O	Pit, 3 walls	
Colorado River	Hague Creek	D/O	Pit, 3 walls	
Colorado River	July	O	Pit, 3 walls	
Colorado River	North Inlet, horse/group	O	Pit, 3 walls	
Colorado River	Red Gulch, group	O	Pit, 3 walls	
Colorado River	Timberline, group	O	Pit, 3 walls	
Colorado River	Tonahutu, horse	O	Pit, 3 walls	
Fall River	Gem Lake	D	Solar Toilet	932
Fall River	North Fork Patrol Cabin	O	Outhouse	1042
Fall River	Willow Park Cabin	O	Outhouse	259
Fall River	McGregor Mountain	O	Pit, 3 walls	
Fall River	Rabbit Ears	O	Pit, 3 walls	
Fall River	Aspen Meadow	O	Pit, no walls	
Fall River	Bighorn Mountain	O	Pit, no walls	
Fall River	Boundary Creek	O	Pit, no walls	
Fall River	Cutbank	O	Pit, no walls	
Fall River	Golden Banner	O	Pit, no walls	
Fall River	Halfway	O	Pit, no walls	
Fall River	Happily Lost	O	Pit, no walls	
Fall River	Kettle Tarn	O	Pit, no walls	
Fall River	Lawn Lake	O	Pit, no walls	
Fall River	Lawn Lake	O	Pit, no walls	
Fall River	Lawn Lake Cabin	O	Pit, no walls	
Fall River	Lost Lake, lower	O	Pit, no walls	
Fall River	Lost Lake, upper	O	Pit, no walls	

District	Location	Use D = day O = overnight	Description	RMNP Structure Number
Fall River	Lost Meadow	O	Pit, no walls	
Fall River	Lost Meadow, horse	O	Pit, no walls	
Fall River	Lower Tileston Meadows	O	Pit, no walls	
Fall River	Peregrine	O	Pit, no walls	
Fall River	Silvanmere	O	Pit, no walls	
Fall River	Tileston Meadows	O	Pit, no walls	
Fall River	Upper Chipmunk	O	Pit, no walls	
Fall River	Ypsilon Creek	O	Pit, no walls	
Fall River	Lost Falls	O	Pit	
Fall River	Stormy Peaks	O	Pit	
Fall River	Stormy Peaks South	O	Pit	
Fall River	Sugarloaf	O	Pit	
Thompson River	Fern Lake Cabin	O	Outhouse	175
Thompson River	Old Forest Inn	D/O	Outhouse	940
Thompson River	Mill Creek	O	Compost Toilet, no walls	
Thompson River	Cub Creek	D/O	Pit, 3 walls	
Thompson River	Fern Lake, group site	O	Pit, 3 walls	
Thompson River	Fern Lake, individual sites	O	Pit, 3 walls	
Thompson River	Odessa Lake	D/O	Pit, 3 walls	
Thompson River	Spruce Lake	O	Pit, 3 walls	
Thompson River	Boulder Brook	O	Pit, 2 walls	
Thompson River	Upper Mill Creek	O	Pit, 2 walls	
Thompson River	Andrew's Creek	O	Pit, no walls	
Thompson River	Glacier Gorge	O	Pit, no walls	
Thompson River	Odessa Lake	O	Pit, no walls	
Thompson River	Over the Hill	O	Pit, no walls	
Thompson River	Sourdough	O	Pit, no walls	
Thompson River	Spruce Lake	O	Pit, no walls	
Thompson River	Upper Wind River	O	Pit, no walls	
Thompson River	Wind River Bluff	O	Pit, no walls	
Wild Basin	Boulderfield	D/O	Solar Toilet #1	929
Wild Basin	Boulderfield	D/O	Solar Toilet #2	929
Wild Basin	Chasm Junction	D	Solar Toilet	930
Wild Basin	Chasm Meadows	D	Solar Toilet	1037
Wild Basin	Finch Lake	D/O	Outhouse	934
Wild Basin	Ouzel Falls	D	Outhouse	933
Wild Basin	Ouzel Lake	O	Outhouse	307
Wild Basin	Sandbeach Lake	D/O	Outhouse	308
Wild Basin	Thunder Lake	D/O	Outhouse	309

District	Location	Use D = day O = overnight	Description	RMNP Structure Number
Wild Basin	Moore Park	O	Compost Toilet, 3 walls	
Wild Basin	Goblins Forest	O	Pit, 3 walls	
Wild Basin	Hole-in-the-Wall	O	Pit	
Wild Basin	North St. Vrain	O	Pit	
Wild Basin	Pear Creek	O	Pit	
Wild Basin	Pear Lake	O	Pit	
Wild Basin	Pine Ridge	O	Pit	
Parkwide Total: 5 Solar Toilet, 16 Outhouse, 2 Compost Toilet, 60 Pit				

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MINIMUM REQUIREMENT ANALYSIS WORKSHEET
ROCKY MOUNTAIN NATIONAL PARK

ROMO-180 (3/2000)

PROPOSED ACTION: _____ DATE: _____

LEAD PERSON(S): _____ WORK UNIT(S): _____

PART A: Minimum Requirement *(should the action be done in wilderness)*

1 IS ACTION AN EMERGENCY?

Answer: ☐ Yes ☐ No
Explain:

YES → ACT ACCORDING TO APPROVED EMERGENCY MINIMUM TOOL CRITERIA

NO ↓

2 DOES ACTION CONFLICT WITH LEGISLATION, PLANNED WILDERNESS GOALS, OBJECTIVES OR FUTURE DESIRED CONDITIONS?

Answer: ☐ Yes ☐ No
Explain:

YES → DO NOT DO IT

NO ↓

3 IS ACTION PRE-APPROVED BY THE WILDERNESS AND BACKCOUNTRY OR OTHER PARK MANAGEMENT PLAN?

Answer: ☐ Yes ☐ No
Explain:

YES → DO ACCORDING TO APPROVED CRITERIA

NO ↓

4 CAN ACTION BE ACCOMPLISHED THROUGH A LESS INTRUSIVE ACTION THAT SHOULD BE TRIED FIRST? (Visitor Education…)

Answer: ☐ Yes ☐ No
Explain:

YES → DO IT

NO ↓

5 CAN ACTION BE ACCOMPLISHED OUTSIDE OF WILDERNESS AND STILL ACHIEVE ITS OBJECTIVES?

Answer: ☐ Yes ☐ No
Explain:

YES → DO IT THERE

NO → DO PART B

PART B: Minimum Tool *(how the action should be done in wilderness)*

6 DESCRIBE, IN DETAIL, ALTERNATIVE WAYS TO ACCOMPLISH THE PROPOSED ACTION * (These may include, primitive skill/tool, mechanized/ motorized, and/or combination alternatives) (Use addition pages if necessary)

* Minimum questions to answer for each alternative:
- What is proposed?
- Where will the action take place?
- When will the action take place?
- What design and standards will apply?
- What methods and techniques will be used?
- How long will it take to complete the action?
- Why is it being proposed in this manner?
- What mitigation will take place to minimize action impacts?

