Chapter I - Purpose and Need for Action

INTRODUCTION

Description

The intent of this document is to analyze alternatives for management direction of wilderness resources on the San Juan and Rio Grande National Forests (SJ-RG NFs). The alternatives present different methods for managing wilderness. The direction contained within the action alternatives will amend the Land and Resource Management Plans (LRMPs) for the SJ-RG NFs. This proposed amendment focuses on recreation use and the effects of that use on the wilderness resource. Direction for all wilderness resources are not addressed in this document. Other resource issues will be addressed in future amendments or LRMP revisions or in individual project plans. Management direction described within this amendment will pertain to all wilderness areas on the SJ-RG NFs as well as the Piedra Area. Changes in allocation of existing management prescriptions will pertain only to the Weminuche and South San Juan Wildernesses and the Piedra Area. Because these areas are the only ones affected by management prescription changes, this analysis will focus on these specific areas.

The SJ-RG NFs are designated as the lead Forests for implementing management direction for the Weminuche and South San Juan Wilderness Areas and the Piedra Area. The Weminuche and South San Juan Wildernesses are congressionally designated as Wilderness. The Piedra Area is a congressionally designated area to be managed for its wilderness character and potential for inclusion in the National Wilderness Preservation System. Within this document, “wilderness” includes all three areas and “Wilderness” (capitalized) refers to congressionally designated Wilderness. This document focuses on proposed changes in Management Area (MA) allocations for these three areas. Other Wilderness areas on the SJ-RG NFs; the Lizard Head, La Garita, and Sangre de Cristo will be affected by proposed changes in MA descriptions and consistent forest-wide wilderness regulations. The lead Forests for these units are the Grand Mesa, Uncompahgre and Gunnison NFs (for the Lizard Head and La Garita) and the Pike and San Isabel NFs (Sangre de Cristo).

The **Weminuche Wilderness**, the largest in Colorado, is 499,771 acres in size (334,776 acres on the San Juan National Forest [SJNF] and 164,995 acres on the Rio Grande National Forest [RGNF]). Stretching across the Continental Divide from Stony Pass on the North to Wolf Creek Pass on the South, the Weminuche contains three summits over 14,000 feet in elevation and many more over 13,000 feet. Elevations range from 7,910 to 14,083 feet. It is an area of rugged mountain beauty, with spectacular peaks, broad glacial valleys, and pristine lakes. The Weminuche is one of the most visited Wilderness areas in Colorado and is popular with both hiking and horseback visitors. There are over 490 miles of trail; two trailheads are reached via the Durango and Silverton Narrow Gauge Railroad, which offers a unique entry to the wilderness environment.

The **South San Juan Wilderness** in south-central Colorado encompasses the eastern extent of the San Juan Mountain range, including a segment of the Continental Divide. The South San Juan contains 164,563 acres (75,640 acres on the SJNF and 88,923 on the RGNF). The South San Juan includes a variety of bottomlands, canyons, and glaciated uplands. Trademarks of the area are high open parks and remote landscapes. Visitor use is higher on the Rio Grande portion of the Wilderness, but is lower overall than in other nearby Wilderness.

The **Piedra Area** is not designated as Wilderness, but is a Congressionally designated area to be managed so as to retain its existing wilderness character and potential for inclusion in the National Wilderness Preservation System. The Piedra Area is 60,387 acres. It is lower in elevation than Wilderness areas on the Forest and encompasses large tracts of ponderosa pine communities, which are not as common in higher-elevation Wilderness areas on either Forest.

Summary of Changes Since the Initial EA

Since the release of the Initial EA, other analyses and plans have been finalized and those changes are referenced within this document. Several portions of this document have been reworded for clarity. Some portions have been revised or expanded to address other agency, public, or internal comments and concerns about the initial EA.

Each chapter of this document includes a section with a summary of changes. Major changes are described in that section.

Within the section in Chapter I titled *Issues Addressed Elsewhere*, the scope of this document has been clarified.

History

The Weminuche Wilderness lies within an area previously designated by the Forest Service as the San Juan and Upper Rio Grande Primitive Areas. This primitive-area designation was first proposed early in 1927. In 1932, the Forest Service's Regional Forester formally approved the San Juan Primitive Area. Forest Supervisor Hutton remarked at the time of the 1927 proposal, "Primarily, the area is a Wilderness, untouched by man except for the construction of the barest necessities.... Its forests are virgin and unmarred except by fire. For natural beauty of the grand and rugged mountain type, it cannot be excelled."

Following the 1964 Wilderness Act, the areas that now encompass the Weminuche and South San Juan Wilderness Areas were studied for possible inclusion in the National Wilderness Preservation System. Table 1-1 shows the initial allocations for each area and also acres added in subsequent Wilderness Bills.

Table I-1. Summary of Acreages

Weminuche Wilderness	**Acres**
January 4, 1975 Wilderness Bill	405,031
1980 Wilderness Bill	66,000 (Goose Creek drainage)
1993 Wilderness Bill	28,740 (western portion)
	499,771 Total Acres
South San Juan Wilderness	
1980 Wilderness Bill	133,463
1993 Wilderness Bill	31,100 (Montezuma Peak and V-Rock Trail areas)
	164,563 Total Acres
Piedra Area	
1993 Wilderness Bill	60,387 Total Acres

What is Wilderness?

Wilderness can mean many different things to a variety of people. There are two main concepts; one being the *sociological* idea that wilderness is a place where one can experience a recreational or social

activity in a natural environment free from development. For a person from an urban environment with little experience in the natural environment, wilderness could be just about any forested area that is relatively undeveloped. On the other hand, *legal* Wilderness is defined by the Wilderness Act of 1964; "A Wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain."

Aldo Leopold, author of *Sand County Almanac* and early Forest Service proponent of wilderness preservation, envisioned wilderness as "a continuous stretch of country preserved in its natural state, open to lawful hunting and fishing, devoid of roads, artificial trails, cottages or other works of man." Robert Marshall, Forest Service Director of Recreation in the 1930's, suggested that "I...shall use the word Wilderness to denote a region which contains no permanent inhabitants, possesses no possibility of conveyance by any mechanical means and is sufficiently spacious that a person in crossing it must have the experience of sleeping out."

Many early descriptions of wilderness focus on the recreational experience that could be encountered. With the passage of the Wilderness Act, other values (scientific, historic, ecological, economic and spiritual) have been defined.

The areas described within this document have been *legally* designated by Congress to be managed as Wilderness or, in the case of the Piedra Area, to retain its wilderness character.

PROPOSED ACTION

The SJ-RG NFs propose to amend the existing LRMPs for both Forests to incorporate new wilderness management direction. The proposed action is described as Alternative C in this document. This alternative seeks to improve the quality of the physical and biological environment opportunities of wilderness areas on the Forest while maintaining recreation opportunities.

The proposed action will define wilderness-wide standards and guidelines; describe wilderness management area prescriptions and their standards and guidelines; and wilderness monitoring requirements. The new prescriptions relate to the current wilderness management prescriptions in the following way:

Old Prescriptions	New Prescriptions
8A	1.11
8B	1.12
8C	1.13
8D	1.13

Wilderness management direction will be described for all wilderness areas on the SJ-RG NFs. Management prescription areas for the La Garita and Sangre de Cristo Wilderness direction were defined in the recently approved Rio-Grande National Forest Land Management Plan. This proposed action will define and relocate (spatially) Wilderness management areas for the Weminuche and South San Juan Wilderness Areas and the Piedra Area. In the Lizard Head Wilderness, the current Forest Plan management prescriptions will be changed to their equivalents in the new labeling scheme, as described above and the allocation of management areas will remain as they currently exist.

This document contains information the Forest Supervisor will need to select an alternative that will guide LRMP direction for wilderness management.

An environmental assessment is not a decision document. It is a document disclosing the environmental consequences of implementing the proposed action and alternatives to that action. The decision is documented in a decision notice signed by the responsible official.

NEED FOR PROPOSED ACTION

Forest Plan direction for wilderness was developed in 1985 and 1996 for the SJ-RG NFs, respectively. The RGNF revised its plan in 1996, but limited the scope of changes to their Wilderness management direction, due to the ongoing planning efforts documented in this amendment.

During the intervening decade since the original plans were published, Colorado has become one of the fastest-growing states in the nation. The significance of southwest Colorado as an outdoor mecca has increased, as have the amount and type of visitation to backcountry areas. The Weminuche, South San Juan, and Piedra Area together comprise the largest block of designated Wilderness and roadless area in Colorado. The Weminuche is one of the most visited Wilderness areas in the state. The increase in the amount and types of recreation use has affected wilderness in ways that were not anticipated in the original plans. There is a need to review existing LRMP direction for management of recreation use, to address changes in recreational use patterns and to preserve the wilderness character of these areas.

Since development of the original Forest Plans for the SJNF and RGNF, additional research and information have become available to guide wilderness managers in preserving the wilderness condition. Limits of Acceptable Change (LAC) is a planning tool that enables wilderness managers to define acceptable wilderness conditions and then develop standards, guidelines, indicators, and management actions to meet acceptable conditions.

> **Wilderness Standards** are levels of accomplishment or courses of action, required to achieve the desired conditions. They are criteria used to evaluate social or environmental impacts. Standards are mandatory; deviation from standards is not permissible without an amendment to the Forest Plan.
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> **Wilderness Guidelines** are defined as preferred levels of accomplishment or courses of action designed to achieve the desired condition. Guidelines can define the level of impact that is deemed acceptable. When deviation from a guideline is necessary, it will be documented during project analysis. Under those circumstances, the responsible official should recognize the purpose(s) for which the Guideline was developed and assure interested individuals that any subsequently approved actions are not in conflict with the purposes for which they were developed.
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> **Wilderness Indicators** identify which condition will be monitored. Indicators are chosen to specifically respond to the issues that have been identified. Through the use of indicators wilderness conditions can be monitored to determine if desired conditions are being met.
>
> **Wilderness Management Actions** are techniques, regulations or responses that can be implemented to affect wilderness conditions on the ground. They are courses of action designed to move wilderness conditions towards the desired future condition.

The LAC planning tool was not available during the development of the original Forest Plan. The LAC process allows interested publics and Interdisciplinary Team members to work together to define acceptable wilderness conditions. This process was used on the SJ-RG and through the input of

public study groups, desired conditions were defined. This amendment incorporates the LAC planning process into LRMP standards and guidelines.

The wilderness standards and guidelines developed in previous LRMPs are, in some instances, difficult to monitor on the ground. There is a need to better define monitoring indicators and to develop management actions needed to restore conditions that are not in conformance. This amendment better defines standards and guidelines and how they will be monitored to determine if wilderness conditions are being met.

There is a need to more explicitly develop standards and guidelines to address the following situations occurring within SJ-RG wilderness:

- The increasing presence of noxious weeds.
- The long-term effects of recreational-stock grazing on vegetation, particularly in meadow and riparian areas.
- The need for more specific campsite condition standards in high-lake basins because of the variability of each lake basin. New campsite condition monitoring techniques need to be incorporated into Forest Plan direction.
- The need to develop monitoring guidelines to measure the effects of increased campsite creation and the corresponding campsite density.
- The need to review direction concerning group size to determine if changes are needed to address concerns about the increased numbers of large groups visiting the wilderness.
- The need to establish fire management goals and set guidelines to monitor our effectiveness in achieving this result.

With the passage of the 1993 Colorado Wilderness Act, there is now an additional 120,000 acres on the SJNF that is to be managed for its wilderness character. Most of the area within the newly designated areas have not been assigned wilderness management prescriptions, which help guide Forest land managers in maintaining wilderness conditions.

Current standards and guidelines for other wilderness resources, such as air quality, water quality, livestock grazing, wildlife, and fish habitat, will need review. Such review, however, is not within the scope of this analysis. The recently revised RGNF LRMP addresses many of these wilderness resources and develops associated standards and guidelines.

NATIONAL WILDERNESS MANAGEMENT DIRECTION

Wilderness Act - Primary direction for managing Wilderness comes from the Wilderness Act of 1964. The Act states that Wilderness is 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...leaving no lands designated for preservation and protection in their natural condition …."*

and administered

> *"...for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness and so as to provide for the protection of those areas, the preservation of their wilderness character..."*

and characterized as

> *"...an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements of human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land....(4) may also contain ecological, geological, or other features of scientific, educational, scenic or historical value..."*

and

> " *...wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation and historical use."*

and

> *"..there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act.... there shall be no other form of mechanical transport, and no structure or installation within any such area."*

Within the Piedra Area, management direction from the 1993 Colorado Wilderness Act directs the Secretary of Agriculture, through the Forest Service, to

> *"..maintain the areas' presently existing wilderness character and potential for inclusion into the National Wilderness Preservation system...mechanized or motorized travel shall not be permitted in such areas: Provided that the Secretary may permit motorized travel on trail number 535 in the San Juan National Forest during periods of adequate snow cover."*

WILDERNESS MANAGEMENT GOALS

The following wilderness management goals were developed through input from interested publics, Forest Service personnel and from the Wilderness Act. The SJ-RG NFs will use these goals in developing management direction for wilderness areas on the Forests:

- Manage wilderness so that changes in the ecosystem are primarily a consequence of natural forces, or within a range of natural variability and succession.
- Maintain wilderness in a natural and untrammeled condition while accommodating human uses.
- Provide outstanding opportunities for solitude and a primitive and unconfined recreation experience.
- Sustain wilderness as a place of peace, solitude and sanctuary.
- Preserve natural resources for their inherent ecosystem and biological diversity values and for scientific research purposes.
- Provide the opportunity for challenge and risk.
- Minimize long-term impacts caused by human uses.
- Sustain natural and indigenous life forms.
- Protect and preserve historic and cultural resources found in wilderness.

PUBLIC PARTICIPATION

Public participation in this planning process began when the Weminuche Wilderness Study Group formed in September of 1993. The study group process allowed interested citizens to participate in monthly study sessions over a period of two years, to learn about wilderness conditions and comment on various aspects of wilderness management. The study group process brought together various interest groups and individuals. The meetings were held throughout the year, except during the summer months, and were open to anyone. Suggestions from the study group process represented a range of opinions and ideas. Although the group concentrated on the Weminuche Wilderness and Piedra Area, the ideas developed by the group have direct application to wilderness management throughout both Forests. This input was used to develop the issues and alternatives presented in this document.

In February of 1996, a formal scoping document was sent to over 800 people and organizations, requesting comments on the proposed amendment to wilderness management direction. The Forest received 262 written responses to this request, as well as petitions signed by 320 individuals. Input from the scoping document was also used in developing alternatives.

Public open houses were held in the communities of La Jara, Durango, Creede, and Pagosa Springs, Colorado, as well as in Chama, New Mexico, to obtain input for the proposed Forest Plan amendment. Over 140 people attended these sessions.

WILDERNESS VALUES

Wilderness has many values for human and social enjoyment, as well as for preserving important biological and physical resources. The Weminuche Wilderness Study Group developed the following statement on wilderness values.

"Wilderness provides an opportunity to experience the magic of nature, the intensity of color and weather. Here we can have the sense of discovery, of what it might have been like for early explorers. We are reminded that the wilderness is a place that our grandchildren should be able to see, which then must be reflected in our sense of responsibility to appreciate it and care for it in the present.

"Wilderness, in contrast to our ordinary lives, is a place away from the threats and fears of daily existence. It removes our worries, clears our mind and creates a sense of relief that we are here.

"Wilderness creates an opportunity for us to separate ourselves from the world and its requirements, by providing a respite from technology, from cars, TV's, and computers. It provides an "escape" from civilized society, allowing us, at least temporarily, to put in order the world we live in. It creates a place to improve our mental and physical health, our spiritual well being. It also provides the struggle and challenge necessary to make us aware of the surroundings.

"Wilderness has important environmental values. It sustains wildlife, fauna and flora and biodiversity. It has values for scientific study, and provides learning opportunities where we can learn both about ourselves and the environment.

"Wilderness is a place that shows nature's fundamental indifference and demonstrates the human's issues with control. In the wilderness we can observe both life giving and life taking, or events throughout every moment of existence, in an ever-changing biosphere, constantly adapting, where a tree may die, but the totality of nature is relatively undisturbed.

"Wilderness has a value in terms of economic market. It provides economic means...because it is a draw within a tourist-based economy it provides jobs and income. This is more noticeable at certain times of the year, such as during hunting season, or in communities where the economy is more dependent on backcountry activities. Services provided by outfitter-guides provide access to the wilderness for persons who otherwise could not experience it by themselves. For such persons commercial wildland support services may be viewed as minimizing impact for the inexperienced or unskilled backcountry visitor.

"Wilderness provides a connection to the past, thus giving us a sense of history, of what used to be both in terms of natural and social history.

"Wilderness provides open spaces where we can feel free. It is a place to recreate away from regulations, and a place to experience without influence. Nevertheless, wilderness must be managed in some ways by nature and in some ways by humans. Regulations and management should respect all forms of life and instill respect in all persons who enter the wilderness. Management practices should educate, inform and teach people how to visit and learn and should nurture in the visitor a sense of responsibility and protection and preserve the challenge and choice that the wilderness presently provides.

"Wilderness in its present state provides a sense of freedom, a freedom to chose places to go. We are concerned about over regulation and concerned that there will be no regulation in certain areas. The freedom to fail should be maintained and that education should be provided to inform the visitor about duties and responsibilities. Regulation should be something that carries a message about how to properly relate to the wilderness, realizing that there is a great diversity in people and in their understanding and depth of awareness about wilderness experiences and values."

Issues Identified

Public scoping identified several important issues. These generally centered on the effects of recreational use on wilderness and the quality of the wilderness experience. The issues were grouped into major issue categories, for purposes of analysis within this document. The major categories are:

Human Effects on Wilderness Ecosystems

There is a concern that the amount and types of human use that are occurring are influencing or disrupting the natural conditions and processes that take place within wilderness. Of particular concern are human impacts to vegetation, soils, wildlife, riparian areas, and water quality.

Wilderness or backcountry use over the past decade has been increasing. Destination areas are showing an increase in compaction, trash accumulation, a reduction in down and standing dead wood, damage to trees, and sterilized soil from campfires. Areas that access the 14,000-foot peaks within the Weminuche Wilderness are receiving an increase of use as the popularity of climbing Colorado's "fourteeners" increases.

Habituation of black bears and mountain goats to humans is more prevalent and can be partially attributed to an increase in the number of visitors and to inadequate handling of food and trash by visitors.

Stocking fish in high mountain lakes has long been a source of concern and controversy. The types of species being used for stocking and which lakes are stocked or not stocked are the major issues. The effects of non-indigenous species on natural ecosystems and processes and the impacts of additional recreation fishing pressure on high altitude lakes and streams contribute to the concern. Many lakes were barren (of fish species) prior to settlement. Now that stocking has occurred in these lakes, there is a concern as to how this has affected natural conditions. For many wilderness users, the opportunity to see and catch fish is an important part of their wilderness experience, and the loss of this opportunity would have a negative impact on their experience.

Exotic plant species, including noxious weeds, are increasing within the wilderness and competing with native species.

Human Effects on Wilderness Experience Opportunities

The amount and types of recreation use that are occurring are affecting the kind of wilderness experience that some people want. Crowding, noise, user conflicts, impacted campsites and trails, trail and camp encounters, group size, and litter can all affect the wilderness visitor's experience.

The establishment of a recreation-use capacity or the maximum number of users within a given area, is a concern from the standpoint of how the capacity would potentially limit recreation use.

If a capacity is established, there is a concern as to how use will be allocated to commercial and non-commercial users.

Large groups, both commercial and non-commercial, have an adverse effect on some users experience. The amount, frequency, and location of large-group encounters have an impact on people's wilderness experience.

The amount and behavior of domestic dogs are concerns. Dogs that are not under control can harass wildlife, and noise from barking affects the wilderness experience of others.

Improvements include trails, bridges, signs, and administrative sites. The location, level of development, and number of improvements within the wilderness affect wilderness experiences. This

issue centers on what level of improvements should be available to protect wilderness resources, while providing for public safety.

The amount and type of regulations that wilderness visitors encounter during their trip are a concern to some. Many individuals feel that having to obtain a permit to visit a wilderness area would be an unnecessary restriction on their freedom to use and enjoy wilderness areas on the SJ-RG NFs.

Recreational-Stock Effects on Wilderness Resource

Some people feel that recreational-stock use within wilderness significantly impacts wilderness conditions, including trails, campsites, riparian areas, and meadows. Native plants are being adversely affected by the amount of grazing that is occurring from recreational stock.

Many users have expressed concern about the byproducts of stock use, such as manure and flies on trails and in campsites.

Recreational-stock use is common within the areas addressed by this document. Recreational stock is frequently used because of the large distances involved and because of the high incidence of horse ownership in the surrounding areas. Many stock users have expressed concern about restrictions on the use of stock, which they feel would adversely affect their way of experiencing the wilderness.

The introduction of non-native plant species is affecting natural vegetative patterns and processes. Recreational use, primarily recreational-stock use, has increased the spread of non-native plant species.

Issues Addressed Elsewhere

This proposed amendment focuses on recreation-related issues. Public scoping identified other issues unrelated to recreational use of the wilderness such as the need to protect air quality and cultural sites, the impacts of domestic livestock grazing, and the effects on water quality from outside sources such as acid rain. These issues have been addressed in the recently revised Rio Grande National Forest LRMP and will be addressed in future LRMP planning efforts on the San Juan National Forest or in individual Allotment Management Plans.

Specific issues related to recreation commercial-use capacity within wilderness on the San Juan National Forest are addressed in the Recreation Use Analysis and Outfitter-Guide Needs Determination available at SJRG offices. The analysis details recreation capacity in terms of visitor days per compartment or drainage area and identifies the mix of commercial and non-commercial use within an area.

Specific issues related to fire management and prescribed fire within the Piedra Area and Wilderness are addressed in the SJ-RG NFs Prescribed-Fire Plan, completed April, 1997. This document addresses changes in management prescriptions and monitoring standards to re-establish fire as a natural ecological force within wilderness management areas.

Overflights of aircraft over wilderness areas on the Forest are not addressed in this document. It is the policy of the Forest Service to discourage flights below 2000 feet above ground level (AGL) while over wilderness areas, except for emergencies or special circumstances. Section 5 of the National Park Overflight Act of 1987 (P.L. 100-91) requires the Chief of the Forest Service to “conduct an assessment to determine what, if any, adverse impacts to wilderness resources are associated with overflights.” In July of 1992, the Forest Service submitted a report to Congress detailing potential impacts of aircraft overflights of National Forest System Wildernesses (Forest Service, 1992). This report summarizes effects of overflights on wilderness resources.

There are water-development structures (dams) that existed at the time of Wilderness designation. Guidance for managing such structures is found in FSM 2320.43d. The structures have been under special-use permit, but as that status changes, analysis specific to those structures and their management, will be made.

Chapter II - Alternatives

INTRODUCTION

In response to the issues identified in Chapter I, four alternatives were developed. These alternatives were developed around themes that best met the issues that were identified. As required by the National Environmental Policy Act (NEPA), Alternative A is the No Action or present-management-direction alternative.

All of the action alternatives contain revised Management Areas descriptions. Management Areas (MAs) are defined as parts of the Forest that are managed for a particular emphasis or theme. Management Areas are called Prescriptions or Management Area Prescriptions in this document. Each Management Area has a Prescription that outlines the setting, the Desired Conditions, and the Standards and Guidelines that apply to it (in addition to the Forest-wide Standards and Guidelines). This amendment defines three MAs to be used in wilderness settings across the SJ-RG NFs. They are:

- Pristine (MA-1.11),
- Primitive (MA-1.12) and
- Semi-Primitive (MA-1.13)

To measure how well the Desired Conditions are being met, indicators are developed for Standards and Guidelines that can be readily monitored. Indicators identify what conditions will be monitored, while Standards and Guidelines define when conditions are acceptable or unacceptable.

A range of Management Actions is also shown that describe courses of action that managers can take if Standards or Guidelines are not being met. Thresholds are the points at which increasingly more restrictive levels of Management Actions can be taken. They let people know at which point the different levels of Management Actions can or will be implemented.

Together the Desired Conditions, Standards and Guidelines, Indicators, Management Actions and Thresholds form the basis of the Proposed Management Direction.

The principle differences between alternatives are based on the location and the amount of acreage allocated to each MA. As the type and location of the MA changes, so does the management direction. When alternatives have more acreage allotted to the Pristine MAs, the influence of human impact on the environment is reduced.

The new numbering system (1.11, 1.12, and 1.13) used for MAs is consistent with other Forests in this Region and surrounding Regions. All alternatives were designed to meet the intent of the 1964 Wilderness Act.

SUMMARY OF CHANGES SINCE THE INITIAL EA

The Alternative Descriptions have been clarified. Clarification of alternative descriptions are as follow:

Alternative A: Continuation of management under this alternative will allow for increased crowding, larger group sizes, and no change in restrictions.

Alternative B: Of the action alternatives, this alternative allows for higher densities of recreation use.

Alternative C: This alternative sets standards and guidelines for recreation use, which when implemented may result in a decrease in existing use in areas where standards are exceeded. The 1.11a subclass of the Pristine MA is now defined as including high-elevation basins within the Weminuche Wilderness that are destination areas and the user-defined, non-system travel corridors leading to them. These areas would be managed as a Pristine MA, however to allow for such uses, the MA crowding standards are modified. Group-size regulations have been amended to allow for a group size maximum of 20 people for groups using the Piedra River for river-running activities.

Changes to the proposed wilderness management direction:

Addition of guidelines for the use of prescribed natural fire and fire suppression strategies, tactics, and impacts.

Recreational livestock are prohibited from being *restrained* within 100 feet of lake shores and streams or within riparian areas. The intent of the standard is to minimize impacts to riparian areas. Impacts to soils, water, and vegetation are most minimized when animals are loose.

The standard for disposal of human waste and wash water had been omitted from this table in the initial EA..

The requirement of a permit for groups of more than ten people has been removed. The intent of the permit was to provide information to large groups about ways to minimize both social and biophysical impacts and to influence their behavior and travel plan. Most groups of 10 or more that currently and historically have used these areas are organized groups, either commercial or institutional. Commercial and institutional groups are required to have special-use permits. To address the issues related to the impacts of large groups, there will be an increased effort by the agency to provide all large groups with information through personal contacts and handouts.

There was an omission in the prohibitions for Little Emerald and Emerald Lakes. Restraining or grazing of recreational livestock is currently prohibited within 1/4 mile of Little Emerald Lake and within 1/2 mile of the north shore and 1/4 mile of the other shores of Emerald Lake. The prohibition will continue under the proposed management.

In response to impacts from the use of campfires, Vestal Basin and the West Fork (Rainbow) Hot Springs area within the Weminuche Wilderness will be closed to campfires. In response to the increase in density and area of campsites, crowding, sanitation concerns, and limited feed for grazing, camping within the West Fork Hot Springs area will be limited to designated sites only, and overnight use and grazing with recreational livestock will not be permitted in the West Fork Hot Springs area. The area of restriction will be defined on a map, but is generally between the junction of the West Fork and Beaver Creek Trails and the point at which the West Fork Trail crosses the West Fork of the San Juan River above the hot springs.

The wording and format of the Management Area Prescriptions has been changed to be consistent with Region 2 prescriptions.

Concerns were expressed that restriction was greater for visitors who use outfitters or guides than for other visitors. Therefore, the prescriptions simply apply to all appropriate recreation activity, whether outfitted, guided, or not, i.e., in the pristine prescription, there is to be no lasting evidence of recreation activities. Permitted outfitters provide services to visitors for activities that meet identified public needs and cannot be provided in non-wilderness settings.

ALTERNATIVE DESCRIPTIONS

Alternative A - No Action - Continue current management

Alternative A represents the current management direction found in the SJNF LRMP developed in 1983. The RGNF LRMP was revised in 1996 and contains Wilderness management direction for that Forest's Wilderness areas.

Current management direction would continue. Direction within the SJNF LRMP describes four MAs. The Transition MA is not contained within the Action Alternatives. The Transition MA specifies standards for wilderness portal areas that exceed standards and guidelines described in the Action Alternatives. The number of acres allocated to non-wilderness MAs would not change. Several areas now allocated as Wilderness as a result of the 1993 Colorado Wilderness Act, do not have Wilderness MAs assigned to them because current direction has never been amended.

Continuation of management under this alternative will allow for increased crowding, larger group sizes, and no change in restrictions.

All Action Alternatives

The RGNF completed their LRMP with the understanding that wilderness Standards and Guidelines, MA allocations, and wilderness management direction described in this document would be incorporated into the new revised LRMP. So, this direction applies to the Piedra area and all Wilderness areas within both Forests. However, changes in MA locations and acreage apply only to the Weminuche, South San Juan, and Piedra Areas. Visitors will be encouraged to use Leave No Trace (low-impact camping) techniques and when and where resource damage indicates the necessity, visitors will be required to use such techniques. The use of such methods can postpone or eliminate the need to limit the total number of visitors.

Alternative B - Maintain Wilderness qualities while retaining recreation opportunities

Alternative B responds to issues raised regarding the amount of recreation use allowed within the wilderness. This alternative addresses the significant issues in two ways. First, the existing MAs are amended to clarify standards, guidelines, and indicators to allow wilderness qualities to be maintained. Second, the location and number of acres of MAs which favor higher densities of recreation use (generally, Primitive and Semi-Primitive), are emphasized more than the other action alternatives, to allow for expanded recreation opportunities. Some people would prefer to have fewer restrictions on the amount of recreation use allowed within Wilderness and the Piedra Area. This alternative would allow larger group sizes for both commercial and non-commercial activities with up to 15 people and a combination of people and stock not to exceed 35. Of the Action Alternatives, this alternative allows for higher densities of recreation use.

Alternative C - Improve Wilderness qualities while maintaining recreation opportunities (Forest Service Proposed and Preferred Action)

To allow for the improvement of wilderness resource conditions, Alternative C increases the number of acres in the Pristine and Primitive MAs. This alternative sets standards and guidelines for recreation use, which when implemented may result in a decrease in existing use in areas where standards are exceeded. Within this alternative, a subclass of the Pristine MA is defined as 1.11a. This subclass defines some high-elevation basins within the Weminuche Wilderness that are destination areas and the user defined, non-system travel corridors leading to them. These areas would be managed as a Pristine MA, however to allow for such uses, the MA crowding standards are modified. This alternative also amends existing MAs to incorporate new standards and guidelines to better measure, monitor, and maintain wilderness conditions. While the total number of people and stock within a group remains consistent with current direction of twenty-five (25) people and/or stock, this alternative reduces the total number of people allowed within a group to fifteen (15), with the exception of the Piedra River, where the group size for river-running activities will be a maximum of twenty (20) people.

Alternative D - Improve Wilderness qualities with emphasis on solitude and protecting unique ecosystems

This alternative seeks to move wilderness areas as a whole toward a more pristine condition by moving areas previously within Primitive or Semi-Primitive MAs to the Pristine MA. The intent is to reduce human influence to the maximum extent possible, by restoring conditions and providing outstanding opportunities for solitude throughout the areas analyzed. This alternative also amends existing MAs to incorporate new standards and guidelines to better measure, monitor, and maintain wilderness conditions. MAs within the Weminuche, South San Juan, and Piedra Area, are limited to Pristine and Primitive only. Group sizes are limited to no more than ten (10) people, with a total combination of people and stock not to exceed fifteen (15).

Alternative Maps A-D (Pages II-16 to II-22) show the Management Area allocations by alternative.

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ALTERNATIVE A -

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ALTERNATIVE B -

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ALTERNATIVE C -

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ALTERNATIVE D -

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PROPOSED WILDERNESS MANAGEMENT DIRECTION

All conditions and opportunities are not the same throughout a wilderness area. Differences in use patterns, natural conditions, and other factors contribute to the need to identify a range of opportunities and desired future conditions. To manage wilderness with one set of standards, and to not define a range of conditions and opportunities, runs the risk of managing to the least common denominator for the entire wilderness.

Each of the action alternatives incorporates the three Wilderness MAs described in this section. Each MA is designed to meet the intent of the 1964 Wilderness Act. The narrative descriptions of the natural and human environment for each MA represent the management goals for the area and the desired condition. They describe conditions sought in the wilderness and serve as criteria for identifying what and where specific management actions are needed. Also described with each management prescription are standards and guidelines and indicators used to measure whether or not the desired condition is achieved. Wilderness-wide management actions designed to achieve desired conditions are also described.

> **Wilderness Standards** are levels of accomplishment or courses of action, required to achieve the desired conditions. They are criteria used to evaluate social or environmental impacts. Standards are mandatory; deviation from standards is not permissible without amending the Forest Plan.
>
> **Wilderness Guidelines** are defined as preferred levels of accomplishment or courses of action designed to achieve the desired condition. Guidelines can define the level of impact that is deemed acceptable. When deviation from a guideline is necessary, it will be documented during project analysis. Under those circumstances, the responsible official should recognize the purpose(s) for which the guideline was developed and assure interested individuals that any subsequently approved actions are not in conflict with the purposes for which they were developed.
>
> **Wilderness Indicators** identify which condition will be monitored. Indicators are chosen to specifically respond to the issues that have been identified. Through the use of indicators wilderness conditions can be monitored to determine if desired conditions are being met.
>
> **Wilderness Management Actions** are techniques, regulations or responses that can be implemented to affect wilderness conditions on the ground. They are courses of action designed to move wilderness conditions towards the desired future condition.

FORESTWIDE STANDARDS AND GUIDELINES

A number of principle laws provide direction for National Forest management. Additionally, there are laws that provide specific direction for management of Wilderness (the Wilderness Act of 1964) and which designate and provide specific direction for the Weminuche and South San Juan Wildernesses and the Piedra Area. A number of prohibitions that apply to designated wilderness are found in the Code of Federal Regulations (CFR). National and Regional Forest management policy and direction, including policy and direction for management of designated Wilderness, is found in the Forest Service Manual (FSM).

Table II-1 describes standards and guidelines that will apply to the Piedra Area and all Wilderness areas. With the exception of those standards and guidelines that are directed by law (P.L.) or National policy (FSM), the following is proposed San Juan-Rio Grande NF policy. Additional standards and guidelines specific to each management area prescription are found in Tables 11-2 through 11-4.

Table II-1. Forest-wide Standards and Guidelines for Wilderness and Piedra Area

Category	
Minerals Management	**Standards**
	a) Recreational panning, sluicing and dredging shall not be allowed.
Fire	**Standards**
	a) Minimize fire suppression impacts in Wilderness by implementing minimum impact suppression tactics as outlined in the Light Hand Tactics guide (B.Moody and F.Mohr, 1988). b) Emphasize the use of prescribed natural fire through planned management-ignited fires and natural ignitions under approved prescribed-burn plans, to reduce unnatural buildup of fuels, and to simulate conditions representative of natural fire regimes.
Heritage Management	**Standards**
	a) NRHP-eligible or -listed historic structures are managed to be compatible with the wilderness setting.
Range Management	**Standards**
	a) Livestock grazing activities shall be permitted in accordance with congressional guidelines. (Sec. 108, P.L. 96-56, House of Representatives Report No. 96-617, FSM 2320.5)
Scenery/ROS	**Standards**
	a) The Scenic management objective is “preservation.” The Recreation Opportunity Class is Primitive.
Special Use Management	**Standards**
	a) Commercial services may be performed within Wilderness to the extent necessary for activities which are proper for realizing recreational, educational or other wilderness purposes of the areas. (Wilderness Act of 1964).

Table II-1. Forest-wide Standards and Guidelines (cont.)	
Recreation	**Standards**
	a) Maximum group size: no more than 15 people per group, with a maximum combination of people and stock not to exceed 25 in any one group for all wilderness areas and the Piedra area, except for the Piedra River where river-running activities will have a maximum group size of 20 people. b) Recreational livestock are prohibited from being restrained within 100 feet of lake shores and streams or within riparian areas except as justified by terrain. c) Where forage is limited, require stock-users camping overnight, to use processed feeds or certified weed-free hay for their stock that are free of viable noxious-weed seeds. d) Disposal of human waste and wash water is prohibited within 100 feet of any water source.
	Guidelines
	a) Prohibit wood burning in areas when: • Use of dead and down wood for fuel is likely to reduce vegetative diversity, soil nutrient and erosion protection, or • Visual resource objectives for the area could not likely be met. b) Camping is not permitted within 100 feet of streams or lakes, unless exceptions are justified by terrain or specific design which protects the riparian and aquatic resources. - Piedra Area and all Wilderness. c) Camping, except at designated sites, and restraining or grazing of recreational livestock are not permitted within ¼ mile of: • Little Emerald Lake - Weminuche Wilderness d) Camping, except at designated sites, and restraining or grazing of recreational livestock are not permitted within ½ mile of the north shore and ¼ mile of the other shores of: • Emerald Lake - Weminuche Wilderness e) Camping and overnight use with recreational livestock, except in designated sites, and campfires and grazing of recreational livestock is prohibited within a defined area around: • Rainbow Hot Springs (West Fork Trail) - Weminuche Wilderness f) Camping is not permitted within the drainage basin of: • Twin Lakes (Needle Creek Drainage) - Weminuche Wilderness. g) Camping, campfires, and restraining or grazing recreational livestock are not permitted within 200 feet of: • Fourmile Lake, West Ute Lake, Archuleta Lake - Weminuche Wilderness • Bear Lake, Blue Lake, Green Lake and Red Lake - South San Juan Wilderness h) Camping, campfires, and restraining or grazing recreational livestock are not permitted within 200 feet of the west and north shores or between the lakeshore and trails #527 (Flint Creek) and #525 (La Osa) at • Flint Lake - Weminuche Wilderness i) Camping, campfires, and restraining or grazing recreational livestock are not permitted within 300 feet of lakes, except for designated sites - Sangre De Cristo Wilderness. j) Wood burning, (i.e. campfires and wood stoves) is not permitted within the following areas: • Needle Creek Drainage - Weminuche Wilderness • Vestal Basin (drainage of Vestal Creek)- Weminuche Wilderness • Navajo Lake Basin - Lizard Head Wilderness. k) Prohibit use or entrance with a wagon, cart, or other mechanized transport, except persons with wheelchairs as a necessary medical appliance - all Wilderness.(Wilderness Act of 1964; Regional Policy, Region 2) l) Prohibit use or entrance with mechanical or motorized means of transport-Piedra Area (1993 Colorado Wilderness Act) m) Prohibit pets from harassing wildlife or other people. Pets must be under voice control or physical restraint.- Piedra and all Wilderness.

Table II-1. Forest-wide Standards and Guidelines (cont.)	
Infrastructure	**Standards**
	a) Where needed, reduce evidence of trails, eliminate duplicate routes and remove trails from maps where repeated travel over the same route is to be discouraged. b) Structures and facilities shall only be permitted for resource protection, user safety, administration of the Wilderness or other wilderness purposes defined in the Wilderness Act.(FSM)
Vegetative Management	**Guidelines**
	a) Vegetative restoration projects may be needed where human activities have altered natural ecosystems and there is no reasonable expectation of natural revegetation. Species native to the ecosystem should be used for restoration work. Where non-native species must be used, they should be selected based on the likelihood that they will not persist beyond the rehabilitation period. b) Noxious weed control: pulling or other hand methods of control will be used for treatment when effective for the species. If noxious weeds pose a substantial threat to wilderness values and hand treatment is not effective, chemicals or biological control may be used only after thorough evaluation of the risk of effects on non-target species and introduction of exotic species.
Recreational Stock Grazing	**Guidelines**
	a) Will not exceed moderate utilization: • 40% utilization by weight on bunchgrass. • 50% utilization by weight on bluegrass.
Riparian Utilization/Trampling	**Guidelines**
	a) Utilization of *Carex* species will not exceed standard: average stubble heights of 3-4 inches during spring use or 4-6 inches in summer/fall. b) Utilization of other herbaceous species in riparian areas limited to 40-45% of weight. c) Utilization on woody plants is limited to 15-20% of current annual growth. d) Limit stream bank disturbance (trampling, exposed soils, etc.) to no more than 20-25% of key area stream reaches.

Management Area Prescription 1.11
Wilderness - Pristine

THEME: Natural processes and conditions have not and will not be measurably affected by human use. These areas provide opportunities for solitude; travel in these environments require knowledge and skills, without dependence on management presence (trails, signs).

DESIRED CONDITIONS:

Natural Environment
Natural succession occurs on all existing vegetative communities, and is influenced by natural processes and disturbance. The structure, composition, function and spatial distribution of vegetative types are the result of natural-successional processes. Human influence on vegetation is unnoticeable. Plant species are indigenous to the immediate area, with exotic plants being extremely rare. Non-indigenous species composition does not increase from an established baseline. Fire is reestablished as a natural ecological force. Fire management activities are designed to retain the natural character of the ecosystem. Evidence of the effects of fire, insects, or disease may be present. Appropriate air quality standards are met, however, periodic smoke could occur due to natural fire. Visibility is generally unimpaired.

Human influence on the composition, structure and function of aquatic ecosystems is unnoticeable. Fish and wildlife management activities will emphasize the protection of natural processes and doing only the minimum necessary to manage the area as Wilderness. Fish stocking will emphasize a wild fishery, where species perpetuate themselves over time and are affected primarily by the forces of nature. Some high mountain lakes may be stocked to provide brood habitat for indigenous TES species. Species of fish that are not indigenous to the area or that are exotic will not be stocked.

A range of habitats is sustained for all naturally occurring species. Sensitive species do not move toward Threatened and Endangered listing. No additional non-indigenous wildlife species are introduced. Human influence on physical features such as soils and geologic materials is unnoticeable.

Human Environment
The opportunity exists for a high level of risk and challenge. Success or failure is directly dependent on the ability, knowledge, skill level, and initiative of the visitor. Self-reliance is the norm. Contact with other users, livestock or agency personnel is very infrequent. Encounters with large groups are rare. Encounters with small groups or individuals are infrequent. Travel is predominately cross-country. Trails may exist but are not maintained or designated as system trails. There are no trail bridges. An element of discovery is maintained. No interpretation, signing, markers, or posts occur with the exception of historical cairns. Information for the public use of the area will be provided in other Wilderness MAs, unless necessary for resource protection or when less obtrusive measures have been unsuccessful. There is no lasting evidence of camping activity or human impacts on the natural environment.

Permitted outfitters provide services to visitors for activities that meet identified public needs and cannot be provided in non-wilderness settings.

Some small, high-elevation basins within the Weminuche Wilderness are destination areas, but do not have maintained trail access. Although trails are not maintained, past use has established paths that are highly visible. These areas are of particular concern because of their popularity and the effect that recreation use can have on the physical and social resources of these areas. Because of their uniqueness, and the desire to maintain the opportunity for use at a level that will provide solitude while not unduly restricting use, a special MA classification has been established **(1.11a).** Guidelines have been modified within this special classification for crowding and capacity. All other Pristine MA standards and guidelines apply.

Grazing actions will adhere to appropriate MA guidelines for structures, and campsites and meet requirements of current Allotment Management Plans.

Structures and facilities are present only as necessary for resource protection when less obtrusive measures have been unsuccessful, or for management of the wilderness resource. Evidence of cultural and historical sites may exist, but are not signed.

Table II-2. Standards and Guidelines: Pristine Wilderness

Category	**Standards**
Infrastructure	a) Do not construct or reconstruct trails. Where resource damage exists from concentrated use of cross-country travelways, take measures to correct problems. b) New signs should not be provided, and existing ones should be removed (except for historical cairns).
Special-Use Management	c) All campsites must meet conditions that are better than or are equal to Cole Condition Class 1 campsite standards.

Category	**Indicator**	**Guidelines**			
Recreation - Physical					
Capacity	Area Wide - People At One Time (PAOTs)/M Acres	Location	Vegetation Type	PAOTs per 1000 acres	
				MA-1.11	MA 1.11(a)
		Area wide	Alpine, Rock, Meadow	1-2	2-4
		Area wide	Forested with openings, Forested	3-7	10-15
Campsite Conditions	Number of sites within a recreation use compartment with a Cole Condition Class rating	a) All sites within Cole Condition Class 1. b) Close and restore all Condition Class 2 through 5 campsites.			
Campsite Density	Maximum number of established campsites within a recreation use compartment	c) 1			
Lake Area Campsite Density	Number of established sites within a lake basin area	d) Lake basins will not have established campsites within this MA.			

Table II-2. Standards and Guidelines: Pristine Wilderness (cont.)		
Category	**Indicator**	**Guidelines**
Recreation - Social		
Encounters: Campsites	Number of sites occupied within sight or sound of your campsite/compartment (season average)	a) .1 b) (Mgt. Area - 1.11a) - 1
Encounters: Trail Routes	Number of encounters (parties) on trails or cross-country routes per 8-hour day (season average)	c) 1 d) (Mgt. Area - 1.11a) - 2
Encounters: Large Groups	Number of large groups encountered on trails or cross-country routes per 8-hour day (season average)	e) .1 f) (Mgt. Area - 1.11a) - .5
Crowding	Percent of sampled visitors who report crowding being a problem.	g) < than 15%
Dogs under Control	Percent of dogs encountered that are not under control	h) <5%
Soil/Vegetation		
Recreational Pack Stock Grazing Areas	Health trend survey	a) At least 95% of surveyed areas show healthy conditions. Trend must remain stable or upward throughout the area
Noxious Weeds	Presence of noxious weeds	b) < 1% canopy cover of noxious weeds
Prescribed Natural Fire	Ignitions designated prescribed natural fire	c) 90%

Management Area 1.12
Wilderness - PRIMITIVE

THEME: These areas of wilderness feature natural environmental conditions and offer a moderate degree of solitude. Natural processes and conditions have not been and will not be significantly affected by human activity (use). Areas are managed to protect ecological conditions with effects of human activity minimized**.**

DESIRED CONDITIONS:

Natural Environment
Natural succession occurs on all existing vegetative communities, and is influenced by natural processes and disturbance. The structure, composition, and function, and spatial distribution of vegetative types are the result of natural-successional processes. Human influence on vegetation is minimal. Plant species are predominately native and indigenous to the immediate area. There are no increases in non-indigenous species composition from an established baseline. Fire is reestablished as a natural ecological force. Fire management activities are designed to retain the natural character of the ecosystem. Evidence of the effects of fire, insects, or disease may be present. Appropriate air quality standards are met, however, periodic smoke could occur from natural fire. Visibility is generally unimpaired.

Human influence on the composition, structure and function of aquatic ecosystems is unnoticeable in most areas. Fish and wildlife management activities will emphasize the protection of natural processes and doing only the minimum necessary to manage the area as Wilderness. Fish stocking, in most areas, will emphasize a wild fishery, where species perpetuate themselves over time and are affected primarily by the forces of nature. In some areas, stocking will be used to supplement existing indigenous fish populations. Exotic species of fish will not be stocked.

A range of habitats is sustained for all naturally occurring species. Sensitive species do not move toward Threatened and Endangered listing. No additional non-indigenous wildlife species are introduced. Human influence on physical features such as soils and geologic materials is unnoticeable in most areas.

Human Environment
The opportunity exists for a moderate to high level of risk and challenge. There is a low incidence of contact with individuals or groups while traveling cross-country, more while on trails. There are infrequent encounters with large groups and moderate encounters with small groups or individuals. Domestic livestock may be encountered. Campsites are dispersed; usually one will not hear or see visitors at adjacent campsites. There is evidence of established campsites. Maintained trails exist. User-established trails are evident. Bridges may be present when needed for resource protection

Established base camps may exist for commercial recreation uses. Commercial permits for day-use activities in high-use areas will be limited. Effects from camping will be minimally noticeable. Permitted outfitters provide services to visitors for activities that meet identified public needs and cannot be provided in non-wilderness settings.

There is signing to indicate trail routes at trail intersections. There is no destination signing or mileage marker signing. Management information and administrative signing occur as appropriate for resource protection. Signing blends in with the natural setting.

Grazing actions will adhere to appropriate MA guidelines for structures, and campsites and meet requirements of current Allotment Management Plans.

Structures and facilities exist for resource protection and administration of the area. Evidence of cultural and historical sites may exist but is not signed or interpreted on the ground.

Table II-3. Standards and Guidelines - Primitive Wilderness

Category	Standards
Infrastructure	a) Bridges may be necessary for resource protection or user safety, but will not be provided merely for user convenience. Use native materials as much as possible in the construction of bridges. b) Provide only the minimum signing necessary to indicate directional information at trail junctions, or as needed for resource protection. Intersection trail signs will be on unstained wood with routed letters, and mounted on unstained posts. c) Prior to construction or reconstruction of trails, analyze consequences for the wilderness character of the area.
Special-Use Management	d) Permit camping only in sites specified in outfitter-guide permits.

Category	Indicator	Guidelines		
Recreation - Physical				
Capacity	**Area wide - People At one time (PAOTs)/M Acres** **On trails-PAOTs per mile**	**Location**	**Vegetation Type**	**PAOTs per 1000 acres**
		Area wide	Alpine, Rock, Meadow	2-5
			Forested with openings, Forested	10-25
		Location	**Vegetation Type**	**PAOTs per mile**
		On trails	Alpine, Rock, Meadow	0.5-1
			Forested with openings, Forested	2-3
		When capacity standards are exceeded, follow crowding management actions		

Table II-3. Standards and Guidelines - Primitive Wilderness (cont.)		
Category	**Indicator**	**Guidelines**
Campsite Conditions	Number of sites within a recreation-use compartment within a Cole Condition Class rating	a) No greater than 15% of sites within campsite Condition Class 4. b) No greater than 25% of sites within campsite Condition Class 3. c) No less than 60% of sites within campsite Condition Class 1-2. d) No sites within campsite Condition Class 5 unless designated.
Campsite Density	Maximum number of established campsites per linear mile of trail within a recreation use compartment	e) 4
Lake Area Campsite Density	Number of established sites within a lake basin area	a) Each identified lake basin will have its own guideline for number of established sites.
Recreation - Social		
Encounters: Campsites	Number of sites occupied within sight or sound of your campsite/ compartment (season avg.)	a) 2
Encounters: Trail Routes	Number of encounters (parties) on trails or cross-country routes per 8-hour day (season avg.)	b) 5
Encounters: Large groups	Number of large groups encountered on trails or cross-country routes per 8-hour day (season avg.)	c) 2
Crowding	Percent of sampled visitors who report that crowding was a problem	d) < than 15%
Dogs under Control	Percent of dogs encountered that are not under control	e) < 5%
Soil/Vegetation		
Recreational Pack Stock Grazing Areas.	Health trend survey	a) At least 90% of surveyed areas show healthy conditions. Trend must remain stable or upward throughout the area.
Noxious Weeds	Presence of noxious weeds	b) Not to exceed more than 2% canopy cover of noxious weeds.
Prescribed Natural Fire	Ignitions designated prescribed natural fire	c) 90%

Management Area Prescription 1.13
Wilderness - SEMI-PRIMITIVE

THEME: These environments are adjacent to primary access points and/or popular destination points. Day use is often the primary type of use. Encounters with other users will be moderate to frequent, caused by spatial and temporal concentration of recreational use. Areas are managed to protect natural conditions while providing for use and enjoyment of the recreational and natural features.