GO TO NEXT STEP

7 EVALUATE WHICH ALTERNATIVE WOULD HAVE THE LEAST OVERALL IMPACT ON WILDERNESS RESOURCES, CHARACTER AND VISITOR EXPERIENCE **

** Minimum criteria used to evaluate each alternative:
- Biophysical effects
- Social/Recreational/Experiential effects
- Societal/Political effects
- Health/Safety concerns
- Economical/Timing considerations

GO TO NEXT STEP

8 SELECT AN APPROPRIATE, PREFERRED ALTERNATIVE

IF REQUIRED →

9 ATTACH TO APPROPRIATE PROJECT PROPOSAL/CLEARANCE FORM FOR REVIEW AND APPROVAL/DISAPPROVAL SIGNATURE

Alternative 1:

Alternative 2:

Alternative 3:

List preferred alternative and give justification:

Appendix D
Minimum Requirement Analysis Worksheet and Instructions

The following are instructions for completing the Minimum Requirement Analysis Worksheet ROMO-180. Answer the questions asked on the worksheet in the spaces provided. Once completed and a decision is made, a copy of the worksheet will be kept on file with other action documents.

Proposed Action: List the proposed action.

Date: List month, day and year the worksheet is completed.

Lead Person(s): List the person or persons proposing and responsible for the action.

Work Unit(s): List the work unit or units who will be conducting the action.

Part A: Minimum Requirement (should the action be done in wilderness)

Step 1: Is action an Emergency?

A true emergency presents an immediate threat to human life, or natural or cultural resources and often requires a quick response beyond that available by primitive means. Criteria for emergency actions are outlined in various operations plans (e.g. Emergency Operations Plan, Emergency Medical Services Plan and Fire Management Plan). If yes, act according to approved emergency minimum tool criteria in the appropriate plan. If no, go to Step 2.

Step 2: Does action conflict with legislation, planned wilderness goals, objectives or future desired conditions?

Park staff and managers must be familiar with the Wilderness Act, ROMO Wilderness recommendation/legislation, planned wilderness goals, objectives and future desired conditions. These can be found in the Wilderness/Backcountry Management Plan. If yes, then do not do the action. If no, go to Step 3.

Step 3: Is action pre-approved by the Wilderness/Backcountry or other park management plan?

Determine if the proposed action is programmatically pre-approved in an approved park management plan (e.g., Wilderness/Backcountry Management Plan, Fire Management Plan, General Management Plan, Resource Management Plan). If yes, the action has already been analyzed and determined to meet the minimum requirement. Do the action according to the approved criteria in the appropriate plan. If no, or if the action deviates at all from the pre-approval, go to Step 4.

Step 4: Can action be accomplished through a less intrusive action that should be tried first?

Explore less intrusive actions such as visitor education, staff training, signing, information media, regulations, use limits, law enforcement, area or trail closures, etc. If yes, implement other action using the appropriate process. If no, go to Step 5.

Step 5: Can action be accomplished outside wilderness and still achieve its objectives?

If yes, conduct action or place facilities determined "essential" (e.g., visitor orientation, information sign, radio repeater station, research) outside wilderness. If no, go to Part B.

Part B: Minimum Tool (how the action should be done in wilderness)

Step 6: Describe, in detail, alternative ways to accomplish the proposed action.

For the Minimum Requirement Concept to work, it is important to develop and seriously consider a range of realistic alternatives that in turn will help determine the appropriate minimum tool to be used to accomplish the action. This process involves a tiered analysis beginning with the least obtrusive, primitive/traditional skills alternatives, then proceeding to mechanized and/or motorized alternatives and finally on to a combination of the above alternatives.

Primitive skills involve the proficient use of tools and skills of the pre-motorized or pioneering era (e.g., the double-bit axe, the crosscut saw, the pack string). The working understanding of primitive skills is important to appropriately plan for their use. Managers must take the lead in demonstrating that tasks can be performed well by primitive or traditional, non-motorized methods. Field staff require adequate training in primitive-tool selection, use, and care to efficiently accomplish planned work. While agency staff should constantly stress the importance of using primitive skills in accomplishing management objectives, they should understand that minimum requirement analysis would not always lead to the use of a primitive tool.

The use of motorized equipment is prohibited when other reasonable alternatives are available to protect wilderness values. While Congress mandated a ban on motors and mechanized equipment, it also recognized that managers might occasionally need those sorts of tools. While this provision complicates the decision-making process, it remains an exception to be exercised very sparingly and only when it meets the test of being the minimum necessary for wilderness purposes (Worf 1987; Colorado State University 1991). If some compromise of wilderness resources or character is unavoidable, only those actions that have localized, short-term adverse impacts will be acceptable (NPS Reference Manual 41).

The minimum questions that should be answered for each alternative are:

What is proposed?
Where will the action take place?
When will the action take place?
What design and standards will apply?
What methods and techniques will be used?
How long will it take to complete the action?
Why is it being proposed in this manner?
What mitigation will take place to minimize action impacts?

Step 7: Evaluate which alternative would have the least overall impact on wilderness resources, character and visitor experience.

The manager must determine how to effectively and safely accomplish the action with the least impact on the wilderness resource and visitor experience. To assist with this determination, managers should use the following five criteria to evaluate each alternative. A brief statement about each should suffice.

1) Biophysical effects:

Describe the environmental resource issues that would be affected by the action. Describe any effects this action will have on protecting natural or cultural resources.

Include both biological and physical effects.

2) Social/Recreational/Experiential effects:
Describe how the wilderness experience may be affected by the proposed action. Include effects to recreation use and wilderness character.
Consider the effect the proposed action may have on the public and their opportunity for discovery, surprise and self-discovery.

3) Societal/Political effects
Describe any political considerations, such as MOU's, agency agreements, and local positions that may be affected by the proposed action.
Describe relationship of method to applicable laws.

4) Health/Safety concerns
Describe and consider any health and safety concerns associated with the proposed action. Consider types of tools used, training, certifications and other administrative needs to ensure a safe work environment for staff. Also consider the effect the proposed action may have on the health and safety of the public.

5) Economic/Timing considerations
Describe the costs and timing associated with implementing each alternative. Assess the urgency and potential cumulative effect from this proposal and similar actions. The potential disruption of wilderness character and resources and applicable safety concerns will be considered before, and given significantly more weight than, economic efficiency.

Step 8: Select an appropriate preferred alternative.
Consult with appropriate park staff and/or the Wilderness Steering Committee as to which of the alternatives will cause the least overall impact to the wilderness resources and character while still accomplishing the action. Select that alternative, give the justification as to why this alternative was selected and list who was involved in the decision.

The net result of a minimum requirement analysis is a carefully weighed project or action that is found to be the most effective way of meeting wilderness objectives and the minimum necessary for Wilderness Act purposes.

Step 9: Attach to appropriate project proposal/clearance form for review and approval/disapproval signature.
If the scope of the action requires a higher level of approval, attach the Minimum Requirement Analysis Worksheet to the appropriate proposal/clearance form (e.g. Project Proposal/Clearance From (ROMO-178), Flight Request Form (ROMO-47) for review.

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Appendix E
Backcountry Permit

The following is an example of the complete text on the back of the current backcountry permit.

U. S. DEPARTMENT OF INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK
BACKCOUNTRY USE PERMIT

A BACKCOUNTRY USE PERMIT IS REQUIRED FOR ALL OVERNIGHT BACKCOUNTRY USE AND MUST BE DISPLAYED ON THE OUTSIDE OF YOUR PACK WHILE HIKING TO YOUR CAMPSITE AND ON YOUR TENT AT THE CAMPSITE.

- This permit is valid only for the dates and camp areas listed.
- A displayed "dash tag" is required for overnight parking.
- Camp must be established on designated tent pads where provided or within 15' of the metal arrowhead that marks the designated site.
- Use pit toilets where provided, otherwise dig a 6" deep "cat-hole" at least 200' (70 adult steps) from water, trails and campsites.

In order to protect park resources and minimize impacts, the following are PROHIBITED everywhere in the backcountry:

- Pets, weapons, and vehicles (including bicycles)
- Fires (except at specific sites with metal fire rings)
- Hunting, feeding, approaching or disturbing wildlife
- Removing or disturbing natural features
- Trenching around tents and camps
- Shortcutting between trail switchbacks
- Littering or leaving trash in sites or pit toilets
- Washing dishes or bathing within 200' (70 adult steps) of water.

In addition to the above general regulations, special regulations apply to designated sites, cross-country zones, stock, bivouac, winter backcountry camping, and fishing. Familiarize yourself with these regulations.

FOR YOUR SAFETY…

- Check upcoming weather before departure
- Summer: **expect extreme weather & lightning**
- Winter: **expect extreme winter conditions & avalanches**
- Bring appropriate gear
- Hang food wherever possible and purify all water
- Be prepared for hazards. Know and take precautions
- Inform someone at home of your trip itinerary.

By my signature below, I confirm that I have received, read, understand and agree that all members of my party will know and abide by all backcountry rules and regulations. I understand that trip leaders and/or party members can be cited for violations of park rules and regulations. I assume complete responsibility for my own safety and that of my group while hiking in Rocky Mountain National Park.

_____
Trip Leader Signature

_____
Date

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Appendix F
Table 1, Trail Standards Summary

Indicator	Standard A	Standard B	Standard C	Standard D	Standard E	Standard F
Type of Use	All-person access; high-volume foot use (no horses); wheelchair accessible (type f use)	High-volume foot use (no horses; type f use)	High-volume foot use (foot use incidental; type cl use)	Intermediate- to high volume foot and usually horse use (types f/e, all use)	Low- to intermediate-volume foot and usually horse use (types f/e use)	Low-volume foot use (no horses; type f use)
Typical Location and Function	Short paved trail to or around extremely popular features such as lakes; may be interpretive trails	1- or 2-mile trails from heavily visited road corridors to popular scenic areas	Trails from liveries inside or outside park scenic or other resources inside park	Primary backcountry trunk trail (through lower part of main drainage); or trail to primary destination	Secondary backcountry trail (leading to many destination in tributary drainages)	Minor backcountry trails
Treadway Width	6'+	4'+	3'+	1 ½' to 3'	1 ½'+ (variable)	1 ½'+ (variable)
Average Maximum Grade	8 º maximum, 5 º sustained	15 º	12 º	12 º	20 º	20 º
Other	Carefully designed and constructed according to standard techniques				Generally a non-constructed trail that evolved informally from use	

Appendix F
Table 2, Trail Standards Details

Standard	General Description	Treadway Surface	Grade/ Erosion Control	Wet Areas	Stream Crossings	Other
A (ACCESSIBLE)	Very high front country standard designed for large numbers of pedestrians, including visitors in wheelchairs	Paved or boardwalk surface, no steps or other barriers to wheelchairs; generally at least 5 feet wide	Generally flat to 5 º although short segments may be 8 º; no cross-trail drainage structures except broad, gentle dips; margins must be outlined with rock to confine use to treadway	Boardwalks with handrails; bog bridges built with stone	Bridges (minimum 5 feet wide) with handrails	Viewing areas or platforms with handrails for nature observation or interpretation
B (HIGH-STANDARD PEDESTRIAN)	High-standard pedestrian trail designed for minimum maintenance, despite heavy use	Dirt, gravel, or paved surface; a wide (at least 4 feet), relatively smooth surface accommodating two or more people side by side	Constant grades not exceeding 12 º, accomplished with carefully aligned switchbacks and stone retaining walls; stone steps and low stone drainage bars used in preference to wood (log) structures; margins commonly outlined with rock to confine use to treadway	Bog bridges (minimum 4 feet wide) built with stone for permanence	Bridges (minimum 4 feet wide) with hand rails; small streams may be crossed with rock or metal culverts	
C (COMMERCIAL LIVERY)	High-standard trail designed to withstand the impacts of large volumes of commercial horse use	Dirt surface; no slick rock sections; no steps except log checks; dirt on the treadway is typically pulverized and cast aside by hooves, often resulting in a central depression; treadway at least 3 feet wide	Grades not exceeding 12 º; switchbacks and retaining walls used routinely to keep grade at a minimum, avoiding sections running straight up slopes which would gully; numerous heavy-duty log or stone drainage bars and log checks in areas with significant grade	High standard bog-bridges at least 3 feet wide	Heavy-duty bridges (minimum 4 feet wide) with side rails over deep and swift streams; smaller streams may be crossed with single or multiple log footbridges and fords for horses	Tree limbs and brush must be pruned at a height for safe passage of horse and riders