DESIRED CONDITIONS:

Natural Environment
Natural succession occurs on all existing vegetative communities, and is influenced by natural processes and disturbance. The structure, composition, and function, and spatial distribution of vegetative types are influenced and sustained by natural processes. Human influence on vegetation is minimal. Plant species are predominately native and indigenous to the immediate area. There are no increases in non-indigenous-species composition from the present baseline. Fire is reestablished as a natural ecological force. Fire management activities will be designed to retain the natural character of the ecosystem. Fire management activities are designed to retain the natural character of the ecosystem. Evidence of the effects of fire, insects, or disease may be present. Appropriate air quality standards are met, however, periodic smoke could occur from natural fire. Visibility is generally unimpaired.

Human influence on the composition, structure and function of aquatic ecosystems is minimal in most areas. Fish and wildlife management activities will emphasize the protection of natural processes and doing only the minimum necessary to manage the area as Wilderness. Fish stocking, in some areas, will emphasize a wild fishery, where species perpetuate themselves over time and are affected primarily by the forces of nature. In most areas, stocking will be used to supplement existing indigenous fish populations. Exotic species of fish will not be stocked.

A range of habitats is sustained for all naturally occurring species. Sensitive species do not move toward Threatened and Endangered listing. No additional non-indigenous wildlife species have been introduced. Human influence on physical features such as soils and geologic materials is minimal.

Human Environment
There is the opportunity for a moderate level of risk and challenge. Contact with other users, livestock, or agency personnel is frequent. Encounters with large and small groups are more likely. Day-use opportunities are more common within this MA. Campsites are dispersed, and may be designated on the ground. Sites may be visible or audible from adjacent sites. There is evidence of established campsites. Travel is predominately on maintained trails. Bridges may be present when needed for resource protection, or where no safe opportunity exists to cross a stream during periods of normal water flow. Signing to indicate trail routes occurs at trail intersections. Boundary signs, trailhead signs, and other information are appropriate to educate and inform wilderness users. Signs are on unstained wood with routed letters, and mounted on unstained posts.

Base camps are infrequent, especially in day-use areas. Permits for day-use activities in high-use areas are limited. Effects from camping activity meet Natural Environment desired conditions (see above). Permitted outfitters provide services to visitors for activities that meet identified public needs and cannot be provided in non-wilderness settings.

Grazing actions adhere to appropriate MA guidelines for structures, and campsites and meet requirements of current Allotment Management Plans.

Structures and facilities are allowed for resource protection and administration of the area. Evidence of historic and cultural sites may exist, but is not interpreted on the ground or signed.

Table II-4. Standards and Guidelines - Semi-Primitive

Category	Standards
Infrastructure	a) Bridges may be necessary for user safety or to protect streamside areas, but will not be provided merely for user convenience. Use native materials as much as possible in the construction of bridges. b) Provide the signing necessary to indicate directional information at trail junctions, as needed for resource protection, or for education and information only at boundaries and trailheads leading into this area. Intersection trail signs should be on unstained wood with routed letters, and mounted on unstained posts. c) Prior to construction or reconstruction of trails, analyze consequences for the primitive character of the area.
Special-Use Management	d) Permit camping only in sites specified in outfitter-guide permits. e) Prohibit or restrict outfitter-guide base camps.

Category	Indicator	Guidelines		
Recreation-Physical				
Capacity	**Area wide - People At one time (PAOTs)/M Acres** **On trails - PAOTs per mile**	**Location**	**Vegetation Type**	**PAOTs per 1000 acres**
		Area wide	Alpine, Rock, Meadow	4-8
			Forested with openings, Forested	50-80
		Location	**Vegetation Type**	**PAOTs per mile**
		On trails	Alpine, Rock, Meadow	2-3
			Forested with openings, Forested	9-11
		When capacity standards are exceeded, follow crowding management actions (Table II-12)		
Campsite Conditions	Number of sites within a recreation use compartment with a Cole Condition Class rating	a) No greater than 15% of sites within Condition Class 4. b) No greater than 25% of sites within Condition Class 3. c) No less than 60% of sites within Condition Class 1-2. d) No sites within Condition Class 5 unless designated.		
Campsite Density	Maximum number of established campsites per linear mile of trail within a recreation use compartment	e) 6		
Lake Area Campsite Density	Number of established sites within a lake basin area	f) Each identified lake basin will have its own guideline for number of established sites.		

Table II-4. Standards and Guidelines - Semi-Primitive (cont.)		
Category	**Indicator**	**Guidelines**
Recreation - Social		
Encounters: Campsites	Number of sites occupied within sight or sound of your campsite/compartment (season avg.)	a) 3
Encounters: Trail routes	Number of encounters(parties) on trails or cross-country routes per 8-hour day (season avg.)	b) 12
Encounters: Large groups	Number of large groups encountered on trails or cross-country routes per 8-hour day (season avg.)	c) 2
Crowding	Percent of sampled visitors who report that crowding was a problem.	d) < than 15%
Dogs under Control	Percent of dogs encountered that are not under control	e) < 5%
Soil/Vegetation		
Area Health	Health trend survey	a) At least 85% of surveyed areas show healthy conditions. Trend must remain stable or upward throughout the area
Noxious Weeds	Presence of noxious weeds	b) Not to exceed 5% canopy cover of noxious weeds
Prescribed Natural Fire	Ignitions designated prescribed natural fire	c) 90%

PROPOSED MANAGEMENT ACTIONS AND THRESHOLDS

This section describes the ***management actions*** that are planned to help achieve desired conditions. Management actions are techniques, regulations, or responses that can be implemented to affect wilderness conditions on the ground. Management actions are selected in relation to the level by which a particular standard or guideline is exceeded. Management actions are categorized into three levels (I, II, III). Level I management actions can take place immediately and are generally an indirect method to bring the condition back to meeting a standard or guideline. Level II and III management actions are more direct or restrictive in their response and are not undertaken until standards or guidelines are exceeded by a certain limit and within a sustained period of time described as ***thresholds***. Thresholds are the upper limit in terms of time period or percentage of the standard or guideline that is exceeded at which point the next level of management action is undertaken.

Campsite Conditions

Campsite conditions reflect the visual imprint of human uses, as well as impacts to soil and vegetation and often, hydrologic processes and water quality. A modified Cole Campsite Monitoring System is used to classify camp-area conditions. Conditions are grouped into five categories based on a score that is determined by surveying a variety of factors that affect campsite impacts. The scale ranges from Condition Class 1, having the least impact, to Condition Class 5, having the highest impact.

Table II-5. Campsite Condition Guidelines

Management Area	Guidelines
1.11 - Pristine	a) All sites within Cole Condition Class 1.
1.12 - Primitive	a) No greater than 15% of sites within campsite Condition Class 4. b) No greater than 25% of sites within campsite Condition Class 3. c) No less than 60% of sites within campsite Condition Class 1-2. d) No sites within campsite Condition Class 5 unless designated.
1.13 - Semi-Primitive	e) No greater than 15% of sites within campsite Condition Class 4. f) No greater than 25% of sites within campsite Condition Class 3. g) No less than 60% of sites within campsite Condition Class 1-2. h) No sites within campsite Condition Class 5 unless designated.

Table II-6. Campsite Condition - Management Actions			
Indicator	**Level 1 Actions**	**Level 2 Actions**	**Level 3 Actions**
Campsite Condition			
Number of sites within a compartment that are within a Cole Campsite Condition Rating.	• Voluntary dispersal of use through education efforts by agency personnel, volunteers, and publications. • Inform visitors of opportunities outside wilderness. • Emphasize Leave No Trace education efforts. • Increase Wilderness Information Specialist (WIS) program and Ghost Rider program efforts.	• Discourage the inclusion of information in publications or guidebooks that directs visitors to high-use areas. • Inform users about alternative areas. • Implement area-wide non-quota permit system to increase visitor education. • Limit improvements of trailhead access to areas where crowding is a concern. • Limit improvement of trail access in areas where crowding is a concern. • Restrict campfire use to previously used sites. • Limit camping to designated campsites in high-use zones, to minimize establishment of new sites. • Close and rehab selected campsites where campsite density is high. • Limit group sizes, to reduce impact on sites. • Implement regulation to restrict recreational stock from being tied to trees in campsites.	• Shorten length-of-stay period. • Implement permit quota system for specific areas that are exceeding guidelines. • Implement area-wide permit quota system at trailheads or at individual destinations. • Implement closure of specific areas to the use of campfires and remove fire rings.

Table II-7. Campsite Conditions - Thresholds		
	ceed Guidelines	
years	than 25% of campsites within a compartment.	% of campsites within a compartment.

Campsite Density

The Campsite Density Guideline describes the maximum allowable number of established campsites, per linear mile of trail within a Recreation Use Compartment (See Map E). For the Pristine (1.11) MA, the guideline will refer to the number of established sites within a Recreation Use Compartment. Established campsites refer to evidence that continued or repetitive camping has occurred at the site in the past. Evidence could consist of fire ring(s), barren ground caused by compaction, long-term vegetative impacts or other significant signs of human use. Campsite density is also monitored at designated high-lake basins, at which the guideline for the maximum allowable established sites would be determined for each lake basin.

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Map E. Recreational Use Capacity.

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Table II-8. Campsite Density Guidelines	
Management Area	**Guidelines**
1.11 - Pristine	0
1.12 - Primitive	4
1.13 - Semi-Primitive	6

Table II-9. Campsite Density - Management Actions			
Indicator(s)	**Level 1 Actions**	**Level 2 Actions**	**Level 3 Actions**
Campsite Density			
Maximum number of established campsites within a recreation use compartment, or Maximum number of established campsites within a lake basin area.	• Voluntary dispersal of use through education efforts by agency personnel, volunteers, and publications • Inform visitors of opportunities outside wilderness. • Emphasize Leave No Trace education efforts for all wilderness users. • Agency personnel educate users to use existing campsites in high-use areas.	• Discourage the inclusion of information in publications or guidebooks that directs visitors to high-use areas. • Inform users about alternative areas. • Implement area-wide non- quota permit system to increase visitor education. • Limit improvements of trailhead access in areas where crowding is a concern. • Limit improvement of trail access to areas where crowding is a concern. • In site-specific areas, increase the distance that campsites must be from water. • Restrict campfire use to previously used sites. • Limit camping to designated campsites in high-use zones to minimize establishment of new sites. • Close and rehab selected campsites where campsite density is high.	• Shorten length-of- stay period. • Implement permit quota system for specific areas that are exceeding guidelines. • Implement a area-wide permit quota system at trailheads or individual destinations

Table II-10. Campsite Density - Thresholds		
Meeting Guidelines	**Approaching or Beginning to Exceed Guidelines**	**Guidelines Exceeded**
Level 1 Actions Appropriate	Level 2 Actions Appropriate	Level 3 Actions Appropriate
Guideline not exceeded in past three years	Guideline exceeded but not by more than 25%.	Guideline exceeded by more than 25%.

Crowding

Crowding is measured by campsite and trail encounters, the size of groups encountered, and by the degree of "perceived crowding," determined from surveying wilderness users.

The Campsite Encounter Guideline monitors the average number of occupied campsites within sight or sound of the monitor's campsite per Recreation Use Compartment. The monitored number of encounters is averaged over the summer use season that varies by compartment.

The Trail Encounter Guideline monitors the average number of encounters with parties (groups) on a trail or cross-country route. Encounter rates are dependent on the length of time spent hiking or riding and thus are converted to an 8-hour period to obtain consistency in monitoring. Trail or route segments that change when the trail or route passes through a different MA determine the location of encounters. Trail or route encounters with large groups are monitored by the same methodology. Large groups are defined as groups having more than 10 people.

Surveying wilderness users to determine their viewpoint on how crowded or uncrowded they felt their wilderness experience was monitors crowding perception. The crowding scale ranges from Not Crowded to Extremely Crowded. The Guideline refers to the percentage of respondents who reported being moderately to extremely crowded.

Table II-11 portrays the Crowding Guidelines for the different management areas, Table II-12 shows the management actions that could be taken to alleviate the crowding, and Table II-13 and II-14 show the threshold levels for crowding.

Table II-11. Crowding Guidelines

	Guidelines			
Management Area	**Campsite Encounters**	**Trail/Route Encounters**	**Large Group Encounters**	**Crowding Perception**
1.11 - Pristine	.1	1	.1	< than 15%
1.11(a) - Pristine	1	2	.5	< than 15%
1.12 - Primitive	2	5	2	< than 15%
1.13 - Semi-Primitive	3	12	2	< than 15%

Table II-12. Crowding - Management Actions			
Indicator(s)	**Level 1 Actions**	**Level 2 Actions**	**Level 3 Actions**
Crowding			
Maximum number of campsites occupied within sight or sound of your campsite per compartment (season average). Maximum number of encounters (parties) on trails or cross-country routes per eight- (8) hour day (season average). Maximum number of encounters with large groups on trails or cross-country routes per eight- (8) hour day (season average). Percent of sampled visitors who report being moderately to extremely crowded within a compartment.	• Voluntary dispersal of use through education efforts by agency personnel, volunteers, and publications. • Inform visitors of opportunities outside wilderness. • Inform visitors of the type of experience (i.e., high encounter rate, numerous campsites, etc.) they will have. • Inform visitors of areas or times best to visit that will reduce crowding.	• Discourage the inclusion of information in publications or guidebooks that directs visitors to high-use areas. • Inform users about alternative areas. • Implement area- wide non-quota permit system to increase visitor education. • Limit group sizes in areas of concentrated use. • Limit improvements of trailhead access to areas where crowding is a concern. • Limit improvements of trail access in areas where crowding is a concern. • In specific areas, increase the distance that campsites must be from water.	• Institute parking fees at high-use trailheads. • Shorten length-of-stay period. • Implement backcountry use fees for high-use areas. • Implement permit quota system for specific areas that are exceeding guidelines. • Implement a area-wide permit quota system at trailheads or individual destinations.

Table II-13. Crowding (Camp, Trail, and Large Group Encounters) - Thresholds		
Meeting Guideline	**Approaching or Beginning to Exceed Guideline**	**Guideline Exceeded**
Level 1 Actions Appropriate	Level 2 Actions Appropriate	Level 3 Actions Appropriate
Guideline not exceeded in past three years	In at least 2 of the past 3 years: Guideline is exceeded by more than 20% of the days that guideline is monitored; and/or the season average does not exceed the guideline by more than 20%.	In at least 2 of the past 3 years: Guideline is exceeded more than 20% of the days that the guideline is monitored; and/or the season average exceeds the guideline by more than 20%.

Table II-14. Crowding (Crowding Perception) - Thresholds		
Meeting Guideline	**Approaching or Beginning to Exceed Guideline**	**Guideline Exceeded**
Level 1 Actions Appropriate	Level 2 Actions Appropriate	Level 3 Actions Appropriate
0 - 15% of sampled visitors moderately to extremely crowded	16-25% of sampled visitors moderately to extremely crowded	More than 25% of sampled visitors moderately to extremely crowded

Dogs under Control

Determining the number of dogs encountered that are not under control is monitored to determine the extent of the problem. A "dog out of control" is defined as an unleashed dog more than ten feet from its owner and not immediately responsive to commands; or a dog chasing wildlife, livestock, or packstock (excluding working dogs), or disturbing other visitors.

The Guideline is that less than 5 percent of dogs encountered will be out of control.

Table II-15. Dogs Under Control - Management Actions

Indicator	Level 1 Actions	Level 2 Actions	Level 3 Actions
Dogs under control			
Percent of dogs encountered that are not under control.	• Educate visitors about problems and concerns with dogs in wilderness, and methods that they might use (leash, voice command) to reduce conflicts. • Institute Forest Order requiring dogs to be under control while in wilderness.	• Institute Forest Order requiring dogs to be on a leash while in wilderness.	• Institute Forest Order prohibiting dogs within wilderness areas.

Table II-16. Dogs Under Control - Thresholds

Meeting Guideline	Approaching or Beginning to Exceed Guideline	Guideline Exceeded
Level 1 Actions Appropriate	Level 2 Actions Appropriate	Level 3 Actions Appropriate
0-5 % of dogs encountered are not under control.	5-15% of dogs encountered are not under control.	More than 15% of dogs encountered are not under control.

Recreational-Stock Use

The impact of recreational stock use on vegetation, meadows and riparian areas is determined by monitoring the condition of meadow and riparian vegetation and stream banks. Conditions are monitored by measuring utilization of vegetation; taking transects of key riparian stream bank reaches, and by conducting a Meadow Health Trend Survey that measures several criteria which determine an upward or downward trend to area conditions.

Table II-17. Recreational-Stock Use - Monitoring Guidelines

Monitoring Elements	Guidelines For All Management Areas
Utilization of bunchgrass and bluegrass	40% utilization by weight on bunchgrass 50% utilization by weight on bluegrass
Riparian utilization	Will not exceed established stubble heights on *Carex* and *Juncus* species. Utilization of other herbaceous species in riparian areas up to 40-50% by weight. No more than 15-20% utilization of current annual growth on woody plants.
Riparian Stream bank Trampling	No more than 20-25% of key area stream reaches may be trampled.

Table II-17. Recreational-Stock Use - Monitoring Guidelines (cont.)			
Monitoring Elements	**Management Areas**		
	MA-1.11	**MA-1.12**	**MA-1.13**
Meadow Health	At least 95% of surveyed areas show healthy conditions. Trend must remain stable or upward throughout the area.	At least 90% of surveyed areas show healthy conditions. Trend must remain stable or upward throughout the area.	At least 85% of surveyed areas show healthy conditions. Trend must remain stable or upward throughout the area.

Table II-18. Recreational-Stock Use - Management Actions			
Indicator(s)	**Level 1 Actions**	**Level 2 Actions**	**Level 3 Actions**
Recreational-Stock Use			
Percent of utilization by weight on herbaceous species within surveyed riparian areas. Percent of key surveyed stream reaches that are trampled. Percent of utilization by weight on bunchgrass and bluegrass within surveyed areas. Trend of health of surveyed areas using the Health Trend Survey. Percent of surveyed areas that show healthy conditions using the Health Trend Survey.	• Educate public on proper use of recreational-stock in the backcountry. • Voluntary dispersal of use through education efforts. • Inform visitors of opportunities outside these areas. • Emphasize Leave No Trace education efforts for all backcountry users, with emphasis for stock users.	• Limit the number of stock per party in areas that are exceeding guideline. • Require certified feed/hay be used for recreational livestock in place of grazing. • Prohibit picketing in areas where guidelines are exceeded. • Enforce regulations to prohibit resource damage caused by tying stock to trees. • Restrict grazing within areas that are exceeding guidelines to no more than 1/3 of the grazing season. • Establish an “on” date for recreational-stock use or a season of use. • Develop a rotation system within a compartment or drainage that would allow recreational-stock grazing only within specified areas. • Limit the length of stay by recreational stock within areas that are exceeding guidelines.	• Close specific areas that are exceeding guidelines to use by recreational-stock. • Close drainages or compartments to grazing by recreational-stock.

Table II-19. Recreational-Stock Use - Thresholds		
Meeting Guideline	**Approaching or Beginning to Exceed Guideline**	**Guideline Exceeded**
Level 1 Actions OK	**Level 2 Actions OK**	**Level 3 Actions OK**
Utilization guidelines not exceeded in past year, *or* trend is currently stable or upward.	Any riparian-area utilization guidelines are exceeded in the past year, *or* Utilization is 41-55% on bunchgrass or 51-65% on bluegrass in 2 of the past 3 years, *or* trend is downward, *or* meadow health is determined to be unhealthy.	Any riparian-area utilization guidelines are exceeded in 2 of the past three years, *or* Utilization is >56% on bunchgrass or >66% on bluegrass in 2 of the past 3 years, *or* trend has not stabilized, *or* meadow health is determined to be unhealthy and has not shown improvement.

Noxious Weed Control

Noxious Weed guidelines define the percentage of noxious weeds that are part of the total overall vegetative canopy of selected survey areas.

Table II-20. Noxious Weed Control - Guidelines	
Management Area	**Guidelines**
1.11 - Pristine	< than 1% canopy cover of noxious weeds.
1.12 - Primitive	Not to exceed 2% canopy cover of noxious weeds.
1.13 - Semi-Primitive	Not to exceed 5% canopy cover of noxious weeds.

Table II-21. Noxious Weed Control - Management Actions			
Indicator	**Level 1 Actions**	**Level 2 Actions**	**Level 3 Actions**
Presence of Noxious Weeds	• Educate public on proper use of recreational-stock in the backcountry. • Inventory surrounding areas for noxious weeds. • Implement mechanical control through chopping to reduce amount and prevent further spread.	• Use Integrated Pest Management (IPM) techniques to prevent further spread. This could include manual or biological treatment, as well as altering grazing practices (as described under the Recreational-stock-Management Actions - Table II-18).	• Continue use of Integrated Pest Management (IPM) techniques. Use chemical control if the noxious weeds pose a substantial threat to wilderness values and habitat.

Table 11-22. Noxious Weed Control - Thresholds		
Meeting Guidelines	**Approaching or Beginning to Exceed Guidelines**	**Guidelines Exceeded**
Level 1 Actions Appropriate	Level 2 Actions Appropriate	Level 3 Actions Appropriate
Guidelines exceeded in past year.	Guidelines exceeded for 2 consecutive years	Guidelines exceeded for 3 consecutive years

Prescribed Natural Fire

Prescribed Natural Fire Guidelines are based on the intent to designate within wilderness, naturally caused fires as Prescribed Natural Fires (PNF). The guidelines are based on the percentage of natural caused fires that receive PNF status. PNF status allows designated fires to run their natural course within established guidelines and safeguards. Before designating a naturally-caused fire as a PNF, the situation is evaluated for several criteria, including potential for immediate threat to life and property. The established guideline for all MAs is 90% of all naturally caused fires or ignitions to be designated as PNF.

Table II-23. Prescribed Natural Fire - Management Actions			
Indicator	**Level 1 Actions**	**Level 2 Actions**	**Level 3 Actions**
Ignitions designated prescribed natural fire.	Educate wilderness users and communities on the role of fire in wilderness	Allow to the greatest extent possible, lightning-caused fire to play its natural ecological role.	Use prescribed fire in wilderness to meet management objectives.

ALTERNATIVE SUMMARIES

As stated earlier, primarily the distribution and acreage of MAs within these areas define the alternatives. Table II-24 displays the acreage difference between alternatives by area.