Standard	General Description	Treadway Surface	Grade/ Erosion Control	Wet Areas	Stream Crossings	Other
D (HIGH-STANDARD)	High-standard trail carefully designed and aligned for minimum maintenance; intermediate horse and hiker volumes, requiring construction and clear delineation of the treadway throughout	Dirt surface; fill imported as necessary to establish and maintain an even surface; rough stony sections and slick rock to be removed or modified to safely accommodate horses; treadway 1 ½ to 3 feet wide (depending on terrain and expected use)	Grades generally 12 º or less; switchbacks and retaining walls used routinely to maintain constant grades; log or stone drainage bars at intervals determined by grade; margins commonly outlined with rock to confine use to treadway	High-standard bog bridges as wide or wider than prevailing treadway width	Heavy-duty bridges (minimum 4 feet wide) with side rails over deep or swift streams; smaller streams may be crossed with single- or multiple-log footbridges and fords for horses	Tree limbs and brush must be pruned at a height and width for safe passage of horse and riders
E (PARTLY-CONSTRUCTED)	Typically a non-constructed trail that has evolved informally through use; may have been partly reconstructed at a higher standard; private horse traffic possible, although difficult in some places	Dirt and rock surface; rough stony sections or slick rock may not be corrected except where necessary to reduce unsure footing for horses; where use has been light, especially in meadows or willow thickets, treadway may be overgrown and indistinct, and cairns and posts may be needed at regular intervals to mark the route; along multiple paths due to wet soils, unwanted paths should be blocked or obliterated and realignment on drier or sloping ground considered; treadway width at least 1 ½ feet, but variable because trail was established by use rather then design	Grades up to 20 º, locally higher; steep sections may be eroded, especially I use has grown beyond the need for a light-duty trail, requiring drainage bars or dips; where trail is along a hillside, with the treadway sloping slightly outward, erosion is probably not a problem and retaining walls not needed; margins typically not lined with rock	Low-standard bog bridges installed only where necessary for safe horse passage and preventing serious damage to boggy soils by horses	Heavy-duty bridges (minimum 4 feet wide) with side rails over deep or swift streams; smaller streams may be crossed with single- or multiple-log footbridges and fords for horses	

Standard	General Description	Treadway Surface	Grade/ Erosion Control	Wet Areas	Stream Crossings	Other
F (NON-CONSTRUCTED NON-CONSTRUCTED)	A non-constructed, foot only trail that has evolved informally through use; unsafe or unsuitable for horses because of very boggy or steep, rocky areas, or for environmental protection; some may not be regarded as part of the official park trail system and may not appear on park maps (examples are paths leading from higher standard trails into cross-country zones, climbers' access trails, and spur trails to most backcountry campsites); constructed structures minimal	Dirt and rock surface; where use has been light, especially in meadows or willow thickets, treadway may be indistinct and cairns may be needed; unwanted multiple paths should be blocked and obliterated, and preferred route clearly marked	Grades up to 20 º; simple waterbars in short, steep, eroded segments should be realigned at a lower grade	Logs rather than bog bridges t0 keep hikers on route	Single-log bridges where streams are deep or swift, otherwise stepping stones or no structures	In contrast to higher standards, standard F trails may not be cleared of fallen trees, except infrequently when large obstructions are causing multiple paths to formed in easily eroded soils

Appendix G
Leave No Trace Principles

With increasing visitor use, both day and overnight, it is important to minimize our impacts and Leave No Trace of our visits into the backcountry. Please learn, practice, and pass on Leave No Trace skills and ethics to those you come in contact with. The following Leave No Trace principles will help protect precious backcountry resources.

PLAN AHEAD AND PREPARE.

- Know and obey the regulations and special concerns for the area you'll visit.
- Be physically and mentally ready for your trip.
- Know the ability of every member of you group.
- Be informed of current weather conditions and other area information.
- Know and accept risks associated with backcountry experiences.
- Take responsibility for yourself and your group.
- Always leave an itinerary with someone at home.
- Choose proper equipment and clothing in subdued colors.
- Plan your meals and repackage food into reusable containers.

TRAVEL AND CAMP ON DURABLE SURFACES.

While Traveling…

- Stay on designated trails and hike single file. Never shortcut switchbacks.
- When traveling crosscountry, choose the most durable surfaces available: rock, gravel, dry grasses or snow. Spread out so that you don't grind a path where one didn't exist before.
- When you stop to rest, be careful not to mash vegetation. Sit on rocks, logs, or in clearings.

At Camp…

- Be careful were you pitch your tent. Use the tent pad at the campsite, and camp in the camp area indicated on your permit.
- Restrict activities to the area where vegetation is compacted or absent.
- Use a large plastic water container to collect water so you don't need to make frequent trips to the water source.

PROPERLY DISPOSE OF WASTE.

- There are pit toilets at many backcountry sites. Use them.
- If there are no pit toilets nearby, urinate or defecate at least 200 feet (70 adult paces) from water, camp, or trails.
- Urinate in rocky places that won't be damaged by wildlife who dig for salts and minerals found in urine.
- Deposit human waste in catholes dug 6-8 inches deep. Carry a small garden trowel or lightweight scoop for digging. Cover and disguise the cathole when finished, or pack out solid waste.
- Use toilet paper sparingly and pack it out along with sanitary napkins, and tampons in an airtight container. Consider using natural toilet paper such as a smooth rock or soft pinecone.

- Wash your dishes and yourself at least 200 feet (70 adult paces) from water sources, and use small amounts, if any, of biodegradable soap. Scatter strained dishwater.
- Strain food scraps from wash water and pack them out
- Pack everything you bring into the backcountry back out.
- Inspect your campsite for trash and evidence or your stay. Pack out all trash…*Yours and others'.*

LEAVE WHAT YOU FIND.

- Treat our natural heritage with respect. Leave plants, rocks, and historical artifacts as you find them.
- Good campsites are found, not made. Altering a site should not be necessary. Don't build structures or dig trenches.
- Let nature's sounds prevail. Speak softly and avoid making loud noises. Allow for others to enjoy the peace and solitude of being in the backcountry.

MINIMIZE CAMPFIRE IMPACTS.

- Campfires are prohibited in the Rocky Mountain National Park wilderness except at certain designated campsites where metal fire rings are provided.
- Campfires can cause lasting impacts to the backcountry. *Always* use a lightweight, portable stove for cooking. A campfire is a luxury, not a necessity.
- Enjoy the sounds and wonders of the darkness, or use a candle lantern instead of a fire.
- Where fires are permitted, use the metal fire grate. Don't scar large rocks by using them to enlarge the fire area.
- Gather *dead and down sticks*, no larger than an adult's wrist, from a wide area, and leave them in their natural form until you are ready to burn them. Scatter any unused sticks.
- Do not snap branches off live, dead, or downed trees.
- Put out campfires completely.
- Remove, and pack out, all unburned trash from the fire grate. Scatter the cold ashes over a large area well away from camp.

RESPECT WILDLIFE.

- Enjoy wildlife at a distance.
- Never feed wildlife.
- Protect wildlife, hang your food and scented items securely.
- Minimize noise.
- Avoid sensitive habitat.

BE CONSIDERATE OF OTHER VISITORS.

- Visit the backcountry in small parties. More people means more impact.
- Avoid popular areas during times of high use.
- Avoid conflicts.
- Minimize noise.
- Keep a low profile.
- Take breaks and rest well off the trail, on a durable surface of course.
- Yield to horse traffic.

For more information on Leave No Trace outdoor skills and ethics contact the Backcountry Office or call LNT, Inc. at 1-800-332-4100. It's easy to enjoy and protect the backcountry simultaneously.

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If future generations are to remember us with gratitude rather than contempt, we must leave them more than the miracles of technology. We must leave them a glimpse of the world as it was in the beginning, not just after we got through with it.