Table II-24. Management Area Distribution

Area	Management Area Prescription	Alt. A	Alt. B	Alt. C	Alt. D
Piedra	Pristine	27,272	35,780	35,780	42,409
	Primitive	11,586	21,650	22,003	18,166
	Semi-Primitive	1,045	3,143	2,791	0
	Non-wilderness	20,670	0	0	0
South San Juan	Pristine	54,550	95,635	104,584	105,078
	Primitive	74,279	58,851	55,384	55,773
	Semi-Primitive	2,257	6,365	883	0
	Non-wilderness	29,765	0	0	0
Weminuche	Pristine	323,398	376,374	383,606	408,303
	Pristine (1a)	0	0	6,270	0
	Primitive	103,105	106,997	99,151	91,769
	Semi-Primitive	63,474	16,702	11,045	0
	Transition	8,948	0	0	0

Table II-25. Comparison of Standards and Guidelines By Alternative					
Indicators		**Alternative A**	**Alternative B**	**Alternative C**	**Alternative D**
Recreation Effects	**Capacity**	• Uses coefficients to approximate capacity in areas and trail corridors. Reduce visitor use when the level of use exceeds capacity on more than 10 percent of the days during the summer and fall use season.	• Capacity per individual compartment is determined by applying coefficients. Actions to reduce use will be taken when 20% or more of use-days sampled exceed guidelines.	• Same as B	• Same as B
	Campsite Conditions	• A system devised by Frissell is used to determine the impact of recreation use on campsite conditions. • Regulations are in place at several lakes to limit camping within a specified distance.	• Modified Cole Campsite monitoring method is used to determine campsite condition. • **<u>New or Revised Regulations</u>:** a) Camping is not permitted within 100 feet of streams or lakes, unless exceptions are justified by terrain or specific design which protects the riparian and aquatic resources. - Piedra Area and all Wilderness. b) Camping, campfires, or restraining or grazing pack stock or riding stock is not permitted within a defined area at • Flint Lake--Weminuche Wilderness c) Camping, campfires, or restraining or grazing pack stock or riding stock is not permitted within 200 feet of: • Fourmile Lake, West Ute Lake, Archuleta Lake - Weminuche Wilderness, and • Bear Lake, Blue Lake, Green Lake and Red Lake -South San Juan Wilderness. d) No disposal of human waste and/or wash water within 100 feet of any water source.	Same as B and • **<u>New or Revised Regulations</u>** a) Camping is not permitted, except at designated sites, within a defined perimeter of the following areas in the Weminuche Wilderness: • Little Emerald Lake (South Shore) • Rainbow Hot Springs (West Fork Trail) b) Camping is not permitted within the drainage basin of Twin Lakes (Needle Creek Drainage) - Weminuche Wilderness. c) Campfires are not permitted within the drainage of Vestal Creek, commonly known as: • Vestal Basin--Weminuche Wilderness	• Same as B • & C and • **<u>New or Revised Regulations</u>:** a) Campfires are not permitted in areas above timberline.
	Campsite Density	• Standards to locate campsites at least 300 feet apart. Guideline for number of campsites occupied at one time.	• Campsite-density guidelines are developed to monitor the creation of new sites and the density of existing sites. Guidelines define an upper Limit of Acceptable Change for density of campsites.	• Same as B	• Same as B
	Lake Area Campsite Density	• Standards and guidelines address the number of campsites that can be occupied at one time around lakes. Density of sites within a lake basin is not addressed.	• An indicator has been established for lake basins. Each lake basin will have a campsite density guideline within a 1/4 mile of the lake. Management actions and threshold levels described in the Campsite Density section apply.	• Same as B	• Same as B
Wilderness Experience	**Crowding**	• Standards and guidelines for trail and camp encounters.	• Encounter rates on trails and at campsites measure the amount of crowding within such areas. Guidelines use “perceived crowding” as a measure of the wilderness experience.	• Same as B	• Same as B

Table II-25. Comparisons of Standards and Guidelines By Alternative (cont.)

Indicators		Alternative A	Alternative B	Alternative C	Alternative D
Wilderness Experience--Continued	**Group Size**	• Maximum group size: 25 people and or stock.	**New or Revised Regulation** • Maximum group size: 15 people. Combination of people and stock not to exceed 35.	**New or Revised Regulation** Maximum group size: 15 people. Combination of people and stock not to exceed 25. Exception on Piedra River which will have a group size of 20 people for river-running activities.	**New or Revised Regulation** • Maximum group size: 10 people Combination of people and stock not to exceed 15
	Dogs Under Control	• No standards or guidelines for management of dogs within wilderness.	• Monitor the number of incidents of uncontrolled dogs. Emphasize education on the effects of domestic dogs on the resource and other visitors. • Require dogs to be under control. • If guidelines are not met, more restrictive measures, such as requiring dogs to be leashed or as a final step, prohibition of dogs within wilderness areas may be instituted.	• Same as B	• Same as B
Recreational Stock Effects	**Recreational-Stock Grazing**	• Grazing guidelines are identified that are based on Forest utilization standards.	• Establish guidelines for utilization on upland and riparian areas. Incorporate a health trend survey of conditions.	• Same as B	• Same as B
Natural Ecosystems	**Noxious Weeds**	• Does not address noxious weeds within wilderness.	• Standards and Guidelines established to measure the presence of noxious weeds.	• Same as B	• Same as B
	Prescribed Natural Fire	• Does not address prescribed natural fire ignitions within wilderness.	• Use the percentage of natural fires that are prescribed natural fires to indicate success of reintroduction of natural role of fire.	• Same as B	• Same as B

COMPARISON OF HOW THE ALTERNATIVES ADDRESS WILDERNESS MANAGEMENT ISSUES

Issue: Effects of Recreation on Wilderness Ecosystems

Recreational Use Capacity

Determining appropriate levels of recreation use for an area requires looking at the social, physical, and biological effects of recreation use. Recreation-use capacity within a given area depends on many factors, and is difficult if not impossible to quantify into one amount. Levels of use that is determined to be the capacity for an area will change over time as resource and social conditions change.

The SJ-RG NFs use coefficients for numbers of people per acre or per mile of trail to determine a theoretical capacity for an area. These coefficients are derived from a mathematical equation that sets a minimum spacing between people, within an area or on a trail. Because recreation use does not occur in a regulated or a consistent pattern, these coefficient capacities are used only as a starting point. Other factors, such as campsite availability, trail and camp encounters, campsite conditions, trail miles available, and wildlife concerns, are then used to derive a capacity number which better reflects on-the-ground conditions.

Once capacity for an area is reached, managers have a wide array of strategies for dealing with impacts from recreation use. Indirect measures designed to influence or persuade people, such as information, education, fees, or site modification, leave visitors with a good deal of freedom. More direct measures (such as limiting the amount of use) have also been used when indirect measures have not been successful, or do not address the circumstances.

The general idea of restricting visitor numbers when an area is being used beyond its capacity is strongly supported in many Wilderness areas across the country (Lucas 1980). Many believe that while restricting use may be desirable, they are opposed to restrictions that limit the freedom of where to camp, or that require a set itinerary.

Alternative A

The existing LRMP direction uses coefficients to approximate capacity in areas as well as trail corridors. The type of vegetative cover within an area that can affect sight distances then further defines these areas/corridors and potentially how many other people you might see. Direction is to reduce visitor use when the level of use exceeds capacity on more than 10 percent of the days during the summer and fall use season.

Alternatives B, C and D

Recreation-use capacities are determined for individual Recreation-Use Compartments which are delineated based on drainages, topography, and use patterns. Coefficients are basically the same as in Alternative A. A wide variety of options are identified for the manager to use when capacity is reached within an area. Thresholds for determining when capacity guidelines are exceeded are defined in terms of the percent of number of

days sampled, rather than of the total number of days during the use season. Actions to reduce use will be taken when 20 percent or more of the use days sampled exceed guidelines.

Campsite Conditions

The Wilderness Act of 1964 states that recreational use of wilderness is to be managed, "so as to preserve its [the wilderness] natural condition and such that the imprint of man's work is substantially unnoticeable." One of the major effects of recreational activity on natural conditions is campsite impacts. These include effects on soils, visual quality, and vegetation from campfire creation and trampling; effects on riparian vegetation from trampling; damage to trees from root exposure due to trampling; and mechanical manipulation, such as tying ropes to trees and breaking off branches for firewood. To determine the effect of campsite use and creation on the natural condition, monitoring programs can be developed to measure conditions and determine how they are changing. Regulations or restrictions on the location and use of campsites can also reduce the effects of camping on wilderness resources.

Alternative A

This alternative uses a system devised by Stanley Frissell that uses a visual walk-through to determine the impact of recreation use on campsite conditions. These conditions are divided into five classifications to define the level of impact. Regulations are in place at several lakes to limit camping within a specified distance.

Action Alternatives

The Action Alternatives incorporate the Modified Cole Campsite Monitoring Method into the standards and guidelines, to allow for a more descriptive and trackable monitoring system. Campsite conditions are affected by a variety of factors, including types of users, method of use, season of use, and numbers in party. To measure and analyze these effects, campsites will be inventoried and monitored on a regular basis. Each site will be given a score or "impact index" that will then be categorized into five condition classes. The classes, ranging from 1 (minimal to no change) to 5 (severe to obvious change), are used within the guidelines to monitor effects in a recreation-use compartment.

Alternative B

This alternative will modify existing regulations concerning distances that visitors can camp from water. The intent is to standardize the distance that people can camp from most lakes within wilderness areas on the SJ-RG NFs to reduce confusion. To address sanitation concerns and water quality in camp areas and throughout the wilderness and Piedra, disposal of body waste and wash water will not be permitted near water sources. The following new regulations would be adopted:

1. Camping is not permitted within 100 feet of streams or lakes, unless exceptions are justified by terrain or specific design which protects the riparian and aquatic resources. - Piedra Area and all Wilderness.

2. No disposal of human waste and/or wash water within 100 feet of any water source.

3. No camping, campfires, or restraining or grazing pack or riding stock within **200** feet of Fourmile Lake, West Ute Lake, Archuleta Lake, Bear Lake, Blue Lake, Green Lake, and Red Lake and within a defined area at Flint Lake.

Alternative C

Same as Alternative B *and* this alternative will add requirements for camping or campfire restrictions in areas. The following new regulations would be adopted:

1. No camping, except at designated sites, within a defined area at the following destinations in the Weminuche Wilderness:
   - Little Emerald Lake (South Shore)
   - Rainbow Hot Springs (West Fork Trail)
2. No camping within the drainage basin of Twin Lakes (Needle Creek Drainage)
3. No campfires, grazing or overnight holding of stock within the defined area at:
   - Rainbow Hot Springs (West Fork Trail)
4. No wood burning at Vestal Basin (drainage of Vestal Creek)

Alternative D

Same as Alternatives B and C except for the following:

No campfires above timberline

Campsite Density

Campsite density is the measure of the number of established campsites in a given area. Established campsites are those that have an established fire ring or other evidence of repeated use. Campsite density can be an indicator of crowding, as well as have physical impacts on the resource. Campsite density increases when established sites are not sufficient.

Alternative A

The existing LRMP direction is to plan for campsites to be at least 300 feet apart. There is a guideline for the number of campsites that can be occupied at one time but this does not address the issue of the creation of new campsites or the current density of sites from an ecological viewpoint.

Action Alternatives

Campsite density guidelines are developed to monitor the creation of new sites and the density of existing ones. These guidelines are developed from ecological as well as from social considerations. These guidelines define an upper Limit of Acceptable Change for density of campsites.

Alternative C

This alternative will restrict camping at certain locations. The following new regulations would be adopted:

1. No camping, except at designated sites, within a defined area at the following destinations in the Weminuche Wilderness:
   - Little Emerald Lake (South Shore)
   - Rainbow Hot Springs (West Fork Trail)
2. No camping within the drainage basin of Twin Lakes (Needle Creek Drainage)

Alternative D
Same as C.

Lake Area Campsite Density

Alternative A
Standards and guidelines address only the number of campsites that can be occupied at one time around lakes. The density of sites within a lake basin is not addressed.

Alternatives B, C and D
In addition to monitoring campsite density along trails and within Recreation-Use Compartments, an indicator has been established for lake basin areas. Lake basins are destination sites that consequently receive a higher proportion of campsite impacts. Each designated lake basin area will have its own campsite-density guideline. Establishment of guidelines for each lake area will accomplished over the next two years. This indicator will monitor the maximum number of established campsites within a lake area (not to exceed 1/4 mile from the lake). The same management actions and threshold levels that are described in the Campsite Density section will apply to the Lake Area Campsite Density indicator.

Wildlife
The Forest Service recognizes that States have jurisdiction and responsibilities for the protection and management of wildlife populations in Wilderness. The SJ-RG NFs will work closely with the Colorado Division of Wildlife (CDOW) in all aspects of wildlife management. Any Forest Service recommendation to the CDOW on wildlife management will be consistent with wilderness values and the need to protect and maintain the wilderness resource.

Alternative A
The existing LRMP direction does not specifically address wildlife within wilderness.

Alternatives B, C, and D
There will be increased effort to inform visitors of ways to prevent habituation of wildlife and encourage the use of those methods, such as using bear-resistant methods of storing animal attractants. The number, location, and types of incidences of visitor wildlife conflicts will be monitored. All of the standards, guidelines, and new regulations described in these alternatives may affect wildlife, including those which reduce crowding, limit group size, minimize campfire and campsite impacts, prevent overgrazing by recreational livestock, control dogs, and protect water sources.

Fish Stocking
The Forest Service recognizes that States have jurisdiction and responsibilities for the protection and management of fish populations in Wilderness. The SJ-RG NFs will work closely with the Colorado Division of Wildlife (CDOW) in all aspects of fish management. Any Forest Service recommendation to the CDOW on fish management will be consistent with wilderness values and the need to protect and maintain the wilderness resource.

The International Association of Fish and Wildlife Agencies (IAFWA) Memorandum of Understanding (MOU) serves as the framework for cooperation between the USFS and the CDOW. Fish and wildlife management activities in Wilderness will be planned and carried out in conformance with the

Wilderness Act's purpose of securing an "enduring resource of wilderness" for the American people. Fish and wildlife management activities will emphasize the protection of natural processes.

Fish stocking will be conducted by the CDOW, in coordination with the US Forest Service, using means appropriate for wilderness, for the following purposes: (a) to reestablish or maintain an indigenous species adversely affected by human influence; this involves maintaining genetic refuges in high quality aquatic habitat, and improving genetics of native, sensitive species; (b) to perpetuate or recover a Threatened and Endangered species, and (c) to provide fishing recreation where appropriate. Fish stocking must be consistent with wilderness values. In most instances the CDOW will be stocking fish that are indigenous to the specific wilderness being stocked. Emphasis will be on stocking native strains of cutthroat trout.

The IAFWA MOU Policy and Guidelines recognizes that specific on-the-ground conditions will determine different applications of the guidelines. Specific lake-by-lake or stream management decisions will be reached through the development of a cooperative Fish Stocking Management Plan for wilderness areas on both Forests.

Alternative A

There is no current MOU developed for SJ-RG wildernesses. An MOU has been developed for native-cutthroat fishery enhancement.

Alternatives B, C and D

The SJ-RG NFs will work with CDOW to develop a localized plan on stocking our wilderness areas. This plan will develop objectives, criteria and definitions by Wilderness Management Area. This plan will tier to the IAFWA MOU. Proposed criteria for the stocking plan include:

1. Will stocking help accomplish Desired Future Condition of MA?
2. Was the lake or stream traditionally stocked with fish before Wilderness designation?
3. Will stocking adversely affect TES species present?
4. Will stocking enhance a TES fishery?
5. Does stocking emphasize the use of species considered to be native to the area?

Noxious Weeds

The Wilderness Act of 1964 states that recreational use of wilderness is to be managed "so as to preserve its [the wilderness] natural condition and such that the imprint of man's work is substantially unnoticeable." Noxious weeds are defined as alien, introduced, or exotic undesirable species that are aggressive, and overly competitive with more desirable native species. Noxious weeds invade areas where mineral soil has been disturbed, such as along trail corridors or in heavily grazed meadows.

Alternative A

The existing LRMP direction does not specifically address noxious weeds within Wilderness.

Alternatives B, C, and D

Guidelines are established to measure the presence of noxious weeds within the wilderness.

Prescribed Natural Fire

Although fire is a natural process in ecosystems, past management practices have emphasized fire suppression. In some instances, this has altered ecosystems by modifying nutrient cycles, plant succession, habitat, and overall ecosystem diversity. In some places, particularly the Piedra Area, it has resulted in excessive buildup of dead and downed wood, which can result in more catastrophic fire occurrences. Although the trend in fire management now leans towards letting fire play its natural role in wilderness ecosystems, management must also take into account human safety, the preservation of non-wilderness resources and the protection of private property.

Alternative A

The existing LRMP direction does not address prescribed natural fire ignitions within wilderness.

Alternatives B, C and D

Prescribed natural fire is identified as a component of wilderness management to meet the desired condition for natural processes to occur. As an indicator of the success of reintroducing the natural role of fire into wilderness ecosystems, the percentage of natural fires that are designated as prescribed natural fires is used.

Issue: Wilderness Experience Opportunities

Crowding

The Wilderness Act of 1964 directs that “outstanding opportunities for solitude or a primitive and unconfined type of recreation” be provided. Research has shown that several factors can affect the type of experience that a wilderness visitor is having. Studies document that solitude/privacy from persons in other parties and other users camping near one’s campsite, is the most important attribute of the wilderness experience (Stankey 1973; Grafe, and others, 1986).

Encounters on travelways and in camp have commonly been used as an indicator of crowding conditions. Campsite encounters are generally the most critical measurement of visitor satisfaction. Encounters at campsites are determined by the number of campsites within sight or sound of the sampler’s campsite. Wilderness users as well as Forest Service personnel will measure encounters.

Trail encounters measure the number of parties that a visitor will pass within an eight-hour period. If the travel route does not require a full day of travel, encounter rates will be adjusted to an eight-hour day.

“Perceived” crowding combines descriptive information such as encounter levels, with evaluative information (the individual’s negative evaluation of that density or encounter level). When people evaluate an area as “crowded”, they have compared the situation that they experienced with their perception of the standard. (Donnelly, M.; et.al, 1992). To evaluate perceived crowding, visitors will be sampled through self-registration forms to determine their level of crowding on the trip they participated in.

Crowding can be affected by other factors, such as the type and location of encounter, the behavior of parties encountered, frequency, and the size of groups. Because of the diversity of factors that can

affect crowding, management actions will be taken only after looking at the interrelationship of all of the crowding indicators, and making a determination based on the degree and amount that guidelines are being exceeded.

Alternative A

The existing LRMP direction addresses crowding primarily through the use of standards and guidelines for trail and camp encounters. Encounter levels were developed to be consistent Region-wide, and did not have local input.

Alternative B, C and D

These alternatives incorporate encounter rates for trail and campsite encounters, to measure the amount of crowding in an area or on a trail. Encounter rates were developed through public input and data collected from current wilderness users, to determine level of acceptance. In addition, guidelines are established to determine perceived crowding as an indicator of the wilderness experience through the use of visitor questionnaires.

Group Size

Restricting the size of parties entering areas is a common method to reduce the effects of large groups on the physical, biological, and social wilderness resources. There is considerable research showing that larger groups cause greater adverse social impact than do smaller groups (Driver, 1980). Impacts from larger groups on the physical-biological environment suggest that the devegetated area in campsites increases as parties get larger (Holmes, 1976).

Preference for group-size limitations varies by the type of user, from one area to another and by the type and location of encounters with groups. In areas on the SJ-RG NFs where horse use is common, there seems to be a greater acceptance of larger groups. Acceptance alone, however, is not the sole criterion for determining appropriate levels for group size.

The Piedra River flows through the Piedra Area and is used by private and commercial rafters and kayakers. Commercial river rafters have expressed a concern that lower group sizes can affect the safety of a trip due to fewer individuals available for rescue efforts.

Group size can be defined in terms of numbers of people and numbers of stock per group. In Wilderness areas where group size restrictions were analyzed, group size limits were generally supported (Stankey, 1980). Data does not exist to say absolutely that any one group size should be established. Criteria for determining appropriate levels should include determining resource capabilities and social acceptance.

Group size has an economic effect on commercial outfitter-guide operations. Commercial operators, especially those using stock to transport guests, generally support a group size limit that will allow them to make trips economically feasible, while maintaining a wilderness experience. Input from commercial operators has generally settled on a party size which allows 1.5 stock per guest, to allow for transport of the guests, their supplies, and equipment.

Alternative A

Maximum group size of no more than 25 people and or stock

Alternative B

Maximum group size: No more than 15 people per group with a maximum combination of people and stock not to exceed 35.

Alternative C

Maximum Group Size: No more than 15 people per group, with a maximum combination of people and stock not to exceed 25 except on the Piedra River where a group size maximum of 20 people is allowed for river running activities.

Alternative D

Maximum Group Size - No more than 10 people per group with a maximum combination of people and stock not to exceed 15.

Dogs under Control

The Wilderness Act of 1964 states that within wilderness "the earth and its community of life are untrammeled by man...which is protected and managed to preserve its natural character ...and ...Outstanding opportunities for solitude or a primitive and unconfined type of recreation," will be available. Dogs that are not properly restrained have and effect on wildlife populations and on visitor experiences. Dogs have been reported to chase wildlife, harass livestock and packstock, and create unwanted noise. Monitoring of this behavior is difficult. This indicator will be measured by using the percentage of dogs encountered that are not controlled by their owners.

Alternative A

The existing LRMP direction does not define standards or guidelines for management of dogs in wilderness.

Alternative B, C and D

Guidelines would be established to monitor the number of incidents when dogs are not under control. The emphasis would be on educating users about the undesirable effects of domestic dogs on the wilderness resource, as well as on other wilderness visitors. Actions would be defined to regulate users who bring dogs into wilderness, by requiring dogs to be under control. If guidelines are not met, more restrictive measures (such as requiring dogs to be leashed or, as a final step, prohibiting dogs within wilderness areas on the Forests) would be considered.

Issue: Recreational-Stock Effects on Wilderness Resource

Recreational-Stock Grazing

The Wilderness Act of 1964 states that recreational use of wilderness is to be managed "so as to preserve its [the wilderness] natural condition and such that the imprint of man's work is substantially unnoticeable." Recreational pack stock and riding stock have an effect on vegetation within wilderness areas. Of particular concern is the upland meadows and riparian areas that stock concentrate in, while grazing near camping areas. The indicators chosen monitor both short-term and long-term changes in vegetation species composition, vigor, density, production, cover, and frequency.

In upland areas, utilization is measured as a percentage of available-forage weight. In riparian areas, it is measured as the stubble height of the vegetation left ungrazed. Utilization levels affect plant vigor, regrowth, and soil conditions. Changes over time in these conditions may affect long-term trends in vegetative health. Estimating area health based on soil conditions, vegetative conditions, and recovery mechanisms (plant vigor, litter distribution) will help determine current conditions and estimate long-term trends. This estimation of long-term trends will help determine if recreational-stock grazing within wilderness is allowing vegetation to move toward the desired future condition goals for vegetation.

Alternative A

The existing LRMP direction for recreational stock grazing within wilderness is based on grazing utilization standards.

Alternatives B, C and D

These alternatives address recreational-stock grazing by establishing guidelines for utilization on both upland and riparian areas, developing a minimum stubble height for *Carex* and *Juncus* species, as well and incorporating a health trend survey of vegetative and soil conditions.

Restraining or grazing pack or riding stock within **200** feet of Fourmile Lake, West Ute Lake, Archuleta Lake, Bear Lake, Blue Lake, Green Lake, and Red Lake and within a defined area at Flint Lake.

Grazing or overnight holding of stock within the defined area at:

Rainbow Hot Springs (West Fork Trail)

Chapter III - Affected Environment

The wilderness environment is comprised of biological, physical, and human resources. These resources are interwoven and together they provide the many values that can be found in wilderness. We have chosen to make decisions based primarily on the effects of humans on wilderness. This section describes in more depth, the types and amounts of human uses, within wilderness.

SUMMARY OF CHANGES

The figures in Tables III-1, 2, and 3, Trailhead Recreation Use for the Weminuche and South San Juan Wildernesses and the Piedra Area have been updated to reflect data gathered during the summer season of 1997.

A paragraph on the deterioration of areas that are grazed has been added to the section which describes vegetation and soil resources.

The information regarding fish stocking has been expanded and includes more information about species of fish and their status (i.e., state or agency listing as of special concern or sensitive).

Issue: Effects on Wilderness Ecosystems -- Recreation Use --

Recreational-Use Capacity

A recreation-use capacity analysis has been developed for the entire SJNF. The RGNF completed an analysis that is contained in its recently revised LRMP. Preliminary results show that many drainages within wilderness areas on the SJ-RG NFs, are at or approaching capacity levels (see Map E - Pg.II-39).

Three categories are depicted on Map E; compartments over capacity, compartments at or nearing capacity, and compartments under capacity. The capacity analysis evaluated both commercial and general public use of National Forest lands. The approach for the capacity analysis is described in the Recreation-Use Capacity Analysis for the SJNF and in the LRMP for the RGNF. Monitoring of these areas needs to continue to verify existing levels of use. Expansion of opportunities for commercial outfitter-guide use of wilderness areas will be limited.

Current Visitor Use Levels

Reliable use records have been sporadic over the past years. Beginning in 1993, a sustained effort was made to sample individual trailheads to determine approximate levels of use by type of use, and to collect use information through trailhead registration data. Tables III-1, III-2, and III-3 summarize the recreation use information by trailhead. This information was developed from sampling at trailheads or from visitor registration data. Generally, fall recreation use is estimated to be 30-50% lower at most wilderness trailheads.

Table III-1. Trailhead Recreation Use (Estimated average number of daily visitors) - Summer Season (5/15-9/15) - Weminuche Wilderness

Trailhead	Backpack	Day Hike	Day Horse	Overnight Horse	Llama	Total
Vallecito	12	36	2	2	0.1	52.1
Pine River	11	24	3	10	.2	48.3
Needle Creek	36	1.5	0	0.2	.1	37.8
Elk Creek	26	1.3	.3	1.9	.2	29.7
Four Mile	4	24	4	2	.1	34.1
Andrews Lake	7	20	4	1	0	32.0
Weminuche (30 Mile)	7	15.6	2	1.5	0	26.1
Poison Park	2	3	5	8	.3	18.3
Archuleta	1	20	.7	4	0	25.7
Purgatory	7	12	3	3	0	25.0
West Fork	8	11	4	2	0	25.0
Cimmarona	1.4	3.5	3	4	.1	12.0
Williams Creek	4	8	4.7	2	.1	18.8
Squaw(30 Mile)	6	10	1.3	1.5	0	18.8
Ute Creek	8	3	2	3	0	16.0
Lobo Overlook	9	4	1.9	0.1	0	15.0
Transfer Park	2	8	2	3	0	15.0
Jackson Mountain	2	5	2	5	.1	14.1
Lake Eileen	.1	13	.1	0.1	0	13.3
Cunningham Gulch	4	7	.2	0.5	.5	12.2
Fern Creek	2.3	5	1.8	1.3	0	10.4
Hope	.9	6	.7	1.2	0	8.8
Middle Fork	2	1	2	2	.1	7.1
Lime Mesa	1.8	2	.5	1.0	.3	5.6
Hunters	1.2	1.7	.5	.9	0	5.3
North Lime	.9	1.5	.7	.7	0	3.8
Ivy	.8	2	.5	.5	0	3.8
Kitty	.7	1	.3	.8	0	2.8
Endlich Mesa	1.2	.4	.2	1	0	2.8
Trout	.7	.5	.5	.7	0	2.4
Starvation	.5	.7	0	.1	0	1.3
Stony Pass	.3	1	0	0	0	1.3
Beartown	.3	.8	0	.1	0	1.2
Deep Creek	.2	.1	0	0	0	.3
Totals	**171.3**	**253.6**	**52.9**	**65.1**	**2.2**	**546.2**

Table III-2. Trailhead Recreation Use (Estimated average number of daily visitors) - Summer Season (5/15-9/15) - South San Juan Wilderness

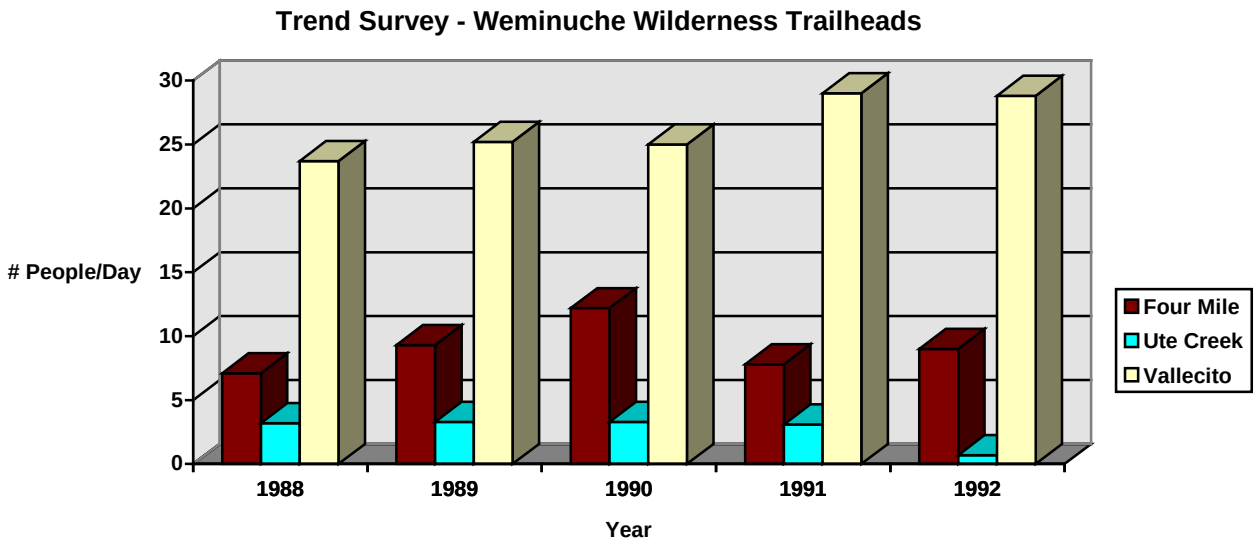
Trailhead	Backpack	Day Hike	Day Horse	Overnight Horse	Total
Three Forks	3	5	10	5	23.0
South Fork	3	5	2	3	13.0
Little Blanco	1	3	.5	2	6.5
Opal Lake	2	7	.1	3	12.1
Elk Creek	2	4	1	3	10.0
Beaver Lake	2	5	.5	1	8.5
Red Lake	2	4	1	1	8.0
Sand Creek	3	1	1	3	8
Fish Creek	2	.5	2	3	7.5
Ruybalid	1	4	1	1	7.0
Quartz Meadow	2	1	1	2	6
Bear Lake	1	3	.5	1	5.5
Crater Lake	1	3	.5	.5	5.0
Blanco River	.5	1	1	2	4.5
Navajo Peak (Price Lakes)	.1	.1	2	2	4.2
Tobacco Lake	1	2	.5	.5	4.0
V-Rock	1	.5	1	1	3.5
Coal Creek (East Fork)	.1	1.2	1	2	4.4
Coal Creek (Fawn Gulch)	.3	.5	1	2	3.8
Treasure Creek	1	1	.5	.5	3.0
Twin Lakes	1	.5	.5	1	3.0
Rio de Los Pine	1	1	.5	.5	3.0
Cont. Div - Cumbres Pass	1	1	.5	.5	3.0
Elwood Pass	.5	1	.5	.5	2.5
Adams Fork	.5	.5	.5	1	2.5
Notch	1	.5	.5	.5	2.5
Navajo Peak (Buckles)	.1	.1	1	1	2.2
Leche Creek	.1	.5	1	.1	1.7
Totals	**34.2**	**56.9**	**33.1**	**43.6**	**167.9**

Table III-3. Trailhead Recreation Use (Estimated average number of daily visitors) - Summer Season (5/15-9/15) - Piedra Area						
Trailhead	**Backpack**	**Day Hike**	**Day Horse**	**Overnight Horse**	**Llama**	**Total**
Piedra River	1	15	3	3	0	22.0
First Fork	1	2.5	1	2	0	6.5
Middle Mountain	.1	.1	1	1	0	2.2
Sand Creek Mosca	.1	.1	1	1	0	2.2
Cold Water Mosca	.1	.1	1	1	0	2.2
Totals	**2.3**	**17.8**	**7**	**8**	**0**	**35.1**

Recreational-Use Trends

Trends of recreational use in wilderness show a gradual increase in use for wilderness as a whole on the SJ-RG NFs. Some areas are experiencing a particularly high increase in day-use activities and use by larger groups. A trend survey of three trailheads in the Weminuche Wilderness shows a mixed bag of increased and decreased use, depending on the trailhead as shown on Chart III-1.

Chart III-1. Trailhead Use Trends - Weminuche Wilderness



The Forest Service reports recreation use annually in terms of Recreation Visitor Days (RVDs). An RVD represents one person participating in a recreation activity for a twelve-hour period. Wilderness use for the SJ-RG NFs for the past five years is shown in Table III-4.

Table III-4. Wilderness Use - MRVDs (1992-1996)					
Forest	**1992**	**1993**	**1994**	**1995**	**1996**
San Juan	188.6	178.2	187.8	204.9	270.5
Rio Grande	113.0	112.3	150.6	154.1	199.0

Types of Recreation Use

The types of use vary by area, with some areas receiving a higher proportion of stock use. In most areas on the SJ-RG NFs, day hiking is a major portion of the total wilderness use, particularly in the Weminuche Wilderness and Piedra Area.

Table III-5. Types of Wilderness Use (Percentage of average daily use)					
Wilderness	**Backpack**	**Day Hike**	**Day Horse**	**Overnight Horse**	**Llama**
Weminuche	34%	47%	8%	10%	1%
South San Juan	26%	31%	19%	24%	< 1%
Piedra Area	8%	43%	23%	27%	< 1%

Commercial Outfitter-Guides

Commercial services may be performed within Wilderness areas to the extent necessary for activities that are proper for realizing the recreational or other wilderness purposes of the area (Wilderness Act of 1964). Commercial services within the SJ-RG NFs Wilderness areas include a variety of activities that meet the intent of the Wilderness Act. Table III-6 describes the amount of service days allocated to commercial users within the Weminuche, South San Juan, and Piedra areas on the SJNF.

Use associated with commercial outfitting and guiding services is estimated to comprise less than 10% of total wilderness use on the SJNF. The percentage is estimated to be slightly higher on the RGNF, than on the San Juan NF, however, use figures have not been verified to date. Visitors using commercial services average a longer stay than other visitors.

A Needs Analysis for Commercial Outfitting and Guiding Services has been completed for the SJ-RG NFs. The RGNF analysis is contained in the revised LRMP and the SJNF has a recently completed Commercial Outfitter-Guide Needs Analysis. This analysis will determine the extent and need for commercial services both within and outside of wilderness.

Table III-6. Wilderness Outfitter-Guide Use (Service Days), San Juan NF			
Primary Activity or Service	**Weminuche**	**South San Juan**	**Piedra Area**
Backpacking	1,822	0	0
Packtrips	1,335	0	285
Experiential Education	4,384	0	0
Fishing w/Stock	620	75	10
Hunting by Foot	48	0	0
Hunting w/Stock	2,310	474	1,163
Mountaineering	42	0	0
Horse Rental	0	92	0
River Running	0	0	147
Day Hike	331	610	0
Day Ride	2,136	0	2,875
Llama Day Hike	30	0	0

Campsite Conditions

From 1986 through 1991, campsite surveys were conducted on the Columbine, Divide, and Pagosa Ranger Districts to determine the condition of wilderness campsites. A majority of the campsites inventoried were situated around lakes or in frequently traveled drainages. Campsite conditions were surveyed using the Cole Campsite Monitoring System. With this type of monitoring, the campsites are grouped into five condition classes with Class 1 being the least impacted and Class 5 being the most. Over 1,000 campsites were inventoried; the results are shown below in Table III-7.

Table III-7. Campsite Condition Survey Results, 1986-1991				
Condition Class	**Pagosa RD Weminuche**	**Pagosa RD South San Juan**	**Columbine RD Weminuche**	**Divide RD Weminuche**
1	2%	11%	11%	0%
2	20%	42%	35%	33%
3	58%	38%	37%	28%
4	16%	9%	12%	15%
5	4%	0%	5%	2%

There appears to be a trend in the creation of more campsites in areas that are destination stops for wilderness users. As crowding increases or sites become over-used, additional campsites are established. Additional inventories need to be completed to determine the extent of new campsite creation.

Issue: Effects on Wilderness Ecosystems -- Vegetation And Soil Resources –

Deterioration of Areas that are Grazed

Deterioration of areas grazed by recreational livestock occurs mainly when grazing use is excessive or when it occurs in fragile areas or at times of the year when fragility is high. Excessive grazing can result from either too many animals or overly concentrated grazing. (Cole and others, 1987)

Trampling

Trampling effects plants through compaction of soils and abrasion of vegetation and surface organic matter, all of which eventually lead to reductions in vegetative cover, changes in species composition, and increased erosion. Changes in species composition occur when plants with varying abilities to tolerate trampling are associated. Trampling often increase light levels and temperature ranges, which in turn favors some species over others. Species richness often increases with low to moderate levels of trampling, before declining to zero with heavy trampling. Plants growing in shade, broad-leafed herbs, lichens, and tree seedlings tend to be the least trample resistant, while grass-like plants and some low-growing herbs tend to be the most trample resistant. The trampling of forested sites generally results in more rapid loss of vegetation than trampling of open woodlands or meadows (Hendee, et all 1990).

Damage to Trees

Trees are felled for firewood, tent poles, hitch rails, removed to create camping space, and carved or hacked up with axes. Tying stock to trees exposes root systems and damages the tree by the pulling action on the bark from the restraint. A human browse line can be seen around many camps where campers have broken off the branches that they can reach for firewood.

Campfire Wood Gathering

Organic matter contributes to soil structure formation, which decreases runoff and erosion and increases soil moisture holding capacity. Organic matter also increases microbial and plants metabolic rates while supplying nutrients. These processes are critical at high elevations where the growing season is short and biomass production is limited. Firewood gathering for campfire use can decrease the available amount of organic matter that is returned to the soil. Larger diameter woody material contributes the most to soil structure and moisture holding capacity. In popular destination areas, downed and dead material has been picked clean, leaving very little to contribute to soil structure.

Visitor Perception of Resource Problems

Survey respondents were asked to describe, from a list of possible problems, the situations that they may have experienced during their Wilderness visit. Respondents were asked to indicate how much of a problem each situation was during their visit. Results of the survey show a moderate concern by Wilderness users, for recreational use effects on vegetation, sanitary conditions, and stream bank conditions. Table III-8 summarizes the results of this survey.

Table III-8. Problems, Weminuche Wilderness Visitor Survey, 1994					
Possible Problem	**Wilderness Study Group**	**Needle Creek Visitors**	**Elk Creek Visitors**	**Vallecito Creek Visitors**	**General Wilderness Visitors**
Horse damage to stream banks/trails	3.44	1.92	2.6	3.5	3.14
Inadequate disposal of human waste	3.42	1.93	2.5	2.72	2.50
Human damage to stream banks/trails	3.39	2.02	2.2	2.58	2.64
Human damage to vegetation	3.35	2.1	2.11	2.5	2.79
Horse damage to vegetation	3.24	1.83	1.62	3.44	3.07
Scale - 1-No Problem at all, 2-A small problem, 3-Moderate Problem, 4- A big Problem					

Wildlife

Refer to the LRMPs for the SJ and RG NFs, for a general discussion on the fish and wildlife found on the Forests. The LRMPs also contains background information on fish and wildlife management direction for the Forests, especially concerning Federally listed Threatened, Endangered, and Sensitive (TES) species.

The black bear and mountain goat populations have received the most interest in terms of possible effects on populations by human use. Both of these species have a tendency to become habituated to food or other attractants brought into the wilderness by humans. While small mammals and birds share the same tendency, the black bear and mountain goat populations have the potential for higher levels of conflict with human use.

The increase in recreation use with a corresponding increase in black bear populations has elevated the number of human/bear conflicts over the past few years. Other factors, such as natural food availability has also contributed to the extent of the problem.

Mountain goat populations concentrate in the Needle Mountain area of the Weminuche Wilderness. The goats were introduced to the region in 1964 when ten goats were transplanted from South Dakota to the Lake City area. In 1969 the CDOW, sighted six goats in the Chicago Basin area of the Weminuche Wilderness, 25 miles from the original release site. A supplemental transplant of four additional goats was conducted in 1971 from a herd originating in British Columbia. Since this time, the herd has expanded to 30-50 animals. The Needle Mountain area opened to permitted hunting (archery) for goats, starting in 1976.

A research project conducted in 1977 (Bronaugh, 1977), indicated that the mountain goat population showed a low tolerance of people. Observations described “goats pushing themselves to exhaustion” to avoid human interaction. Since this time, the mountain goat’s interactions with humans have changed dramatically. Today, mountain goats have become dogged companions to hikers who visit the area. Populations show little fear of humans as they congregate around campsites hoping to receive a handout. Goats key in on areas where humans have urinated to paw and dig up the ground to obtain salts from the urine. Education efforts have been used to help reduce the conflicts, but the problem continues to persist. The goat population has become habituated to human use, particularly in the Twin Lakes area of Chicago Basin.

Fish Stocking

Many of the high mountain lakes within Wilderness areas on both Forests are stocked by the CDOW. Stocking has occurred since early settlers first arrived in the area. Subspecies of the cutthroat trout

(*Oncorhynchus clarki*) are native to the area; Colorado River cutthroat (*O.c. pleuriticus*) on the west side of the Continental Divide and Rio Grande cutthroat (*O.c. virginalis*) on the east side of the Divide. The Colorado River cutthroat trout is currently a U.S. Fish and Wildlife Service Category 2 species (may be appropriate for listing as federally threatened or endangered), is considered a Species of Special Concern by the DOW, and is on the USFS regional sensitive species list.

Species that are not naturally indigenous to the area such as rainbow and brook trout were introduced many years ago. Appendix 1 displays the Wilderness lakes that are stocked and which species are traditionally used. The CDOW is reducing the use of species that were not naturally indigenous to the area and is now emphasizing stocking with native cutthroat strains.

Bodies of water identified as lakes within Wilderness areas on the SJNF number approximately 83. Of these 83 lakes, 53 are stocked on a regular basis. Lakes such as Emerald and Little Emerald, maintain a self-sustaining population and do not need to be stocked. Rivers and streams within Wilderness areas on the Forests are generally not stocked. Exceptions include the Pine River which is stocked with Colorado native cutthroat and the Piedra River (not in a Wilderness area but managed for wilderness qualities) which is stocked with brown and rainbow trout. Within the wilderness are also many small ponds, potholes, and riparian areas which are not stocked. These areas provide valuable aquatic habitat for non-fish species.

Prescribed Natural Fire

Detailed fire records collected since the 1930s show that nearly all fires in the Weminuche and South San Juan Wilderness Areas have averaged less than one acre in size. However, large fires have occurred in the past one hundred years, as evidenced by extensive aspen stands. Fires have also averaged less than one per year. The absence of fire in these areas is a result of high elevation and wet microclimates.

The primary fire-dependent vegetative types in the Weminuche and South San Juan Wilderness and the Piedra Area include spruce-fir, mixed conifer, aspen, and ponderosa pine. Spruce-fir forests are the dominant forest types within these wilderness areas. Mixed conifer and ponderosa pine are more common within the Piedra Area. Fire regimes (occurrence, intensity, frequency, size, and patterns) vary considerably within these vegetative types. Historically, fire played a major role in shaping the composition and function of these vegetative types, particularly in the ponderosa pine and warm mixed conifer forests (Covington, Romme, 1994). Fire suppression has significantly reduced fire occurrence and altered fire frequency, which has resulted in changes in the vegetative types.

The spruce-fir forest type is widely distributed throughout the higher elevations from about 8,500 to 12,000 feet (Romme, 1992). Aspen is the major seral species of this forest type, and often colonizes large areas following major disturbance events such as wildfire.

Fire intervals in spruce-fir forest are variable, ranging from decades to hundreds of years, with the longer intervals being more typical (Romme, 1979). Under dry conditions, fire in the spruce-fir type is usually of high intensity, similar to those in Yellowstone National Park in 1988. Such fires could be ongoing for an extended time period covering large portions of the landscape.

Issue: Wilderness Experience Opportunities

Crowding

Encounter rates are one measurement of crowding. Within the Weminuche Wilderness, encounter rates on trails were determined by using a self-issuing survey to Wilderness visitors during 1995.

Visitors keep a daily diary of encounters on trails that they walked or rode. The survey requested that respondents keep track of the encounters by type of user encountered (hiker and stock groups). The results of this survey are shown in Table III-9. Results are arranged by Recreation-Use Compartment. The locations of the Recreation-Use Compartments are displayed on Map E.

Table III-9. Trail Encounter Rates - Weminuche Wilderness

Recreation-Use Compartment	Average # of Trail Encounters w/Hiking Groups	Average # of Trail Encounters w/Stock Groups	Average # of Trail Encounters - Total Groups
Pine River	7.5	4.6	12.1
Four Mile	10.0	1.3	11.3
Vallecito	9.6	.8	10.4
West Fork	6.1	3	9.1
Needle Creek	6.5	0	7.5
Elk Creek	6.0	.1	6.1
Fisher	4.0	2.0	6.0
Twilight	5.5	0	5.5
Purgatory	5.1	.4	5.5
San Juan	4.9	0	4.9
Squaw	3.5	1.3	4.8
Eileen	4.5	0	4.5
Granite	3.0	1.0	4.0
East Fork	1.9	2	3.9
Turkey	2.5	1.2	3.7
Sheep	3.2	0	3.2
Lake Creek	2.8	.3	3.1
La Osa	2.0	1.8	2.8
Cave	2.0	0	2.0
Ute	1.9	.1	2.0
Johnson	1.9	0	1.9
Williams Creek	1.7	.2	1.8
Weminuche	1.6	0	1.6
Stormy	1.0	.4	1.4
Flint	1.1	.2	1.3
Rock	.5	.8	1.3
Ten Mile	1.2	0	1.2
Hope	1.1	0	1.1
Blanco	1.0	0	1.0
Florida	.4	.4	.8
Navajo	0	0	0
Ivy	0	0	0
Continental	0	0	0

Encounters represent the average number of parties encountered during a typical 8-hour daytime period.

When encounter rates are compared to current LRMP standards, an analysis shows that several of the Recreation Use Compartments are at or over the established level of encounters.

Crowding was shown to be a moderate to moderately high level of concern to Weminuche Wilderness visitors in a survey conducted in 1994. The survey asked Wilderness users to rate their level of

concern on several Wilderness issues. The questionnaire was also given to Forest Service management personnel, as well as members of the Weminuche Wilderness Study Group. The sample population was primarily comprised of backpackers (80%), which is somewhat higher than the percentage of total use by backpackers in the Weminuche. Table III-10, describes the factors that were of most concern to the respondents Wilderness experience.

Table III-10. Experience, Weminuche Wilderness Visitor Survey, 1994

Wilderness Experience Indicator	Average Response Rank
The amount of litter that I see.	5.34
The number of trees around a campsite that have been damaged by people.	4.95
The number of horse groups that camp within sight or sound of my campsite.	4.81
The amount of noise associated with human activities within the Wilderness.	4.75
The number of campfire rings that people have made.	4.60
The number of hiker groups that camp within sight or sound of my campsite.	4.58
The amount of vegetation loss and bare ground around a campsite.	4.40
The number of big-game animals that I see.	4.39
The number of horse groups I see along the trail.	4.38
The number of large groups (more than 8 people) that I see along the trail.	4.30
The amount of manmade noises originating outside the Wilderness.	4.27
The average number of horse groups that travel past my campsite while I am there.	4.26
The number of groups of hikers that I see along the trail.	3.94

Scale: 1-No Concern, 2-Slightly Concerned, 3-Somewhat Concerned, 4-Moderately Concerned, 5-Very Much Concerned, 6-Extremely Concerned

The results of this survey are very similar to results obtained from other wilderness visitors across the country. Litter is the number one concern of most wilderness visitors. The moderate to high level of concern expressed about the number of horse groups camped near the respondent's campsite can be attributed to the sample population being primarily backpackers. The results show a higher concern in camp encounters versus trail encounters. Another survey summarized in Table III-11, shows varying degrees of concern over too many people depending on the area where the visitor was sampled.

There is a trend to a higher number of large groups entering the wilderness areas on the Forests. Contributing to this increase is scout groups, universities and colleges, church organizations, organized horse groups, and outfitter-guide services. Responses to surveys as shown in Table III-8, indicate a higher level of concern with encountering larger groups than smaller groups on trails and at campsites.

The SJ-RG NFs have two different group-size regulations currently in place. The Sangre de Cristo Wilderness has a 15 person/25 people and stock limitation in effect, and the rest of the Wilderness areas have a 25 people and/or stock regulation in effect

Wilderness Experiences

Social values integral to wilderness include therapeutic, spiritual, aesthetic, intellectual, physical, and character building. In 1990, a survey was conducted by interns from Colorado State University that asked visitors to the Weminuche Wilderness what the relative importance of the following Wilderness experiences was to them. Table III-11 summarizes the results.

Table III-11. Wilderness Experiences - Colorado State University, Survey of Weminuche Wilderness Visitors, 1990

Experience	% of respondents who felt experience is extremely important
Enjoying scenic beauty	77.2%
Knowing the area is being protected	62.5%
Experiencing the peace and calm	59.2%
Experiencing solitude	57.4%
Reaffirming your connection with nature	52.6%
Getting away from crowded situations	50.8%
Exploring the area	49.8%
Getting a better appreciation of nature	47.4%
Enjoying the sounds of nature	45.6%
Getting exercise	36.5%
Experiencing the smells of nature	35.2%
Avoiding everyday sights and sounds	33.9%
Relaxing physically	33.0%
Releasing some built-up tension	33.0%
Reflecting on your spiritual values	30.4%

Regular or extended experience in the natural environment may produce a physical conditioning effect. Moreover, periodic experience in wilderness may prevent or relieve mental dysfunction believed caused by repressed desires forced upon us by pressures and constraints of modern society (Manning, 1988).

The requirements for realizing therapeutic, spiritual, and intellectual values from wilderness are highly individualistic. However, some requirements as described in the Table III-11, are best met in MAs that offer the most solitude, privacy, escape from noise and isolation. These experiences are best met in MAs 1.11 (Pristine) and 1.12 (Primitive).

Dogs under Control

Dogs are frequent visitors to wilderness areas on the SJ-RG NFs. There are no current regulations restricting the use of dogs. The issue of dogs in wilderness is a divisive one. The break is about even either way when wilderness users are asked if dogs should be allowed. Responses shown in Table III-12 show a fairly low level of concern from wilderness users surveyed over the presence of dogs or that they are not on a leash.