President Lyndon B. Johnson, 1964

LEAVE NO TRACE

Plan Ahead and Prepare – Travel and Camp on Durable Surfaces
Leave What You Find – Properly Dispose of Waste
Minimize Campfire Use – Be Considerate of Others
Respect Wildlife

FINDING OF NO SIGNIFICANT IMPACT

BACKCOUNTRY/WILDERNESS MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT

ROCKY MOUNTAIN NATIONAL PARK

The Backcountry/Wilderness Management Plan for Rocky Mountain National Park (RMNP) was developed to address issues and provide guidelines for managing the non-developed areas of the park that are defined as backcountry or as designated, recommended, or potential wilderness. Park management proposed this new plan because the 1984 Backcountry Management Plan mainly addresses overnight use in the backcountry/wilderness and is inadequate for addressing management direction, consistency, and needs. The new plan details a wide array of issues and identifies specific standards for managing administrative actions and visitor use. The plan formalizes many current backcountry/wilderness management practices that have been in effect for the past twenty years. It does not affect developed areas, roads, or frontcountry park uses.

The new plan supercedes any direction or guidance set forth in the 1984 Backcountry Management Plan. The adoption of this plan is not part of the recommendation before Congress to officially designate a large portion of the park as wilderness.

An Environmental Assessment (EA) was conducted to examine plan alternatives. The EA involves detailed analysis of two alternatives and describes the potential impacts associated with implementing the proposed plan (Alternative A), or maintaining the current status of backcountry and wilderness management with no written standards (Alternative B). The EA was available for public review and comment beginning on January 19, 2001, and the review period was extended to April 6, 2001, which provided an opportunity for public input on the alternatives. Alternative A was identified in the EA as the preferred alternative.

After a careful review of resource and visitor impacts and public comments, the preferred alternative, with minor changes based on the public's suggestions, has been selected for implementation. Topics of concern identified during scoping and evaluated in the EA include education, recreational use, trails and trailheads, overnight permit system, camp areas, appropriate facilities, administrative actions, research activities, resource impacts, and social impacts.

PREFERRED ALTERNATIVE (ALTERNATIVE A IN THE EA)

The preferred alternative provides for a written plan with standards or recommended actions for such elements as day use and overnight group size limits, private stock use, administrative minimum requirements (tools), aircraft use, the Backcountry Permit System, campsite standards and management, climbing management, trails management, and facilities in the backcountry and wilderness. The preferred alternative also provides for an enhanced wilderness interpretation and education effort and establishment of a Wilderness Steering Committee.

Under the preferred alternative, all backcountry/wilderness areas will be officially designated in one of four management classes, based on the following:

- Type and amount of use
- Accessibility and challenge
- Opportunity for solitude
- Acceptable resource condition
- Management use

Each management class has associated desired social, resource, and managerial conditions for that area with different use standards. The plan endorses and often requires the use of the Minimum Requirement Concept (MRC), which enables managers to examine and document if a proposed action is appropriate in wilderness, and, if so, what is the "minimum tool" needed to achieve the objective.

Another feature of the plan is the backcountry permit and reservation system and associated standards. Climbing management guidelines and requirements are presented in detail, and six different trails maintenance levels (A through F) are explained. Specific indicators or standards that may vary among the four management classes are provided for bare ground and barren area sizes, group size limits (overnight and day use, including stock groups), campsite size, tent pad numbers and size, distance of campsite to water sources, vegetation cover, tree/shrub damage, root exposure, number of social trails, access trail tread, and cleanliness.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is the same as the preferred alternative. The preferred alternative minimizes environmental impacts and addresses the main issues that were identified during scoping and planning. It provides a formalized plan that would help to ensure that decisions regarding wilderness use would be consistent and would be subject to protective standards. It also promotes the use of the minimum tool concept (where appropriate) and wilderness education. All of these attributes contribute to the minimization of environmental impacts on park resources and values.

OTHER ALTERNATIVES CONSIDERED IN THE EA AND RECOMMENDED DURING THE PUBLIC REVIEW

Alternative B, No Action / Current Management Alternative – This alternative was considered in the EA. Under this alternative, the current status of backcountry and wilderness management at RMNP would continue, and there would be no comprehensive backcountry and wilderness management plan in effect. Proposed activities in the backcountry and wilderness would be reviewed and approved on a case by case basis, based on policies and guidelines that are not formalized, but generally followed. There could be a lack of continuity with changes in staff and/or administrations, and there would be no documented process that would ensure the most consistent protection of backcountry and wilderness values.

OTHER ALTERNATIVES CONSIDERED DURING THE PLANNING PROCESS BUT REJECTED FOR CONSIDERATION IN THE EA

In formulating the proposed plan, a variety of management options were considered that met the purpose and need in different ways. These included different management designations for various areas, different numeric standards for campsite use, and different levels of desired visitor use. However, an examination of these options showed that many were either: (1) essentially duplicates of less environmentally damaging or less expensive alternatives; (2) not raised as important issues during scoping; and/or (3) not within the authority of this planning action (e.g., would require changing current regulations). Based on these considerations, these options were not developed in an official alternative, and two alternatives were ultimately considered.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse

The preferred alternative includes many provisions and standards for resource protection that would result in long-term benefits to natural and cultural resources, as well as a consistent review process that would have beneficial effects on the administration of operations in wilderness areas. There may be some adverse impact on park operations, due to limitations that will be placed on some management options, as well as the continuation of cumulative adverse impacts related to the intrusion of human visitors into wilderness. However, none of these impacts, adverse or beneficial, would be considered to be significant.

Degree of effect on public health or safety

The preferred alternative would have a positive effect on public health and safety in many ways, since it provides standards that were derived in part due to concerns for visitor safety. For example, standards for human waste management will help limit the spread of disease, and provisions for trail maintenance will help to eliminate unsafe hiking conditions. Possible adverse health or safety effects could occur if the new procedures required by use of the MRC result in needing to use unfamiliar equipment or not having a means of rapid transport readily available for all operations. None of these effects is expected to be significant.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas

As described in the EA, no major adverse effects to natural or cultural resources were identified for the preferred alternative. The entire area subject to the plan contains historic and cultural resources, wetlands, and ecologically critical areas. As described in the EA, none of these would be adversely affected by the preferred alternative. The entire length of the Cache La Poudre within the park is a Wild and Scenic River.

Degree to which effects on the quality of the human environment are likely to be highly controversial

Approximately 300 copies of the draft combined plan and EA (Plan/EA) were distributed to organizations, government agencies, and individuals identified during the scoping and planning processes. Copies were also available on the RMNP Internet site and in local libraries. Press releases were issued to local media informing the public of the availability of the document. During the extended review and comment period, 38 e-mail and written comments were received, including comments from several groups focused on environmental and access issues. A total of 34 commentors were in favor of Alternative A, many of which commended RMNP for developing a plan that establishes guidelines to protect the park's resources. One commentor did not favor the plan, but did not specify another alternative, and the remaining four commentors provided comments or requested information with no alternative preference expressed.