Table III-12 - Problems, Weminuche Wilderness Visitor Survey, 1994					
Possible Problem	**Wilderness Study Group**	**Needle Creek Visitors**	**Elk Creek Visitors**	**Vallecito Creek Visitors**	**General Wilderness Visitors**
Too many people in area	3.06	2.09	2.38	3.5	2.27
Low-flying aircraft	3.05	1.73	2.14	1.36	2.07
Pets not on leash	2.44	1.48	1.62	1.25	1.75
Horse manure on trail	2.33	2.16	2.65	3.83	2.50
Presence of dogs	2.0	1.58	1.00	1.58	1.73
Scale: 1-No Problem at all, 2-A small problem, 3-Moderate Problem, 4- A big Problem					

Issue: Recreational-Stock Effects on the Wilderness Resource

Most of the information related to this issue is based on field observations, rather than empirical data and research conducted in other areas. Very little monitoring has been completed that shows trends or quantifies the actual extent of impacts related to recreational stock. Recreational-stock use accounts for 19% of the total overnight use within the Weminuche Wilderness, 43% within the South San Juan, and 50% within the Piedra Area. The use of recreational stock has a long history in southwest Colorado backcountry areas. Day rides, pack trips, and big-game hunting are the primary purposes for recreational-stock use.

Research has shown that the use of stock in backcountry areas has an impact on trail and campsite conditions (Weaver, 1978). Many of these impacts can be reduced through educational efforts to change behavioral patterns. The size of stock parties influences the severity of a number of problems, particularly in little used and off-trail places.

Trampling impacts of packstock are especially severe because considerable weight is carried on a small bearing surface (Weaver and others, 1979). Therefore, vegetation and soil damage occur rapidly where stock leaves a constructed trail surface. Where stock leave the main trail tread, trail widening and development of parallel trails are likely. Other studies have found that while hiker use tends to stabilize trail surfaces, horse use loosens the soil, making it more prone to erosion (Whittaker, 1978).

Significant differences in impact caused by stock parties are also evident at campsites. In the Bob Marshall Wilderness, Montana, stock sites were six times as large as backpacker sites. They had more than four times the devegetated area, 11 times as many damaged trees and 25 times as many trees with exposed roots (Cole, 1983).

In areas grazed by recreational stock, native colonizer species may increase in importance, or alien species brought in as seed in feces, on coats or hooves, or in supplemental feed may proliferate. Such changes represent substantial alteration of natural conditions. (Cole, 1989).

Additional monitoring of stock-use areas needs to be conducted, to determine localized effects of stock use on meadows and riparian areas.

CHAPTER IV - ENVIRONMENTAL CONSEQUENCES

This chapter discusses the consequences of implementing each of the four alternatives described in Chapter II.

SUMMARY OF CHANGES

The Forest Order commonly referred to as the Bear Order was amended on August 15, 1997. It is now mandatory to store food, etc., only inside listed campground and at some recreation areas in the SJRG. The areas addressed in this EA are not affected by the current order.

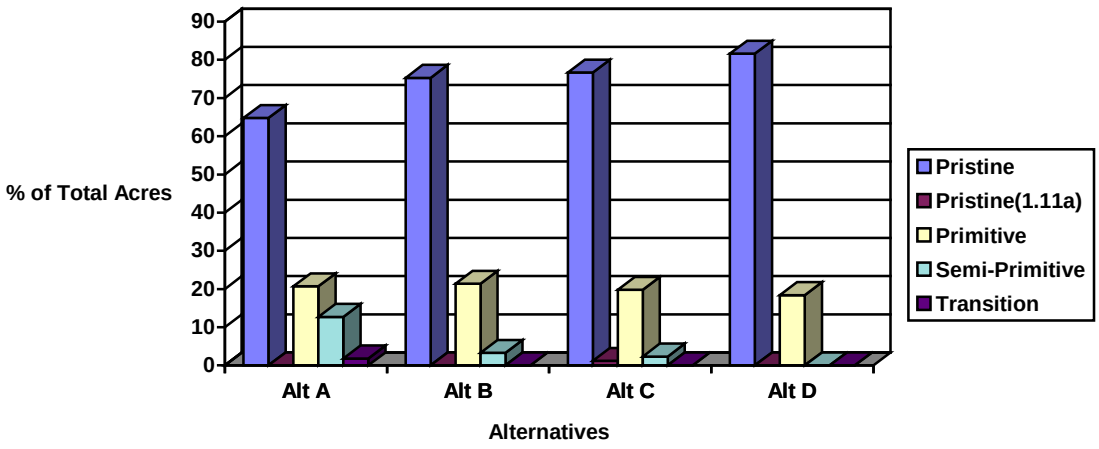
Under Alternative C, the Hell Canyon Trail in the Weminuche Wilderness will not be maintained, and will be removed from the Forest Development Transportation Plan. Under Alternative D, the Los Pinos Trail in the South San Juan Wilderness and the Fern Creek Trail in the Weminuche Wilderness will be removed from the Forest Development Transportation Plan and will be restored to a natural condition.

Since the release of the Initial EA, the Interim Colorado River Cutthroat Trout Conservation Strategy has been developed in cooperation with CDOW. The strategy defines goals to ensure the long-term survival of Colorado River cutthroat. The strategy is further described under Fish Stocking.

Major Differences Between Alternatives

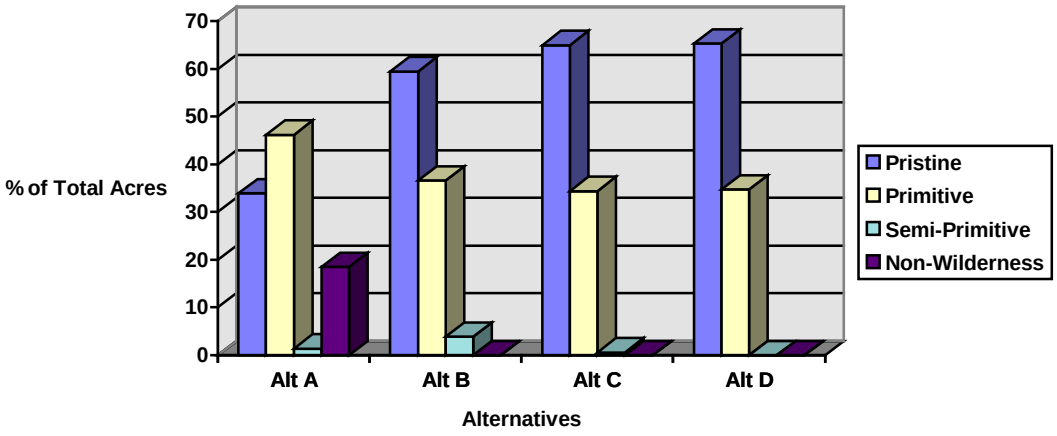
For the most part, the major differences between alternatives are associated with the location and extent of the wilderness MAs that define the alternatives. In general, the Pristine class (Class 1.11) will decrease the amount of human influences on the natural environment. The other classes, Primitive (1.12) and Semi-Primitive (1.13), will allow for more intensive human use, with Semi-Primitive allowing the highest level within the limits described. To varying levels, the alternatives address the issues that surfaced during public scoping. The following charts (Figures IV-1, IV-2, IV-3), describe wilderness area's in terms of percentage of the MAs that are allocated by alternative.

Figure IV-1. Weminuche Wilderness MA Allocation



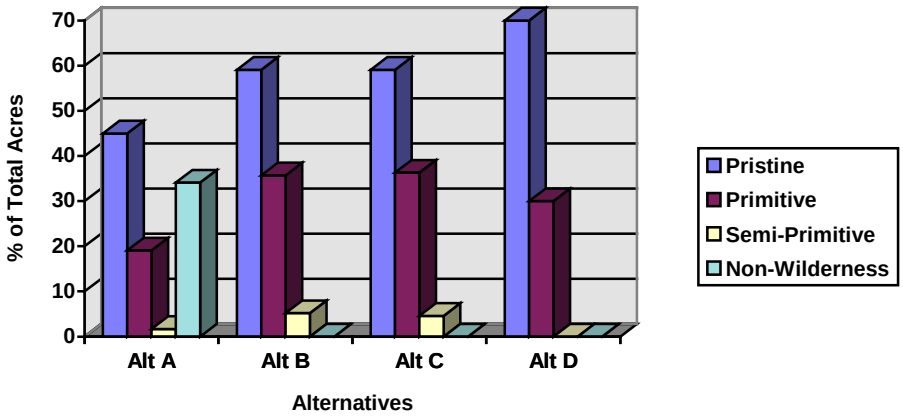
As shown in the Figure IV-2, Alternative A reflects Management Areas as defined in the current Forest Plan. Portions of the South San Juan Wilderness were not designated Wilderness until 1993. Most of the area now designated as Wilderness was within the Wilderness Study Area and was assigned wilderness prescriptions. As the Wilderness boundary was defined, it included slivers of non-wilderness prescriptions.

Figure IV-2. South San Juan Wilderness MA Allocation



As shown in Figure IV-3, Alternative A reflects Management Areas as defined in the current Forest Plan. The area now known as the Piedra Area was not designated by Congress until 1993. Most of the area now designated as the Piedra Area was within the Wilderness Study Area and was assigned wilderness prescriptions. As the Wilderness boundary was defined, it included parts of management areas with non-wilderness prescriptions.

Figure IV-3. Piedra Area MA Allocation



ENVIRONMENTAL CONSEQUENCES BY ISSUE AREA

Issue: Effects on Wilderness Ecosystem

All alternatives will eventually lead to improvements in many of the natural conditions, populations, and processes within wilderness. All alternatives have standards and guidelines to monitor effects on the wilderness ecosystem. The Action Alternatives incorporate new standards and guidelines that improve the ability to effectively monitor on-the-ground conditions.

Recreation Use Capacity

Recreation use capacities are developed using coefficients associated with management area prescriptions. Generally, the more acres of Pristine (1.11) management areas that are defined in an alternative, the lower the capacity. Higher acreages of Primitive (1.12) and Semi-Primitive (1.13) management prescriptions increase the capacity. The higher the capacity, the greater the potential for adverse affects on the physical, biological, and social wilderness conditions. Lower capacities have the potential to increase the need for more direct methods to limit use in order to maintain standards and guides, such as by instituting permit systems.

Alternative A

Existing management direction will accommodate the highest recreation-use capacity of any of the alternatives. This is due primarily to the designation of the Transition MA in high-use corridors. Under existing direction, anticipated future demand for wilderness recreation use should be met.

The Transition MA that is prescribed on certain portions of the Weminuche Wilderness on the SJNF, allows conditions to continue that may not meet wilderness resource desired conditions, particularly in terms of social values. This MA permits levels of use that exceed conditions that most wilderness visitors are seeking.

Alternatives B, C, and D

By adopting LAC standards and guides, the Action Alternatives attempt to correct ongoing environmental and social problems and prevent future degradation. The revised standards and guidelines will allow managers to better monitor conditions and trends of recreation use in wilderness. Wilderness managers will have a set of actions to choose from that can be used to minimize impacts.

Alternative B will accommodate the highest level of use of any of the Action Alternatives. The main contributing factor to this is the allocation of the Primitive MA in the high-lake basins of the western portion of the Weminuche Wilderness. This MA classification will allow for levels of use that are at or near the existing demand.

Alternative C will decrease the current levels of use in some areas, particularly in the Weminuche Wilderness. The western portion of the Weminuche Wilderness has been evaluated to be over capacity. Decreases or redistribution of use for both outfitter-guides and the general public use will be needed to meet capacity guidelines under this alternative.

Alternative D would result in the most effect on current use patterns to meet capacity guidelines. This alternative would require a significant reduction in current use.

Under the Action Alternatives, recreation use compartments will be used to determine specific capacities for areas defined by the compartment. Capacities will be keyed to the particular compartment and monitored to determine if capacities are being exceeded.

Table IV-1 - MAs of Popular Destination Areas by Alternative

Destination Areas	Management Area (MA) Allocation			
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**
Chicago Basin	Semi-Primitive	Semi-Primitive	Semi-Primitive	Primitive
Elk Creek (To Beaver Ponds)	Transition	Semi-Primitive	Semi-Primitive	Primitive
Vallecito (Twin Bridges)	Transition	Semi-Primitive	Semi-Primitive	Primitive
Pine River (To Lake Creek)	Transition	Semi-Primitive	Semi-Primitive	Primitive
No Name Creek	Primitive	Primitive	Pristine (1.11(a))	Pristine
Ute Lakes	Primitive	Primitive	Primitive	Primitive
West Fork San Juan	Transition	Semi-Primitive	Semi-Primitive	Primitive
Four Mile Lake	Semi-Primitive	Semi-Primitive	Semi-Primitive	Primitive
Emerald Lake	Semi-Primitive	Semi-Primitive	Semi-Primitive	Primitive
Blue Lake	Primitive	Semi-Primitive	Primitive	Primitive
Four Mile Lake	Semi-Primitive	Semi-Primitive	Semi-Primitive	Primitive

Vegetation and Soil Resources

Alternative A

Due to the lack of specific standards and guidelines for some ongoing recreation-use impacts, long- and short-term improvements in soil, vegetation, and water quality may not be promptly realized. Indirect effects will continue to occur at lake basins and other areas of concentrated use. These indirect effects include barren core-area creation, additional fire rings created, social trails between campsites, damaged trees, and exposed root systems. As projected use continues to increase, these effects are likely to be more evident.

Action Alternatives

By adopting LAC standards and guidelines, the action alternatives, attempt to correct ongoing environmental and social problems and prevent future degradation. The main effects of implementing new standards and guidelines will come from improved monitoring of the effects of grazing by recreational livestock, campsite density, and campsite condition. The revised standards and guidelines will allow managers to monitor conditions and trends of recreation use in wilderness. Managers will have a set of actions to choose from that can be used to minimize impacts.

No degradation beyond current conditions would be allowed under the action alternatives. All of the action alternatives will improve conditions beyond the existing LRMP standards and guidelines through implementation of the standards and guidelines described in Chapter II. The degree of improvement by alternative will depend on the amount of areas allocated to the more pristine MAs. Those alternatives with greater acreage of Pristine MA should see a greater improvement in soil and vegetation conditions over the long-term.

The restriction of camping within 100 feet of streams or lakes will minimize new impacts to vegetation and soils in fragile riparian areas and will permit previously damaged areas to recover naturally or with restoration efforts.

Alternative B

The group size for people is decreased from 25 to 15, which may minimize damage to vegetation and soils in fragile areas and in little-used and relatively undisturbed areas. The number of stock per group is increased from *a combination or people and stock not to exceed 25 per group* to 35 per group. In those areas where larger numbers of stock per group visit, the potential for impacts from grazing to vegetation, and associated impacts to soils, are increased.

Alternative C

The maximum group size of 15 people is the same as Alternative B. The combination of people and stock is not to exceed 25, with the exception of the Piedra River where the maximum group size will be 20 people. The change in group size may reduce the potential for damage to vegetation and soils in fragile areas, in little used and relatively undisturbed areas, and in those areas which larger parties may have used.

Camping will be prohibited at Twin Lakes, near Chicago Basin. Additional restrictions will be in place to allow camping only in designated sites at Emerald Lake and West Fork Hot Springs. These restrictions will allow areas that are now essentially barren of vegetation to recover, and will consolidate camping use to reduce compaction and the numbers of fire rings created.

Campfires will not be permitted at West Fork Hot Springs and Vestal Basin. These restrictions will allow a return to a more natural level of organic matter in the form of woody residue. Damage to trees and vegetation from wood-gathering activities will be minimized.

The Hell Canyon Trail in the Weminuche Wilderness will not be maintained, and will be removed from the Forest Development Transportation Plan. There will be fewer human influences on natural processes.

Restrictions regarding restraint of recreational livestock within riparian areas will minimize the effects of grazing and trampling to those areas.

Alternative D

In addition to the restrictions described in Alternative C, under Alternative D, the Los Pinos Trail in the South San Juan Wilderness and the Fern Creek Trail in the

Weminuche Wilderness will be removed from the Forest Development Transportation Plan and restored to a natural condition.

The Hell Canyon Trail in the Weminuche Wilderness will not be maintained, and will be removed from the Forest Development Transportation Plan.

Campfires will not be permitted in areas above timberline. This restriction will allow a return to a more natural level of organic matter in the form of woody residue. Damage to trees and vegetation from wood-gathering activities will be minimized. There will be fewer human influences on natural processes.

Noxious Weeds

Alternative A

The existing LRMP direction does not specifically address the effect of noxious weeds on the wilderness resource. Without specific guidelines in place to monitor conditions, adverse resource impacts on vegetation may continue without clear trends or effects realized.

Alternatives B, C, and D

Proposed indicators for noxious weeds would provide for more specific monitoring and control actions as compared to the current direction. Monitoring of noxious weed populations will allow managers to spot recent invasions and take actions to reduce overall noxious weed populations.

Wildlife

All Alternatives

The effects common to all alternatives are the improvements associated with meeting already existing LRMP standards and guidelines and desired conditions for riparian conditions, stream bank stability, and upland habitat conditions. The direct effects of angling, hunting of big-game species, or decreased water quality from improper camp practices will not be changed under any of the management alternatives.

Alternatives A and B

Adverse effects from recreation use on the habituation of wildlife species such as black bear and mountain goat will continue and possibly increase as recreation use increases. Impacts of habituation of wildlife species, particularly the mountain goat population at Twin Lakes will continue as camping in the area is allowed to continue. Education efforts should help to minimize the effects.

Alternative B

People will be required to keep dogs under control, which will lessen incidents of wildlife harassment by dogs. Incidents will be monitored, and if guidelines are not met, more restrictive measures may be taken.

Alternatives C, and D

Prohibiting overnight camping at Twin Lakes may improve water quality at the lake, and reduce the habituation of the mountain goat population to human use. The restriction will allow the Forest Service and Colorado Division of Wildlife to observe goat behavior, to determine if restrictions curtail habituation. Less crowding may decrease the level of direct disturbance of wildlife.

Fish Stocking

Alternative A

Stocking of lakes and streams will continue as presently scheduled. Species that are considered to be indigenous to Wilderness areas because they were stocked prior to Wilderness designation will continue to be imported into the Wilderness ecosystem. Research has shown (Liss and Larson, 1991) that there are significant differences in biotic communities of lakes with and without fish, probably caused by fish predation on invertebrates and amphibians vulnerable to such predation.

Alternative B, C and D

The concept is to protect the genetic purity and preserve the genetic variability of the remaining stock of this trout. The long-term view is to ensure stability of the species. Under the action alternatives, a localized plan will be developed in partnership with the CDOW to develop specific objectives and criteria for stocking of fish within MAs. Implementation of this plan could potentially decrease the number of lakes that are stocked. The exact number of lakes that fall into this category is not yet known due to insufficient information on fish populations and the final development of the localized plan. Generally, lakes to be stocked with pure strains of natives will be lakes that can sustain natural, self-supporting populations. Under the conservation strategy, some high mountain lakes that do not support self-sustaining populations, may be stocked with pure strain Colorado native cutthroat trout to provide genetic refuges for the species. The CDOW also plans to reduce the use of non-indigenous fish in the area, fish species which will lessen the genetic hybridization of fish species within lakes and streams of the area.

Some fish biologists (Peter Bahls, 1992), have suggested that as a guideline at least 50% of the total number of lakes within a Wilderness Area should remain fishless, including at least 10% of the larger, deeper lakes. Under the Action Alternatives, 65% of lakes within the SJNF Wilderness Areas will continue to be stocked. Most of the deeper lakes are either stocked or have self-sustaining populations of native species.

Issue: Wilderness Experience Opportunities

Crowding

Alternative A

No immediate changes in the current recreation-use levels would occur. Long-term changes will likely take place as predicted increases in recreation use occur. As popular destinations become more crowded, some wilderness visitors will alter their behavior in terms of visit or itinerary. More remote destinations will likely experience greater

visitation levels. As use levels increase, regulations to mitigate the effects of additional use would likely be adopted. Some visitors will choose not to visit areas that are considered to be overcrowded. Existing standards and guidelines for use levels within the Transition MA will continue to allow for a higher density of use, than the other Action Alternatives, in portal areas.

Alternatives B, C, and D

If use continues to increase as predicted, the resulting effect, will contribute to higher levels of compaction, a reduction of dead and downed timber from firewood gathering, and human waste accumulations. Human influences of natural processes will increase.

Because of the more stringent crowding guidelines for encounter rates, for both trail and campsite encounters, the Action Alternatives will provide progressively more opportunity for solitude and reduction in crowding. The implementation of standards and guidelines and management actions described in Chapter 2 will result in decreased levels of crowding throughout areas that are currently receiving high levels of use. Areas that are lightly used at this time will not likely see a change in use patterns if MA guidelines are monitored and enforced.

Generally, decreased crowding will increase the quality of the wilderness experience. Some wilderness visitors may have to change their itinerary or reschedule their visit to meet MA guidelines. Visitor perceptions of crowding will be measured to determine if the recreation experience meets expectations. Management actions will be in place to provide both indirect and direct methods to meet crowding guidelines. Alternative D will have guidelines in place, but may also require more regulations and perhaps immediate recreation use limitations to achieve the desired condition.

Dogs

Alternative A

No immediate change is expected in the current condition. As standards and guidelines are not in place for monitoring the effects of dogs on the wilderness resource, there will be a lack of information to make any changes in current management.

Alternatives B, C, and D

Monitoring will take place to determine effects of dogs on the experience of wilderness visitors and on wilderness resources. If guidelines are exceeded, there will be the potential to restrict the presence of dogs within wilderness areas or require that dogs be restrained.

Group Size

Most research has shown that the greater the group size, the greater the potential for both short-term and long-term impacts on the wilderness resource. Larger parties require larger campsites. Larger parties will not necessarily cause more impact on established campsites large enough to accommodate the party; however, they will cause more rapid impact on previously undisturbed places (Hammitt and Cole, 1987). Encountering a large party has been shown to do more to diminish feelings of solitude than encountering the same number of people in small parties (Stankey, 1973). Input from user groups, wilderness visitors, and the Wilderness Study Group shows a social preference for a group-size limit within the range of 10-15 people.

Alternative A

Existing direction allows for up to 25 people and or stock to enter a Wilderness area on the Forest. This is inconsistent with the Sangre de Cristo Wilderness regulations, which limit people group size to a maximum of 15. With existing regulations allowing group sizes of up to 25, the social acceptance of a maximum 10-15 people per group would be exceeded.

Alternative B

This alternative would allow an increase in the amount of stock that could be brought into an area to a maximum combination of no more than 35 people and/or stock, but no more than 15 people in a group. Generally, stock causes more impact, both social and ecological, than humans (Cole, 1987; Stankey and Schreyer, 1987). Increasing the group size from the existing limit to allow for more stock use will have a higher impact on the physical and social resources. It will have a positive benefit for some commercial outfitter-guide operations, which have been restricted in their ability to provide more services and supplies to their guests because of the current group- size restrictions.

Alternative C

Implementing this alternative will provide for consistency with the Sangre de Cristo Wilderness Area on the RGNF and Pike-San Isabel National Forests, which have already instituted a more restrictive group-size limit. The maximum number-of-people limit will fall within the range of social preference of current users of the wilderness. Some commercial outfitter-guide operations that use stock will be hampered by the limit on the number of stock. Church groups and universities that regularly use the wilderness areas on the Forests will be impacted by the reduction in the number of people that they can have in a group. A larger group size on the Piedra River will allow for a more manageable safety situation for both private and commercial raft/kayak trips.

Alternative D

Alternative D will restrict group size to no more than 10 people per group, with a maximum total of 15 people and/or stock. This limit will severely restrict current commercial outfitter-guide operations that depend on stock to transport guests and supplies to base camps. The economic viability of many of these commercial operations could be put in jeopardy by this restriction. Church groups and universities that regularly use the wilderness areas on the Forests will be impacted by the reduction in the number of people that they can have in a group.

With a significantly smaller group size, the social and physical impacts of large groups will be reduced. Effects on campsite conditions and trail and camp encounters will show a net improvement.

Issue: Recreational-Stock Effects on Wilderness Resources

Alternative A

The existing LRMP direction does not specifically address recreational-stock effects on vegetation, soils, or riparian areas. Guidelines are in place for utilization of forage by domestic livestock that could apply to recreational-stock use. These standards apply to

allotment areas, and do not necessarily address site-specific meadow and stream bank areas that are frequently used by recreational stock. Without specific guidelines in place to monitor conditions, adverse resource impacts on vegetation, soil, and riparian areas may continue.

Alternative B, C, and D

Specific monitoring guidelines will be implemented for forage utilization, stream bank trampling, and area health. Some meadow areas that are currently being heavily used by recreational stock may be closed or restricted from grazing, to help recover the vegetation of the area. When guidelines are exceeded, management actions described in the proposed action will be implemented. Actual actions taken will depend on site-specific conditions.

None of the action alternatives propose to ban the use of recreational-stock within wilderness. Some destination areas will require actions by recreational stock users to meet the desired conditions. These actions which could include restrictions on grazing, distances that stock have to be kept from water sources while restrained, and limitations on group sizes will improve wilderness conditions to insure that continued use of recreational-stock in wilderness is appropriate.

Alternative D because of its emphasis on ecosystem protection would have the most beneficial effect on reduction of impacts from recreational packstock. Alternatives B and C would impose fewer restrictions on stock use while improving existing conditions.

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Appendix 1
Fisheries Management by Body of Water

Appendix 1. Fisheries Management by Body of Water - Stocking				
Forest	**Wilderness**	**Body of Water**	**Proposed Management Area Allocation**	**Management (If stocked, species are listed)**
San Juan	Weminuche	Arrow Lake	Pristine	Not Stocked
San Juan	Weminuche	Annie Lake	Pristine	Previously stocked with Rainbow, will switch to Colorado River Cutthroat.
Rio Grande	Weminuche	Archuleta Lake	Semi-Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Balsam Lake	Pristine	Not Stocked
San Juan	Weminuche	Betty Lake	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Castellia Lake, Castillia Lake (east)	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Chopper Lake	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Columbine Lake	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Crater Lake	Semi-Primitive	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Divide Lake	Semi-Primitive	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Dollar Lake	Pristine	Cutthroat-Emerald Lake Native
San Juan	Weminuche	Donut Lake	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Durango City Reservoir	Primitive	Not Stocked
San Juan	Weminuche	Eldorado Lake (Big and Little)	Primitive	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Elk Lake	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Emerald Lake (Gem Lakes)	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Emerald Lake (Big and Little)	Semi-Primitive	Not Stocked-Self sustaining
San Juan	South San Juan	Fish Lake		Cutthroat-Snake River Native
San Juan	Weminuche	Flint Lake	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Fourmile Lake (Lower and Upper) – Fourmile Creek	Semi-Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Garfield Lake (Upper and Lower)	Pristine	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Granite Lake	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Grizzly Gulch Lake	Pristine	Cutthroat-Snake River Native

Appendix 1. Fisheries Management by Body of Water - Stocking (Cont.)				
Forest	**Wilderness**	**Body of Water**	**Proposed Management Area Allocation**	**Management (If stocked, species are listed)**
San Juan	Weminuche	Garfield Lake (Upper and Lower)	Pristine	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Granite Lake	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Grizzly Gulch Lake	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Half-Moon Lake	Primitive	Cutthroat-Emerald Lake
San Juan	Weminuche	Hazel Lake	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Hidden Lake	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Highland Mary (Big and Little)	Semi-Primitive	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Hossick Lake	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Irving Lake	Pristine	Cutthroat-Snake River Native
San Juan		Jewel Lake	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Johnson Lake	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Leviathan Lake (North and South)	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Lillie Lake	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Lost Lake (Roell Creek)	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Lost Lake(Elk Creek)	Pristine	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Monument Lake	Primitive	Not Stocked
San Juan	Weminuche	Moon Lake	Primitive	Cutthroat-Emerald Lake Native
San Juan	Weminuche	Mount Oso Lake	Pristine	Not Stocked
San Juan	Weminuche	Mystery Lake	Pristine	Cutthroat-Snake River Native
San Juan	Lizard Head	Navajo Lake	Semi-Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Nebo Lake	Pristine	Not Stocked
San Juan	Weminuche	No Name Lake	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Pear Lake	Primitive	Cutthroat-Snake River Native
San Juan	South San Juan	Quartz Lake	Primitive	Cutthroat-Snake River Native
Rio Grande	South San Juan	Red Lakes	Primitive	Previously with Rainbow, will switch to Rio Grande Cutthroat
San Juan	Weminuche	Rock Lake	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Roell Lake (Lake Mary Alice)	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Ruby Lake (Lower)	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Silex Lake	Pristine	Cutthroat-Snake River Native
Rio Grande	Weminuche	Spruce Lake (Upper and Lower)	Primitive	Brook Trout
Rio Grande	Weminuche	Squaw Lake	Primitive	Not Stocked
San Juan	Weminuche	Storm King Lake	Pristine	Cutthroat-Snake River Native

Appendix 1. Fisheries Management by Body of Water - Stocking (Cont.)				
Forest	**Wilderness**	**Body of Water**	**Proposed Management Area Allocation**	**Management (If stocked, species are listed)**
San Juan	Weminuche	Sunlight Lake (Upper and Lower)	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Ten Mile Lake	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Trinity Peaks Lake	Pristine	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Turkey Creek Lake	Primitive	Previously with Brook Trout, not stocked anymore
San Juan	Weminuche	Twilight Lake (Lower, North, and South), Upper not stocked	Primitive	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Twin Lakes	Primitive	Previously with Yellowstone Native Cutthroat, not stocked anymore
Rio Grande	Weminuche	Ute Lakes(West, Lower, Main-East, Upper, Middle)	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Vallecito Lake	Pristine	Cutthroat-Snake River Native
San Juan	Weminuche	Verde Lake(Big and Little)	Pristine	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Vestal Lake	Primitive	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Webb Lake	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	White Dome Lake	Pristine	Previously with Rainbow, will switch to Colorado River Cutthroat.
San Juan	Weminuche	Williams Lake	Primitive	Cutthroat-Snake River Native
San Juan	Weminuche	Window Lake	Primitive	Not Stocked
Rio Grande	South San Juan	Conejos River, Adams Fork	Primitive	Rio Grande Cutthroat Trout
Rio Grande	South San Juan	Conejos River, South Fork	Primitive	Rio Grande Cutthroat Trout
Rio Grande	South San Juan	Ann Lake	Primitive	Rio Grande Cutthroat Trout
Rio Grande	South San Juan	Bear Lake	Primitive	Rio Grande Cutthroat Trout
Rio Grande	South San Juan	Beaver Lake	Primitive	Rio Grande Cutthroat Trout
Rio Grande	South San Juan	Blue Lake	Primitive	Rio Grande Cutthroat Trout
Rio Grande	South San Juan	Glacier Lake	Primitive	Rio Grande Cutthroat Trout
Rio Grande	Weminuche	Goose Lake	Primitive	Rio Grande Cutthroat Trout
Rio Grande	South San Juan	Green Lake	Primitive	Rio Grande Cutthroat Trout
Rio Grande	South San Juan	Red Lake	Primitive	Rio Grande Cutthroat Trout
Rio Grande	South San Juan	Rock Lake	Primitive	Rio Grande Cutthroat Trout
Rio Grande	South San Juan	Tobacco(Tobasco)L	Primitive	Rio Grande Cutthroat Trout
Rio Grande	Weminuche	Squaw Creek	Primitive	Rio Grande Cutthroat Trout
Rio Grande	South San Juan	Trail Lake	Primitive	Rio Grande Cutthroat Trout
Rio Grande	Weminuche	Trout Lake	Primitive	Rio Grande Cutthroat Trout

Appendix 1. Fisheries Management by Body of Water - Stocking (Cont.)				
Forest	**Wilderness**	**Body of Water**	**Proposed Management Area Allocation**	**Management (If stocked, species are listed)**
Rio Grande	Weminuche	Ute Creek	Primitive	Rio Grande Cutthroat Trout
Rio Grande	Weminuche	Ute Lake, Lower Twin	Primitive	Rio Grande Cutthroat Trout
Rio Grande	Weminuche	Ute Lake, Main (E)	Primitive	Rio Grande Cutthroat Trout
Rio Grande	Weminuche	Ute Lake, Middle	Primitive	Rio Grande Cutthroat Trout
Rio Grande	Weminuche	Ute Lake, Upper Twin	Primitive	Rio Grande Cutthroat Trout
Rio Grande	Weminuche	Ute Lake, Upper W	Primitive	Rio Grande Cutthroat Trout

Appendix 2
Glossary

Air Quality Standards: Classifications and standards established under the Clean Air Act and Amendments.

Base Camp: Camp that has the dual role of serving as a central supply location for other camps in the area and providing for the needs of transportation livestock, if used, and clients needs for shelter, sanitation and food.

CFR: See Code of Federal Regulations.

Campsite monitoring:

Cole campsite monitoring method: Method of monitoring wilderness campsites developed by David N. Cole, research biologist. *Modified Cole* refers to a method that is a modified version of the Cole method.

Capacity: The maximum number of users within a given area without having unacceptable degradation of resources or undesirable social interaction. Capacity is a concern from the standpoint of how the capacity would potentially limit recreation use. As used in this document, capacity is defined by day use and overnight use. Pass -through use - travel through a compartment en route to a camping destination in another compartment - will not be tracked.

Code of Federal Regulations: The listing of various regulations pertaining to management and administration of the National Forests.

Coefficient: As used in this document, values which relate an acre of land to a particular spacing of people at one time and are used to determine the capacity of a defined area.

Commonly Used Acres: Recognizing that all of the area within the Forest boundary is likely to be used at some time for recreation, the *commonly used acres* (CUA) represent those areas in the Forest which are more commonly used by recreationists. Areas withdrawn from the CUA include private property within the Forest boundary, land with greater than 35% slope, and bodies of water greater than 5 acres in size that are not typically used for boating or rafting. The outcome was corrected with adjustments for corridors along system trails, commonly used sites and cross-country, mountaineering, or climbing routes.

Commercial groups: groups that are led by commercially operated guiding service. See Outfitters and Guides.

Condition Class: Each campsite is assigned a condition class category based on defined levels and/or type of impact. The range of condition classes is one to five with Class 1 as the least impacted.

Endangered Species: Any species in danger of extinction throughout all or most of its range, as defined in the federal Endangered Species Act.

Established campsite: An established campsite shows sign of repeated use. It may have a fire ring, ground vegetation may be worn away, the core of the campsite may be bare of vegetation and/or soil may be compacted.

Forest Development Trails. As defined in 36 CFR 212.1 and 261.2, those trails wholly or partly within or adjacent to and serving, the National Forests and other areas administered by the Forest Service that have been included in the Forest Development Transportation Plan.

FSM: See Forest Service Manual.

Forest Service Manual: The principal source of continuing instructions for the conduct of Forest Service programs and activities, and is the basic and ruling component of the directive system. The Manual is also available to interested persons outside the service as a source of information on basic operations in the Forest Service.

Frissell: The Frissel Condition Class Monitoring System for monitoring wilderness campsite condition developed by Sidney S. Frissell.

Goal: A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms, and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principle basis from which objectives are developed. (36 CFR 219.3)

Guideline: wilderness Guidelines are defined as preferred levels of accomplishment or courses of action, designed to achieve the desired condition. Guidelines can define the level of impact that is deemed acceptable. When deviation from a guideline is necessary, it will be documented during project analysis.

Indicator: A specific measurement used to gauge a resource or social condition. wilderness indicators identify which condition will be monitored. Indicators are chosen to specifically respond to the issues that have been identified. Through the use of indicators wilderness conditions can be monitored to determine if desired conditions are being met.

Indigenous Species: Any species of flora or fauna that naturally occurs in a wilderness area and that was not introduced by man. (FSM 2320.5). In regards to fish stocking, the definition of indigenous is modified by the International Association of Fish and Wildlife Agencies MOU which states that indigenous includes species of fish traditionally stocked before wilderness designation, if the species is likely to survive.

Institutional Group: Includes a variety of membership or limited constituency institutions such as religious, conservation, youth, fraternal, service club, and social groups; educational institutions such as schools, colleges and universities; and similar common interest organizations and associations.

Issue: A point of discussion, debate, or dispute about environmental effects. (40 CFR 1500-1502) Issues are determined to be *significant* based on the extent of their geographical distribution, the duration of their effects, or the intensity of interest or resource conflict.

LAC: See Limits of Acceptable Change.

LRMP: See Land and Resource Management Plan.

Land and Resource Management Plan: Forest-wide plan (required by the National Forest Management Act [NFMA]) setting overall management direction, standards and guidelines for the National Forest. The goal of the Forest Plan is to fully integrate a mix of management actions that provide for use and protection of forest resources, satisfying guiding legislation, and address local, regional, and national issues for the plan period.

Large group: Group which consists of more than 10 people.

Limits of Acceptable Change: A recreation and wilderness planning system designed to define desired conditions, set acceptable limits of change to resource and social conditions, and develop indicators, standards, and actions to monitor and prevent or correct unacceptable change.

M: 1,000 units.

MA: See Management Area.

Management Action: An action (technique, regulation or response) taken to assure standards are attained. Management actions may include indirect and direct measures.

Management Area: An area that has common direction throughout that differs from neighboring areas.

Management Prescription: Management practices and intensity selected and scheduled for application on a specific area to attain goals and objectives. (36 CFR 219.3)

Monitoring: The collection of information to determine the effects of resource management and to identify changing resource conditions or needs.

NEPA: See National Environmental Policy Act of 1969.

NFMA: See National Forest Management Act.

National Environmental Policy Act of 1969 (NEPA): Legislation declaring the productive harmony with nature, and protection of the environment, to be a national policy. NEPA provides for analyzing the environmental consequences of proposed management actions on all National Forest System lands, including management actions taken in Wilderness.

National Forest Management Act (NFMA): Legislation directing, among other things, the preparation of Land and Resource Management Plans for each unit of the National Forest System.

National Wilderness Preservation System: All lands covered by the Wilderness Act of 1964 and subsequent Wilderness designations, irrespective of the agency having jurisdiction.

No Action Alternative: Reflects no change from current management direction, strategies, standards, guidelines, or practices.

Objective: A clear, specific statement of planned results to be achieved within a stated time period.

Opportunity Classes: Zones with varying desired conditions or objectives, all within the legal definition of Wilderness. Three opportunity classes are used in this analysis, with Class I being the most pristine and Class III the least pristine.

Outfitter-Guide: Individual or business that operates commercially to provide guiding service and/or provision of equipment and/or supplies to Forest visitors.

PAOT: See Persons at One Time.

Persons at One Time: The number of people in an area or using a facility at one time. Generally used as the "maximum PAOT" to indicate the capacity of an area or facility to support peak usage within established user-density standards and without degradation to biophysical resources.

Prescribed Fire: The use of the term *prescribed fire* in this document is as it was defined at the time**:** A wildland fire burning under pre-planned, specific conditions, to accomplish specific, planned resource management objectives. (FSM 2320.5). **However**, before release of the final document, the definition had changed to: ***Prescribed Fire***: fire ignited by management ignitions, planned and executed under approved action plans with environmental analyses.

Prescribed Natural Fire: The use of the term *prescribed natural fire* in this document is as it was defined at the time: A prescribed fire ignited by lightning. **However**, before release of the final document, the definition had changed to: ***Wildland Fire***: fire ignited by unplanned ignitions--human-caused or natural ignitions and may pose a significant threat or may offer resource benefits. *Prescribed natural fires*, as used in this document, will now be called *wildland fires* caused by natural ignitions that offer resource benefits and will receive a graduated response based on approved plans and environmental analyses.

Prescription: Management practices selected and scheduled for application on a specific area to attain goals and objectives.

ROS: See Recreation Opportunity Spectrum.

RVD: See Recreation Visitor Day.

Recreation Opportunity Spectrum (ROS): A means of classifying and managing recreation opportunities based on physical setting, social setting, and managerial setting. Each class is defined in terms of the degree to which it satisfies certain recreation experience needs, based on the extent to which the natural environment has been modified, the type of facilities provided, the degree of outdoor skills needed to enjoy the area, and the relative density of recreation use.

ROS Primitive: Very high probability of experiencing solitude, self-reliance and challenge; natural landscape with natural processes allowed to function; very low interaction between users; restrictions and controls not evident; access limited and generally cross-country travel.

Recreation Use Compartment: An area delineated on LRMP planning maps that is based on a combination of topography and recreation use patterns. Compartments form the basis for recreation capacity and monitoring of use.

Recreation Visitor Day (RVD): Twelve hours of recreation use in any combination of persons and hours, i.e. one person for 12 hours, three persons for four hours.

Scoping: Determining the scope of issues to be addressed and identifying the significant issues related to a proposed action. (40 CFR 1501.7)

Standard: A specified level of attainment or acceptability, usually expressed in quantifiable terms; used as a rule to measure against. Wilderness Standards are levels of accomplishment or courses of action, required to achieve the desired condition. They are criteria used to evaluate social or environmental impacts. Standards are mandatory; deviation from standards is not permissible without an amendment to the Forest Plan.

Succession: The predictable, orderly, long-term developmental changes of an ecosystem, involving changes in species composition, structure, and community processes.

System Trails. Trails that have been included in the Forest Development Transportation Plan. Also called Forest Development Trails.

Threatened Species: Those plant or animal species likely to become endangered throughout all or a significant part of their range within the foreseeable future, as defined in the federal Endangered Species Act.

Threshold: The point or level of activity beyond which an undesirable set of responses begins to take place within a given resource system. The threshold is the upper limit in terms of time period or percentage of the standard that is exceeded at which point the next level of management action is undertaken.

Visual Quality: Scenic attributes of landscapes that elicit psychological and physiological benefits to humans.

Wilderness Act of 1964: Public Law 88-577. The legal mandate and basis for management of designated Wilderness.

Wilderness: All lands included in the National Wilderness Preservation System by public law; generally defined as undeveloped federal land retaining its primeval character and influence without permanent improvements or human habitation. Within this document, *Wilderness* (capitalized) refers to congressionally designated Wilderness - the Weminuche and South San Juan Wildernesses. Within this document, *wilderness* (uncapitalized) refers to those areas which are managed to retain their wilderness character and includes designated Wilderness and the Piedra Area.

Appendix 3
Principal Laws

Principal Laws Affecting Administration of National Forest Wilderness Areas

1. **The Wilderness Act of 1964**, as enacted September 3, and amended October 21, 1978 (16 U.S.C. 1131-1136), specifies congressional policy to secure for the American people an enduring resource of wilderness for the enjoyment of present and future generations. It defines wildernesses as areas untrammeled by people that offer outstanding opportunities for solitude and directs agencies to manage wilderness to preserve natural ecological conditions. With certain exceptions, the Act prohibits motorized equipment, structures, installations, roads, commercial enterprises, aircraft landings, and mechanical transport. The Act permits mining on valid claims, access to private lands, fire control, and insect and disease control, grazing, water resource structures (upon the approval of the President), and visitor use.

2. **The Forest Management Acts of 1897, 1899, and 1901 (Organic Act)** (16 U.S.C. 473-475, 477-482. 551) require the Forest Service to protect the National Forest System including designated wilderness areas which are a part of that system from fire and other depredations. The authority to regulate and monitor wilderness derives from these acts.

3. **The Multiple-Use Sustained-Yield Act of 1960** (16 U.S.C 528-531) provided that the establishment and management of wilderness was consistent with the management of the National Forest System for multiple uses.

4. **The National Environmental Policy Act** (42 U.S.C. 4321) provides for analyzing the environmental consequences of proposed management actions on all National Forest System lands, including management actions taken in wilderness.

5. **The National Forest Management Act of 1976**, as amended (16 U.S.C. 1600) provides that management direction for wilderness be incorporated into forest plans and sets minimum standards for the content of the plans.

6. **The Clean Air Act**, as amended August 7, 1977 (42 USC 7401, 7478, 7470, 7472, 7474, 7475, 7491, 7506, 7602) directs the Forest Service to protect Class I air-quality standards in certain Wilderness areas and Class II standards on the remaining wilderness areas.

7. The specific Public Laws to designate certain lands as components of the National Wilderness Preservation System:
   - **Public Law 93-632** designates the Weminuche Wilderness.
   - **Public Law. 96-560** designates the South San Juan Wilderness.
   - **Colorado Wilderness Act of 1993** (P.L. 103-77) designating additions to the South San Juan and Weminuche Wilderness areas.

Piedra Area

Colorado Wilderness Act of 1993 (P.L. 103--77) designating the Piedra Area as an area to be managed to maintain its presently existing wilderness character and potential for inclusion in the National Wilderness Preservation System. The act provides for grazing and restricts mechanized or motorized travel.

Title 36 of the Code of Federal Regulations
Regulations that apply to Wilderness Management

1. Part 293 - Wilderness Primitive Areas
2. Part 261 - Prohibitions
3. Part 219 - Planning
4. Part 228 - Minerals

Appendix 4

Public Comments
on the
Initial Wilderness Management Direction
Environmental Assessment
and Forest Service Responses

The following comments and issues (in bold italics) were received from the public during the review period following the issuance of the Initial Environmental Assessment (EA). Forest Service (FS) responses follow each issue.

GRAZING

"Livestock grazing within Wilderness Areas is not appropriate or ecologically sound. Rarely are stock well supervised, causing precious riparian areas to become degraded. How can you justify free range grazing to fit in with this picture?"

FS Response - Although the Secretary of Agriculture has authority to regulate grazing in Wilderness, the Wilderness Act of 1964 specifically allows the continuance of grazing within designated Wilderness if it was a use at the time of designation. The Congressional Grazing Guidelines (FSM 2323.22) specifically direct the Forest Service not to alter management of grazing solely on the basis of Wilderness designation. The Colorado Wilderness Act of 1993, which designates the Piedra Area specifically allows livestock grazing to be permitted and managed to the same extent and in the same manner as of the date of the designation.

If the concern is the use of recreational livestock, the use is historically and legally appropriate. The impacts of such use are addressed in the document. Refer to Table II-25 for a summary of standards and guidelines by alternative.

. . . the "Social and Economic Impacts" have not been addressed, the "History, Custom and Culture" of the area and our allotments have been ignored. Therefore there may be a need to call for a Environmental Impact Statement (EIS). . . On Range Management, I found little to no information... Concerned that in this EA, utilization standards may have changed which will lead to the demise of our operation and a significant economical impact to the region.

FS Response - This EA does not address utilization standards for domestic livestock operations. The issues related to commercial grazing, including social and economic impacts and utilization standards, are beyond the scope of this document and will be addressed in separate EAs. The planning for individual allotments is addressed through the Allotment Management Planning Process. The EAs for the area of concern mentioned by the respondent are scheduled for 1999.

NOXIOUS WEEDS

Portions of the V-Rock allotment have a problem with noxious weeds that need to be dealt with.

FS Response - Noxious weeds have been discussed throughout the document. As stated within the document, we are aware of the increasing presence of noxious weeds. The use of feed that is free of viable noxious weed seeds is currently a requirement throughout the SJ-RG Forests. Proposed indicators for noxious weeds would provide for more specific monitoring and control actions as compared to the current direction. Monitoring of noxious weed populations will allow managers to spot recent invasions and take actions to reduce overall noxious-weed populations. Actions that may be taken under the proposed alternative include educating the public on proper use of recreational stock in the backcountry, noxious-weed control by pulling or other hand methods when effective for the species. If noxious weeds pose a substantial threat to wilderness values and hand treatment is not effective, chemicals or biological control may be used after thorough evaluation of the risk of effects on non-target species and introduction of exotic species.

General

"The sole purpose of the EA appears to enhance recreational activities of Wilderness areas and does not address multiple use."

FS Response – The focus of the Plan Amendment is to address the effect of recreation use on the Wilderness resource. This does not imply that enhancement of recreation at the expense of other wilderness resources is the outcome. The purpose of the analysis is to determine the effects of amending the Forest Plan's wilderness direction. This direction includes a desired future condition, standards and guidelines, indicators and thresholds, and management actions to be taken if standards are exceeded. For the first time, we will have measurable standards in place to determine if recreation use is having an adverse effect on wilderness resources. The desired conditions (beginning on Pg. II-29), define desired conditions for all wilderness resources. Other resource areas addressed in the analysis include fire management and noxious weeds.

"It is the responsibility of the Forest Service to see that the Wilderness Areas which still exist are not exploited with excessive roads, signs, grazing or negative impacts on our riparian areas."

FS Response - There are no roads within the areas of concern. Signing is limited. (see Tables II-2, 3, and 4). The issue of grazing in wilderness is addressed in the previous response statements.

MONITORING

After studying Table III-2 "Trailhead Recreation Use," it appears that the data listed at trailheads is inaccurate. Perhaps a more obvious and accurate system of trail registry needs to be devised.

FS Response - As the heading for the table indicates, those figures are estimations. They are based on voluntary registration by visitors at trailheads, sample counts with trail counters, and observations. We recognize the potential for inaccuracy, but is the best information available at this time. We are

continuing to improve our estimation of recreation use and as we do so the trailhead use numbers will be revised as needed.

The monitoring guidelines are not specific - How will the Forest Service monitor use of wilderness? The summary fails to disclose where and when the Forest Service will do this monitoring, or what the agency will do with the results of the monitoring.

FS Response - We are currently using, and will continue to use, several methods of monitoring use. Wilderness patrols, monitoring crews, other agency employees, and volunteers collect information within these areas during the season of use about encounters, campsite density and condition, dogs under control and other information. We also gather information through the use of trail counters, visitor surveys, and visitor registration. The results of the monitoring will be compiled and evaluated, then compared to the standards and guidelines set within this document. If standards or guidelines are exceeded, management actions will be taken. Monitoring guidelines that are specified in this document are some of the most specific that the Forest Service has used in monitoring wilderness conditions.

PRIVATE PROPERTY ADJACENT TO WILDERNESS

Concerned regarding private property adjacent to Wilderness. ". . .a downdraft wind felled and splintered wide acres of timber both up in true wilderness and also next to cabin property . . .sets up extreme fire hazard . . .We wish to have prescribed fire directives more clearly articulated to provide a 'buffer zone' and planned protection for private land. Are clear directives established for this concern?"

FS Response - Forest Service policy includes direction to "reduce, to an acceptable level, the risks and consequences of wildfire within wilderness or escaping from wilderness" and that "no fire may be ignited or allowed to burn without documented, pre-planned, specified conditions." The San Juan - Rio Grande Prescribed Fire Plan, released in April, 1997, summarizes precautions to be taken to minimize risk of active fire to the public, on page 30.