Some commentors expressed disagreement with the standards or limits contained in the preferred alternative, stating that there should be no limits on use of a public resource. Some expressed concern about standards or limits for climbing activities and equipment. These may be somewhat controversial issues, since other users expressed support for the standards and/or limits. However, none of these issues or potential effects on the quality of the human environment is likely to be highly controversial or result in significant impacts. The letters and e-mails received reflected a variety of concerns, and each substantive concern is addressed in the NPS responses in the errata sheets.

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks

The preferred alternative places a high emphasis on protecting wilderness and provides for limits on equipment or facilities that can assist users and minimize risk, but that may be visually intrusive. These include certain climbing aids, signage, and new developed facilities. These provisions would be beneficial to those users seeking a true wilderness experience, but could increase risks to those users who need more developed facilities or assistance in navigating the park. However, none of these is a highly unique or unknown risk, and this does not represent a significant impact.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration

The action for this project will not set any NPS precedent. The preferred alternative will not have significant effects and does not represent a decision in principal about any future consideration elsewhere in the National Park System.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts

Impacts resulting from implementation of the preferred alternative would contribute to existing impacts from the current use of the RMNP wilderness, plus impacts from the use of other wilderness areas and private lands adjacent to the park. The cumulative, minor, adverse impacts that already exist due to the intrusion into wilderness by human visitors would continue under this plan. However, the provisions in the plan and its consistent implementation would not result in cumulatively significant impacts. The plan would mitigate intrusions above and beyond the restrictions placed on private lands outside the park and on some adjacent U.S. Forest Service wilderness, resulting in a cumulative benefit to wilderness resources because of the increased resource protection and preservation of the wilderness character of the area.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

To date, over 500 prehistoric and historic archaeological sites have been recorded in RMNP, but few have been evaluated for the National Register of Historic Places (NRHP). The park contains 146 historic structures that are eligible for listing or enrolled in the NRHP, and 18 of these are in the backcountry/wilderness. The McGraw Ranch is the only area that has been documented as a cultural landscape.

Under the preferred alternative, direct adverse impacts to cultural resources from use of the wilderness can occur if visitors accidentally or intentionally disturb, vandalize, or remove artifacts or features associated with an historic or archaeological site, or a traditional cultural property. Some trails or campsites in RMNP provide visitors access to the proximity of various cultural resources whereby use or visitation of these resources may have a direct adverse impact on the site. Vandalism can occur if visitors move, remove, or rearrange rocks from prehistoric sites, or logs at the remains of historic cabins. Park staff conducting routine ground disturbing activities during maintenance of trails or campsites has the potential to disturb cultural and archaeological resources. Because the entirety of RMNP has not been surveyed for cultural resources, there are cultural resource sites that have not been identified. Therefore, visitors or park staff working in the wilderness may unknowingly discover or disturb a previously undocumented cultural resource site.

Provisions formalized in the preferred alternative address protection and research measures for preserving cultural resources. Protection measures as outlined in the plan include the rehabilitation, reconstruction, and restoration of archaeological and historic sites, objectives, and features. The plan also establishes guidelines for cultural resource inventories and research that may include monitoring, remote sensing, surveying, documentation, and data recovery. Guidelines for commercial service and restrictions on new trails and bridges would also serve to limit visitor access into wilderness and possible adverse impacts on cultural resources in the area. The proposed recommendation on day use group sizes, along with the limits currently set on other group sizes, would serve to reduce adverse impacts from large groups on unprotected resources. The planned wilderness education and interpretation programs would serve to educate park visitors and employees about the importance and sensitivity of cultural resources.

With these measures in place, impacts to significant scientific, cultural, or historical resources should be kept to a minimum.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat

There are 69 endangered, threatened, or rare species known to occur within RMNP. Although impacts to these and other species and habitats could result from the use of the wilderness by visitors and park staff, no significant adverse impacts are envisioned under the preferred alternative. Implementation of the plan will help limit adverse impacts on park wildlife, including those species and individuals that are threatened, endangered, or of special status, resulting in long-term, benefits. The plan includes provisions that help to preserve and protect habitat, such as temporary or permanent area closures, restrictions on new trails, site rehabilitation, control of non-native species, and limits on campsite sizes and number of visitors in camps and on trails at any one time. Guidelines for proper food storage and garbage handling would provide the information needed to help reduce wildlife encounters. The listed recommendations for group size limits of day use visitors, stock groups, and overnight campers would also help to reduce negative encounters between wildlife and humans. Smaller group sizes would also mean fewer adverse impacts to wildlife from unnatural sounds and lights in the wilderness. The restriction on pets in wilderness would continue which eliminates one source of conflict between domestic animals and wildlife.

Several provisions are also in the plan that would serve to minimize impacts to wildlife from climbers. Vocal calls between climbers would be discouraged, and power drills would not be allowed. The spring raptor closure program would continue. There would be increased monitoring of raptor activity in high use climbing areas, which would be temporarily closed if the monitoring indicates that adverse impacts would occur if these areas remained open.

Application of the Minimum Requirement Concept and minimum tool requirements may likely result in less use of mechanized equipment and vehicles, which would eliminate many sources of noise and lights from motor vehicles, aircraft, chainsaws, and other mechanized tools. Also, less use of off-road vehicles (ORVs) or other mechanized equipment for trail or facility maintenance would result in less chance of an unintentional taking of (running over) small, non-mobile species. However, with extended stays in the wilderness to accomplish the required task, there may be more, but negligible, impacts to wildlife from lower level (human) noise as opposed to aircraft noise. Most species will temporarily avoid the area used by the work crews and return when the disturbance is gone and any adverse impacts to the habitat would be short-term and localized.

Finally, the education and interpretation programs in the plan would most likely include information on preventing and minimizing disturbance to all wildlife, thereby reducing the number and severity of impacts to wildlife or threatened or endangered species from visitor use.

Whether the action threatens a violation of federal, state, or local environmental protection law

This action violates no federal, state, or local environmental protection laws.

Impairment

In addition to reviewing the list of significance criteria, the NPS has determined that implementation of the proposal will not constitute an impairment to Rocky Mountain National Park's resources and values. This conclusion is based on a thorough analysis of the environmental impacts described in *the Backcountry/Wilderness Management Plan and EA*, the public comments received, relevant scientific studies, and the professional judgement of the decision-maker guided by NPS *Management Policies* (December 27, 2000). Although the plan has some minor negative impacts, in all cases these adverse impacts are the result of actions taken to preserve and restore other park resources and values. Overall, the plan results in major benefits to park resources and values, and opportunities for their enjoyment, with no impairment.

PUBLIC INVOLVEMENT

The plan and associated EA were made available for public review and comment during a comment period that extended from January 19 to April 6, 2001. Approximately 300 copies of the Plan/EA were distributed for public review to various government agencies, private organizations, and individuals identified during the scoping and planning processes. Copies were also available on the RMNP Internet site and in local libraries. Press releases were issued to local media informing the public of the availability of the document. During the extended review and comment period, a total of 35 comments were received via e-mail and regular mail. Of these, a total of 29 comments were in favor of Alternative A. Some comments resulted in minor changes to the text of the plan and/or the EA. Substantive comments are addressed in the Errata Sheets attached to this FONSI. The FONSI and errata sheets will be sent to everyone who commented on the EA.

CONCLUSION

The preferred alternative does not constitute an action that normally requires preparation of an Environmental Impact Statement (EIS). The preferred alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are minor and

temporary in effect. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Approved: Karen P. Wade 7/17/2001

Karen P. Wade Date
Director, Intermountain Region

Errata Sheets

Backcountry/Wilderness Management Plan and Environmental Assessment

Rocky Mountain National Park

Comments received during the extended public comment period centered around the following topics: camping and backcountry permits, wilderness definition and standards, climbing management, fish and wildlife, visitation and visitor use, figures and maps, range of alternatives, and miscellaneous policy issues.

Major comments needing further clarification are summarized below by topic followed by a response from the NPS. The majority of comments listed below resulted in no text changes to the draft document; however, those comments that did result in changes to the text are indicated with an initial asterisk (*****) and explained in the response. Further, minor comments including typographical and grammatical errors, minor rewordings, and minor factual corrections are not addressed below, but have been changed in the text of the Plan/EA accordingly.

Some of the comments received were outside the scope of the Plan/EA. These comments were distributed to the appropriate NPS parties at RMNP who will respond to these comments on an individual basis, as needed.

Camping and Backcountry Permits

*****Comment: Some existing campsites do not meet the current standards set forth in the plan and should be relocated. Further, there should be a plan developed for the evaluation of campsites. (2 comments)

Response: Text changes in the plan have been made to indicate that there are a few campsites that may have met previous standards, but do not meet the standards outlined in this plan. However, there would be potentially greater impacts and resource damage if these sites were moved to a new location. Relocation can be considered, but the decision must be based on site-specific conditions and a case by case basis. This has been clarified in the text in *Section 2.1.4.5, Camp Area and Site Management*. RMNP does have a program in place currently whereby campsites are evaluated on a routine basis and rehabilitated or relocated if necessary. This is described in *Section 2.1.4.5.6, Monitoring*.

Comment: Not in favor of standards being relaxed on campsites with animal stock under Management Class 3. (1 comment)

Response: The new standards are based on user data that RMNP has collected and are reasonable guidelines that meet both visitation and resource needs. The standards are based on one pack animal for every three riders. This increases the number of stock at individual stock campsites however reduces the number of stock at group stock campsites. Stock campsites can accommodate the new standards without any modifications.

Comment: Why is group size increased for winter use? (1 comment)

Response: The group size limit of 12 during the winter is because the environmental conditions, particularly snow cover, allow more visitors to use the backcountry/ wilderness with less impact to the resources. The winter group size of 12 is consistent with the group size of 12 allowed at designated group campsites during the summer. In 1992, winter group sizes of 15 and summer group sizes of 20 were reduced to12 based on resource protection issues, increased visitor awareness of backcountry/wilderness values and ethics and trends in smaller group sizes.

Comment: Backcountry permit limits are not reasonable. (3 comments)

Response: The limits placed on backcountry permits and overnight stays in the backcountry/wilderness have not changed for many years and will not change with the implementation of this plan. Because RMNP is a highly visited park, these limits were established and are employed to protect the park's resources and to allow equal opportunity for visitors to enjoy the backcountry/wilderness.

Wilderness Definition and Standards

***Comment**: The total acreage of RMNP that is covered by this plan should be clarified. Is the current wilderness recommendation the same as the original recommendation, and if not, what is the difference? (4 comments)

Response: The current official total area of RMNP is 265,769.14 acres. The number of acres of wilderness has changed since the original 1974 recommendation due to park boundary changes and updates of the recommendation to Congress. This has been verified for consistency in the text throughout the document.

***Comment**: Clarification is needed on the history and current status of the wilderness recommendation. (2 comments)

Response: The text in the plan describing the history of the wilderness recommendation at RMNP is accurate and outlines the major events that have taken place with regards to recommended wilderness areas. However, the plan has been expanded in *Section 1.3.1, History of Wilderness and Backcountry Management/Wilderness Recommendation* to incorporate recent activities that have taken place since the Draft Plan/EA was published, including the latest submission of recommended wilderness areas to Congress in April 2001.

***Comment**: The definitions of non-wilderness backcountry are unclear. (1 comment)

Response: The definitions of wilderness and non-wilderness backcountry have been clarified in the text in *Section 1.1, Scope of the Plan*.

Comment: What is the wilderness setback from roads? (1 comment)

Response: Generally, the wilderness setback from roads is 200 feet from the centerline of paved roads and 100 feet from the centerline of dirt roads.

Comment: The use of chainsaws, rock drills, or motorized equipment should not be allowed at all in wilderness areas. (3 comments)

Response: The Wilderness Act prohibits the use of motorized equipment, except as necessary to meet minimum requirements for the administration of the area for the purpose of the Act. It is not the intent of NPS to use any types of motorized equipment in the backcountry/wilderness, except under exceptional circumstances. The use of traditional and primitive tools is emphasized throughout the Plan. In all cases, park crews will seek to avoid, minimize, or reduce the use of motorized equipment and mechanical transport, or their effect, in wilderness by searching for workable hand tools and techniques compatible with wilderness environments.

The Minimum Requirement Concept sets forth stringent requirements used to analyze the need, if any, for the NPS to use motorized equipment during management actions in the wilderness. Each situation is evaluated on a case by case basis and the effectiveness of the Minimum Requirement Concept will be evaluated each year as part of the annual review of the Plan/EA. The only exception to evaluating tasks on a case by case basis is that of opening trails in the spring, which is a programmatic approval to allow the efficient opening of trails in order to reduce the overall impact to wilderness resources (e.g., trail braiding, vegetation damage, soil compaction).

Comment: The plan is lacking indicators and standards for all resources that can affect the wilderness experience. Further, the plan should specify what type and scope of management actions will be implemented should standards be violated. (1 comment)

Response: The plan establishes both general and specific standards for maintaining and protecting wilderness, which are based on data collected by RMNP. Because there is not sufficient information or data to identify specific standards for every resource in RMNP at this time, and this plan is dynamic by nature, the annual review of the plan will allow the NPS to evaluate the effectiveness of regulations and guidelines and maintain flexibility where needed.

*****Comment: Regulations are too stringent regarding the construction of new trails. (1 comment)

Response: This plan does not preclude the construction of new trails under certain circumstances. Trails may be constructed or rerouted if critical to protect natural or cultural resources. The management goal is to maintain existing trails that currently meet visitor use and to revisit the need for additional trails on a case-by-case basis when necessary to balance visitor use and resource protection. Text changes have been made in *Section 2.1.4.7.3, Trail Work and Maintenance*, to indicate this more clearly.

Climbing Management

*****Comment: The policy regarding fixed climbing anchors should be strengthened. (4 comments)

Response: Currently, the NPS is analyzing its policies regarding climbing management and hopes to establish nationwide protocols for climbing-related issues in the near future. The NPS is also currently working with other agencies including the U.S. Forest Service (USFS), U.S. Fish and Wildlife Service (USFWS), and the Bureau of Land Management (BLM) in an attempt to establish standardized interagency guidelines for climbing. Therefore, this plan establishes general climbing guidelines until more specific policies are developed at the national level. Text changes have been made as shown in *Section 2.2.4.5, Climbing Management*.

Comment: Are the bivouac site guidelines new, why are there different standards for Bivouac and Crosscountry areas and why can't climbers use tents? (1 comment)

Response: No, the bivouac site guideline as discussed in this plan is not new and has been in place for some time. Different standards apply to bivy sites since they are above treeline in more sensitive areas than crosscountry camping areas which are below treeline. Climbers can not use tents and must only establish the bivy between dusk and dawn due to physical and visual impacts where bivouacs are located.

Comment: The analysis of climbing management in this plan seems to outweigh other resource analyses. Is it necessary to establish an individual plan for climbing management? (1 comment)

Response: NPS policy currently allows each park to address the issue of climbing management in either a Wilderness Plan or an individual Climbing Management Plan. Because standard guidelines for climbing management are currently being established at a national level, RMNP decided to include climbing-related issues in this plan, as opposed to developing an individual Climbing Management Plan. Once standard protocols have been established for climbing at a national level, RMNP may choose to review the need for developing an individual Climbing Management Plan.

Comment: Are bottom-to-top fixed anchor routes appropriate in the wilderness? (1 comment)

Response: Climbing is a widely practiced activity in RMNP, and fixed anchors in the wilderness are acceptable according to wilderness guidelines and NPS policy.

Comment: What is that status of the rockbolt inventory, and should it be included as an appendix to this plan? (2 comments)

Response: The current rockbolt inventory for RMNP is not included as an appendix to this plan because it is not complete at this time. Plans to update the rockbolt inventory are in progress.

Fish and Wildlife

Comment: This plan and EA should include more information regarding impacts on wildlife including threatened and endangered species. Further, the plan does not mention how exotic fish are handled. (2 comments)

Response: The intention of this Plan/EA is to evaluate potential impacts to resource areas in relation to the management of wilderness. Because no specific impacts to wildlife are anticipated as a result of implementing the preferred alternative, a more in-depth analysis is not provided. *Section 2.2.2.2, Fish and Wildlife* sets the overall direction with regards to fish and wildlife management in wilderness. The *Resource Management Plan* provides more specific information and management actions pertaining to fish and wildlife, both native and non-native, in RMNP.

Comment: Hunting would be a good control of the number of elk and should be allowed in RMNP.

Response: Per federal regulations, hunting is not permitted in any National Park including RMNP.

Visitation and Visitor Use

Comment: There should be restrictions placed on the number of visitors allowed in RMNP during the summer because of problems including pollution, littering, and natural resource destruction. (1 comment)

Response: Pollution and air quality is closely monitored in RMNP, and most air quality degradation is due to pollution from external sources. If, however, it is noticed that pollution from cars within RMNP is endangering natural resources, management will revisit its air quality policies. The number of cars allowed in RMNP is outside the scope of this plan and EA. Management also closely monitors visitation and resource damage. Limiting visitation to the park at this time is not being considered, because visitation numbers are not excessive to where RMNP resources are being significantly damaged. Areas that are damaged by overuse are temporarily closed off to visitors until the area has been restored.

*****Comment: How will limits placed on visitor group size affect visual quality? (1 comment)

Response: Limits placed on group size are anticipated to enhance the visual quality and experience of the wilderness because fewer individuals and tents will be seen, particularly in large groups. This statement has been added to *Section 4.2.8, Visitor Use and Experience*.

*Comment: The plan and EA does not clearly state whether or not motor vehicles can be used by Native Americans to access wilderness areas. (1 comment)

Response: Native Americans are permitted to access the backcountry/wilderness for sacred and religious purposes, however it is not the intent of the plan and EA to permit Native American access to these areas by motor vehicle. Because Native American access is not an

administrative use of the wilderness, the statement regarding the Minimum Requirement Concept located in *Section 2.1.3.3.13, Native American Access* has been deleted.

Figures and Maps

Comment: The figures and maps in the plan and EA should be more detailed. (5 comments)

Response: The figures provided are designed to provide the reader with a basic understanding of wilderness boundaries, management classes, and RMNP resources. More detailed information is provided in the text of the document or can be obtained at RMNP.

Comment: Figure 2-1 shows the south half of Twin Sisters with no designated Management Class. (1 comment)

Response: In Figure 2-1, Twin Sisters is shaded by light gray with no cross-hatching, which indicates Management Class 1.

Comment: What is the wilderness acreage for each of areas identified on Figure 1-2 (Mummy Range, Never Summer, Trail Ridge, and Enos Mills)? Does RMNP intend to have these areas known by those names? (1 comment)

Response: The wilderness acreages for the areas identified in Figure 1-2 are as follows: Mummy Range Unit = 84,006; Never Summer Unit = 9,824; Trail Ridge Unit = 6,310; Enos Mills = 148,324. All acreages are approximated from the Rocky Mountain National Park Recommended Wilderness Boundaries Map # 121-60,403a dated June 1999. The specific names were used in RMNP's the original Wilderness Recommendation in 1974 to identify individual units within the wilderness area. The official name of the recommended wilderness is Rocky Mountain National Park Wilderness.

Range of Alternatives

Comment: The range of alternatives considered for this plan and EA is not sufficient. (2 comments)

Response: Scoping efforts were conducted and a number of management options were considered prior to the development of the alternatives considered for this plan and associated EA. Management options that did not meet the Purpose and Need or that may have resulted in more extensive environmental impacts or unreasonable costs were eliminated from further consideration. Other options were eliminated if there was no support expressed by the public during scoping. Those options that were found to be reasonable and met the Purpose and Need were carried forward and combined to create the Action Alternative A/Preferred Alternative. During the alternatives development process, it was discovered that there were not enough distinct management options to create additional discrete action alternatives. Therefore, Alternative A and the No-Action/Current Management Alternative were the only two alternatives ultimately carried forward for detailed analysis.

Policy Issues

*****Comment: There is no reference in the plan to NPS-77, NPS guidance for recreation and management. (1 comment)

Response: NPS-77 has been added to the list of regulations in *Section 1.4.1, Federal and General Provisions* of the Plan/EA.

Comment: Will the plan impact the right of Grand Ditch to exist and continue? (1 comment)

Response: The plan recognizes pre-existing conditions including the Grand Ditch, and acknowledges that these uses will continue to exist, subject to RMNP oversight and applicable regulations that protect the park's resources and values.