TRAIL MAINTENANCE AND SIGNING

From an efficient use of funds and manpower standpoint, the use of mechanical equipment should be permitted in wilderness areas for maintenance purposes.

FS Response - According to the Wilderness Act of 1964, the use of motorized equipment and mechanical transport is not permitted within Wilderness, except as necessary to meet the minimum requirements for the administration of the area as wilderness (Section 4(c), P.L. 88-577). Forest Service Policy regarding the use of motorized equipment for administrative purposes is found in FSM 2326.

In designation of the Piedra Area, the Colorado Wilderness Act generally prohibits the use of motorized and mechanized travel, but not the use of other mechanical or motorized equipment such as chain saws.

CAPACITY

The commercial use capacity should be analyzed together with this EA - not in a separate analysis, later this year. The results of the Recreation Use Capacity analysis need to be part of this EA.

FS Response - A recreation use capacity study was completed in October of 1997 for the entire San Juan National Forest. This analysis was tiered to the existing Forest Plan direction. It is available for review at any San Juan National Forest office. The Wilderness amendment will affect capacity because of the changes in Management Area (MA) allocations which capacity is based on. The EA discloses that the more acres that are allocated to Pristine and Primitive MAs, the lower the recreation capacity will be. The EA also describes which recreation-use compartments are at, over or below capacity (Map E, Pg. II-41). Capacity is an ever-changing baseline as new information is found and monitoring results are developed. The Forest will verify or amend capacity numbers after reviewing monitoring results on an annual or biannual basis.

The SJ-RG National Forest is proposing Alternative C. This alternative suggests that there are no new opportunities for commercial use. This is in conflict with the summary and the analysis suggested on page II-35.

The concern is that outfitters will once again be cut somehow by this capacity.

FS Response – Alternative C does not preclude the issuance of outfitter-guide permits for new opportunities. Alternative C does define standards and guidelines that may limit the amount of commercial use in the future. The Recreation Use Capacity Analysis and Outfitter Guide Allocation document is the best reference for determining what levels of commercial use will be available in the future. Some areas within Wilderness have available capacity. In places where additional capacity is available they may be held in reserve for existing outfitter and guides to redistribute use from areas that are already over capacity. Other areas may be available for short term or Institutional outfitting and guiding which is showing a high growth rate on the Forest. Any need for limits on recreation use apply to both commercial use and public use. The outfitting industry will not be singled out to bear all the burden of any limitations.

MANAGEMENT AREA PRESCRIPTIONS

South San Juan: . . .The two main trailheads in the region of the wilderness, V-Rock and Navajo Peak, receive light recreational use in an amount only one-half or one-third of the Fish Creek Trailhead. . . .both for consistency's sake and to better reflect the wild nature of the V-Rock area, we recommend that the prescription for this area be changed to 1.11, Pristine.

Piedra: . . .The Devil Mountain portion in the southeast corner of the area has no internal trails and the primary access trailhead, Middle Mountain, is a lightly used access point. . . .the area between Davis Creek and Coldwater Creek is without trails and is essentially unused by visitors except perhaps during hunting season. . . .we suggest changing the proposed management area prescriptions for the Piedra to those defined by Alt. D.

FS Response - The areas described are very accessible to cross-country travel, have numerous established camps, and receive substantial use during hunting season. To maintain the integrity of the Pristine Management Area this amount of use and the existence of established camps would not be allowed.

Weminuche: We urge that the West Needles be reassigned to the Pristine category.

FS Response - Visitors to the West Needles area are within sight or sound of Highway 550, therefore do not meet the criteria of *solitude* in the definition of pristine. It will be protected from increased use by the topography of the area and the lack of accessibility for most of the area.

"The infrastructure of Primitive Wilderness seems more appropriate than Pristine Wilderness [for area of South San Juan Wilderness adjacent to private property] for maintenance and reconstruction of these trails as well as minimum signing."

FS Response - There are no system trails (Forest Development Trails) in the area described in this comment. These routes are considered to be cross-country routes and are neither maintained nor signed.

HORSE USE

We feel that horses in the wilderness should be phased out, with an exception for disabled people who can't walk.

FS Response - Horse use within wilderness has been a traditional and allowable use prior to the inception of the Wilderness Act. The Wilderness Act does not identify horse use as a non-conforming use of wilderness. The Plan Amendment does identify the impact of horse/stock use on wilderness resources and identifies standards and guidelines for the protection of those resources. Management actions are identified on Page II-46 that would be taken if recreational-stock use standards and guidelines are not met.

Writer does not want a prohibition of camping at the Rainbow Hot Springs.

FS Response - We are not proposing the closure of the area to camping. Camping will be restricted to designated sites and campfires not allowed. The area is receiving concentrated heavy use which is compacting soils, removing vegetation from the area and reducing the amount of down and dead material. These restrictions are proposed to provide for continued recreation use of the area while maintaining wilderness conditions.

Writer is concerned that the EA dealt solely with summer use and does not address overcrowding during rifle hunting seasons.

FS Response - Standards and guidelines which are disclosed in the EA are meant to apply to all seasons. We agree that crowding conditions can occur in fall as well as in summer and monitoring will continue through both of these seasons to determine if standards and desired conditions are being met.

Writer felt that the application of four classifications of management areas was too many (Semi-Primitive, Primitive, Pristine and subclass Pristine 1.1(a)).

FS Response - This issue was brought up during the Interdisciplinary Team discussions on allocation of MAs. The team looked at an alternative of developing just two classes within wilderness and this is presented in the EA as Alternative D. Because of the varied conditions that exist in wilderness due to recreation-use levels and facilities (usually trails/bridges) the team opted to go with the four classes in the selected alternative to allow a higher level of use at trailheads and some destination areas while providing a more pristine experience in areas off of system trails.

A statement is made on page I-7 suggesting that "Significant economic effects, either positive or negative, are not likely." I disagree with this statement.

FS Response - We also agree with the writer and have deleted this statement from the effects statement of the Proposed Action.

Natural reproduction should be encouraged, however, I believe that the fisheries should be maintained. If folks have a problem with fish in the streams, then they do not have to fish!

FS Response - The Forest Service agrees that fisheries should be maintained, but not at the cost of introducing species that are not indigenous to the wilderness area that they are located in. The Forest Service and the Colorado Division of Wildlife will continue to work cooperatively together to maintain natural populations of Colorado and Rio Grande River Cutthroat and to use these species in areas where stocking is necessary.

...the surveys, surveyors and the data collected was skewed against the horse user.

FS Response - Many of the surveys were taken in areas that have very little horse use which could account for the low amount of respondents that rode horses. Surveys that we have had available at the trailhead register boxes are usually picked up primarily by foot travelers as we have had a very low compliance with horse users registering. We understand the limitations of the sampling and use the data with that understanding.

The recommendation of Alternative C by the Forest is, in my opinion, a contradiction of the tables, charts and data presented to the study group, the outfitters, and in the EA.

FS Response - Many of the tables and charts have been revised in the final version to better reflect the writers concerns to more accurately display the effects of alternative C.

...with increased regulation, how is the enforcement going to take place?

FS Response - This is always a concern that the Forest Service has in implementing management direction. Our primary objective is to inform and educate the wilderness user of methods that can be used to minimize impacts. Volunteer organizations and partnerships are being used with more frequency to help us get the messages out. Enforcement is necessary in some instances and the number of enforcement personnel will not probably increase in the near future.

Voluntary compliance with regulations combined with the education message of why regulations are necessary will be our main effort.

GROUP SIZE

Our primary objection is the group size. We would like to see a group size of 35 of which the people could not exceed 15.

FS Response - Surveys and research have shown repeatedly that the larger the group size the greater the potential for physical, biological and social impacts. The Forest has selected an alternative that we feel best meets the needs for the protection of the wilderness resource while providing for the economic stability of the outfitting industry. Increases in group size to accommodate more stock runs counter to the goal of improving wilderness conditions as directed in the selected alternative.

Regarding group size and the effects on guided river trips: "Limiting the trip size to 15 rather than 25 has adverse effects on both the safety of the trip and economics of the trip. It is important to realize that one cannot separate the economics from the safety and service of the trip. It is precisely the ability to make a profit on a trip that allows the outfitter to use the best equipment and guides for the trip. Safety is even more tangibly impacted when you decrease the amount of boats on a trip, thereby reducing the margin for error.

FS Response - It is not uncommon for there to be a group size limit on rivers comparable to the Piedra River in difficulty and remoteness. While there is a correlation between safety and number of craft, the correlation between numbers of people and safety is less clear. As long as there are enough people to provide more than one boat, there appears to be no further substantial relationship between group size and safety. The River Information Digest, Western Region, (produced by the American River Management Society) includes basic information about those rivers which provide whitewater-boating opportunities in the Western U.S. with segments over ten miles in length or which have been designated as a component of a federal, state, or local Wild and Scenic River System. Of the rivers listed in the Digest, there are twenty rivers which have a difficulty classification of III to V+ and have a group size of 16 or less. The range of group size limits is between 4 and 16. Nine have a group size limit of 15. Six have group size limits that are less than 15.

Although the writer has expressed a concern about the economic effects of the proposed group size of 15, outfitters on the Piedra and other rivers routinely take a smaller number of people on guided trips. Reported use by outfitters on the Piedra for 1997, show one trip with 14 in the group as the largest group size on a trip. The most common group size reported was 8.

The Forest recognizes the unique nature of the Piedra River and the concerns for safety. We have decided to amend the group size regulations described in the Initial EA to allow for a maximum of 20 people engaged in river running activities.

Wilderness Management Direction

Amendment to the Land and Resource Management Plans

Decision Notice

San Juan-Rio Grande National Forests Wilderness Management Direction

Decision Notice

Introduction

An Environmental Analysis (EA) that discusses alternatives for management of wilderness areas and the Piedra Area within the San Juan-Rio Grande National Forests (SJ-RG NF's) is available for public review in the Forest Supervisor's Office at 701 Camino Del Rio in Durango, Colorado and at 1803 W. Highway 160 in Monte Vista, Colorado. This Decision Notice documents the Deciding Officer's decisions pertaining to the proposed action identified in the EA.

Background

There are five congressionally designated Wilderness areas on the SJ-RG NF's as well as the Piedra Area which is a congressionally designated area to be managed for its wilderness character and potential for inclusion in the National Wilderness Preservation System. The SJ-RG NF's are designated as the lead Forests for implementing management direction for the Weminuche and South San Juan Wilderness Areas and the Piedra Area. Within this document, ``wilderness" includes all three areas and ``Wilderness" (capitalized) refers to congressionally designated Wilderness. Other Wilderness areas on the SJ-RG NFs are the Lizard Head, La Garita, and Sangre de Cristo. The lead Forests for these units are the Grand Mesa, Uncompahgre and Gunnison NFs (for the Lizard Head and La Garita) and the Pike and San Isabel NFs (Sangre de Cristo).

The **Weminuche Wilderness**, the largest in Colorado, is 499,771 acres in size (334,776 acres on the San Juan National Forest [SJNF] and 164,995 acres on the Rio Grande National Forest [RGNF]). Stretching across the Continental Divide from Stony Pass on the North to Wolf Creek Pass on the South, the Weminuche contains three summits over 14,000 feet in elevation and many more over 13,000 feet. Elevations range from 7,910 to 14,083 feet. It is an area of rugged mountain beauty, with spectacular peaks, broad glacial valleys, and pristine lakes. The Weminuche is one of the most visited Wilderness areas in Colorado and is popular with both hiking and horseback visitors. There are over 490 miles of trail; two trailheads are reached via the Durango and Silverton Narrow Gauge Railroad, which offers a unique entry to the wilderness environment.

The **South San Juan Wilderness** in south-central Colorado encompasses the eastern extent of the San Juan Mountain range, including a segment of the Continental Divide. The South San Juan contains 164,563 acres (75,640 acres on the SJNF and 88,923 on the RGNF). The South San Juan includes a variety of bottomlands, canyons, and glaciated uplands. Trademarks of the

area are high open parks and remote landscapes. Visitor use is higher on the Rio Grande portion of the Wilderness, but is lower overall than in other nearby Wilderness.

The **Lizard Head Wilderness** situated in the far western end of the San Juan Mountains and comprised of most of the San Miguel range, is 41,496 acres in size and contains approximately 278 acres of private land. Approximately half of the wilderness area is located on the Uncompahgre portion of the Grand Mesa, Uncompahgre, Gunnsion National Forests and the other half is located on the SJ-RG NF's. The area contains 3 of Coloardo's 54 fourteen thousand foot peaks and is popular with hikers, horse users and mountain climbers.

The **Sangre de Cristo Wilderness** was designated in 1993 with the passage of the Colorado Wilderness Act. The 218,922 acre wilderness is located on the Pike San Isabel National Forests and the SJ-RG NF's. Approximately 120,080 acres are located within the SJ-RG NF's. This wilderness encompasses the Sangre de Christo Range, a long and narrow range in southern Colorado. Four 14,000 foot peaks are located in this wilderness area.

The **La Garita Wilderness** is located in south-central Colorado and encompasses the La Gartia Mountains. The 129,626 acre wilderness was first designated in the 1964 Wilderness Act. Additional acres was added in 1980 by Public Law 96-560 and in 1993 with the Colorado Wilderness Act. Approximately 50,180 acres of the wilderness are located on the SJ-RG NF's.

The **Piedra Area** is not designated as Wilderness, but is a Congressionally designated area to be managed so as to retain its existing wilderness character and potential for inclusion in the National Wilderness Preservation System. The Piedra Area is 60,387 acres. It is lower in elevation than Wilderness areas on the Forest and encompasses large tracts of ponderosa pine communities, which are not as common in higher elevation Wilderness areas on either Forest.

Existing Direction

Appendix 3 of the EA displays the principal laws, regulations and policies governing National Forest Wilderness. The primary legislation specific to Wilderness is the Wilderness Act of 1964(P.L. 88-577).

The Land and Resource Management Plans(LRMP's) for the San Juan and Rio Grande National Forests also contain direction for management of Wilderness areas.

Purpose and Need

Forest Plan direction for wilderness was developed in 1985 and 1993 for the SJ-RG Nfs, respectively. The RGNF revised its plan in 1996, but limited the scope of changes to their Wilderness management direction, due to the ongoing planning efforts documented in this amendment.

During the intervening decade since the original plans were published, Colorado has become one of the fastest growing states in the nation. The significance of southwest Colorado as an outdoor mecca has increased, as have the amount and type of visitation to backcountry areas. The Weminuche, South San Juan, and Piedra Area together comprise the largest block of designated Wilderness and roadless area in Colorado. The Weminuche is one of the most visited Wilderness areas in the state. The increase in the amount and types of recreation use has affected wilderness in ways that were not anticipated in the original plans. There is a need to review existing LRMP direction for management of recreation use, to address changes in recreational use patterns and to preserve the wilderness character of these areas.

Since development of the original Forest Plans for the SJNF and RGNF, additional research and information have become available to guide wilderness managers in preserving the wilderness condition. Limits of Acceptable Change (LAC) is a planning tool that enables wilderness managers to define acceptable wilderness conditions and then develop standards, guidelines, indicators, and management actions to meet acceptable conditions.

Public Involvement

Public participation in this planning process began when the Weminuche Wilderness Study Group formed in September of 1993. The study group process allowed interested citizens to participate in monthly study sessions over a period of two years, to learn about wilderness conditions and comment on various aspects of wilderness management. The study group process brought together various interest groups and individuals. The meetings were held throughout the year, except during the summer months, and were open to anyone. Suggestions from the study group process represented a range of opinions and ideas. Although the group concentrated on the Weminuche Wilderness and Piedra Area, the ideas developed by the group have direct application to wilderness management throughout both Forests. This input was used to develop the issues and alternatives presented in this document.

In February of 1996, a formal scoping document was sent to over 800 people and organizations, requesting comments on the proposed amendment to wilderness management direction. The Forest received 262 written responses to this request, as well as petitions signed by 320 individuals. Appendix A summarizes these responses. Input from the scoping document was also used in developing alternatives.

Public open houses were held in the communities of La Jara, Durango, Creede, and Pagosa Springs, Colorado, as well as in Chama, New Mexico, to obtain input for the proposed Forest Plan amendment. Over 140 people attended these sessions.

In June of 1997 the initial Environmental Assessment for the Wilderness amendment was issued. Approximately 150 copies of the EA were sent to individuals and organizations that had requested copies or that had provided input into the document. Comments were received from 35 individuals and organizations. Input was accepted through December of 1997.

Decision Needed

The decision needed is to determine which set of actions and directions best meets the intent of the Wilderness Act for management of wilderness resources on the Forests. The Decision Maker is charged with meeting the intent of the Act while provide opportunities for Wilderness dependent activities to occur.

The proposed action, by clarifying management direction, falls within the Forest Supervisor's authority as described in FSM 1922.04b and FSM 1922.51. As the Deciding Official for this direction, the Forest Supervisor may choose to:

- Select the proposed action as described in the EA;
- Modify the proposed action;
- Select another alternative; or,
- Select the no action alternative and defer changes in direction to a later date.

Decision

It is my decision to implement Alternative C and the associated standards, guidelines and management actions described in the Wilderness Management Direction Environmental Assessment for the SJ-RG NF's.

This decision amends the Forest Land and Management Resource Plans as follows:

- Adds wilderness management goals to FLMP goals
- Changes Management Area definitions and locations
- Adds wilderness management standards and guidelines for management areas and forest-wide.
- Defines thresholds and possible management actions within wilderness when thresholds are exceeded.
- Adds wilderness monitoring requirements
- Adds wilderness management area map to FLMP's.

Alternative C will improve wilderness qualities while maintaining recreation opportunities. To allow for the improvement of wilderness resource conditions, Alternative C increases the number of acres in the Pristine and Primitive MA's.

This alternative sets standards and guidelines for recreation use, which when implemented may result in a decrease in existing use in areas where standards are exceeded.

For the Weminuche and South San Juan Wilderness Areas and the Piedra Area, this alternative will define and relocate (spatially) Wilderness management areas (MA's).

Specific wilderness management direction will be described for all wilderness areas on the SJ-RG NF's. Direction for MA's are amended to incorporate new standards and guidelines to better measure, monitor and maintain wilderness conditions.

MA locations for the La Garita and Sangre de Cristo Wilderness were defined in the recently approved Rio Grande National Forest Land Management Plan. For the Lizard Head Wilderness, the current Forest Plan MA locations will remain the same however the definitions will be changed to the new equivalents which are described in the Environmental assessment.

Within this alternative, a subclass of the Pristine MA is defined as 1.11a. This subclass defines some high elevation basins within the Weminuche Wilderness that are destination areas and the user defined, non-system travel corridors leading to them. These areas would be managed as a Pristine MA, however to allow for higher use levels, the MA crowding standards are modified.

While the total number of people and stock within a group remains consistent with current direction of twenty-five (25) people and/or stock, this alternative reduces the total number of people allowed within a group to fifteen (15) for all Wilderness Areas on the SJ-RG NF's and the Piedra Area, except the Piedra River. For river running groups on the Piedra River the group size will be a maximum of twenty (20) people.

New camping restrictions will be implemented to prohibit overnight camping in the Twin Lakes Basin (Needle Creek Basin) and camping only in designated sites at Rainbow Hot Springs (Weminuche Wilderness) and Little Emerald and Emerald Lakes (Weminuche Wilderness).

Use of campfires will be prohibited in Vestal Basin (Weminuche Wilderness).

New regulations will be implemented to prohibit camping within 100 feet of water sources unless exceptions are justified by terrain or specific design. Dogs will be required to be under voice command and control at all times.

Other Alternatives Considered

Alternative A - No Action - Continue current management

Alternative A represents the current management direction found in the SJNF LRMP developed in 1983. The RGNF LRMP was revised in 1996 and contains Wilderness management direction for that Forest's Wilderness areas.

Current management direction would continue. Direction within the SJNF LRMP describes four MA's. The Transition MA is not contained within the Action Alternatives. The Transition MA specifies standards for wilderness portal areas that exceed standards and guidelines described in the Action Alternatives. The number of acres allocated to non-wilderness MA's would not change. Several areas now allocated as Wilderness as a result of the 1993 Colorado Wilderness Act, do not have Wilderness MA's assigned to them because current direction has never been amended.

Continuation of management under this alternative will allow for increased crowding, larger group sizes, and no change in restrictions.

Alternative B - Maintain Wilderness qualities while retaining recreation opportunities

Alternative B responds to issues raised regarding the amount of recreation use allowed within the wilderness. This alternative addresses the significant issues in two ways. First, the existing MA's are amended to clarify standards, guidelines, and indicators to allow wilderness qualities to be maintained. Second, the location and number of acres of MA's which favor higher densities of recreation use (generally, Primitive and Semi-Primitive), are emphasized more than the other action alternatives, to allow for expanded recreation opportunities. Some people would prefer to have fewer restrictions on the amount of recreation use allowed within Wilderness and the Piedra Area. This alternative would allow larger group sizes for both commercial and non-commercial activities. Of the Action Alternatives, this alternative allows for higher densities of recreation use.

Alternative D - Improve Wilderness qualities with emphasis on solitude and protecting unique ecosystems

This alternative seeks to move wilderness areas as a whole toward a more pristine condition by moving areas previously within Primitive or Semi-Primitive MA's to the Pristine MA. The intent is to reduce human influence to the maximum extent possible, by restoring conditions and providing outstanding opportunities for solitude throughout the areas analyzed. This alternative also amends existing MA's to incorporate new standards and guidelines to better measure, monitor, and maintain wilderness conditions. MA's within the Weminuche, South San Juan, and Piedra Area, are limited to Pristine and Primitive only. Group sizes are limited to no more than ten (10) people, with a total combination of people and stock not to exceed fifteen (15).

Basis and Reason for my Decision

The factors that lead me to select Alternative C are as follows:

A. Response to Issues and Concerns

Human Effects on Wilderness Ecosystems

There is a concern that the amount and types of human use that are occurring are influencing or disrupting the natural conditions and processes that take place within wilderness. Alternative C addresses this issue by developing desired conditions, and standards and indicators for recreation use which can be monitored to determine if desired conditions are being met. Alternative C best meets the need of providing for desirable levels of recreation use while protecting the wilderness resource. In addition Alternative C will provide for regulations that protect important wilderness resources such as riparian areas.

Habituation of black bears and mountain goats to humans is more prevalent and can be partially attributed to an increase in the number of visitors and to inadequate handling of food and trash by visitors. Alternative C will reduce the potential for habituation of goats by prohibiting camping in the Twin Lakes area where the mountain goat population has had the most human

contact. In addition the proposed management actions which reduce crowding and campsite densities should help the situation with black bears.

Stocking fish in high mountain lakes has long been a source of concern and controversy. The types of species being used for stocking and which lakes are stocked or not stocked are the major issues. The effects of non-indigenous species on natural ecosystems and processes and the impacts of additional recreation fishing pressure on high altitude lakes and streams contribute to the concern. Many lakes were barren (of fish species) prior to settlement. Now that stocking has occurred in these lakes, there is a concern as to how this has affected natural conditions. For many wilderness users, the opportunity to see and catch fish is an important part of their wilderness experience, and the loss of this opportunity would have a negative impact on their experience. Alternative C addresses this issue by reaffirming the need to cooperatively work with the Colorado Division of Wildlife to develop a joint stocking plan for wilderness lakes. Stocking of lakes within wilderness will be addressed on a case by case basis and where stocking is necessary will generally be done with native cutthroat species.

Exotic plant species, including noxious weeds, are increasing within the wilderness and competing with native species. Alternative C will provide for monitoring of populations of noxious weeds and recommends treatment alternatives.

Human Effects on Wilderness Experience Opportunities

The amount and types of recreation use that are occurring are affecting the kind of wilderness experience that some people want. Crowding, noise, user conflicts, impacted campsites and trails, trail and camp encounters, group size, and litter can all affect the wilderness visitor's experience. Alternative C will set standards for encounters on trails and at campsites. If standards are exceeded than appropriate management actions will take place as outlined in the environmental assessment.

Large groups, both commercial and non-commercial, have an adverse effect on some users experience. The amount, frequency, and location of large-group encounters have an impact on people's wilderness experience. Alternative C reduces existing group size that is presently allowable from 25 people to 15 people for all areas within wilderness except the Piedra River. River outfitters had expressed a concern that a reduced group size on the Piedra River could effect the safety of their operations. I have modified the original group size restriction to establish a group size of 20 for river running activities on the Piedra River to meet these concerns.

The amount and behavior of domestic dogs are concerns. Dogs that are not under control can harass wildlife, and noise from barking affects the wilderness experience of others. Alternative C will implement a regulation that requires dogs to be either on a leash or respond to voice commands.

The amount and type of regulations that wilderness visitors encounter during their trip are a concern to some. Many individuals feel that having to obtain a permit to visit a wilderness area would be an unnecessary restriction on their freedom to use and enjoy wilderness areas on the SJ-RG NFs. Alternative C does not require that a quota permit system be immediately implemented. Under the guidelines within this alternative a monitoring system will be put into place to determine the amount of use that is occuring within wilderness areas and what effects

this use is having on wilderness conditions. Thresholds are established which spell out as clearly as possible when more restrictive measures, such a permit system, would be necessary. It is my intent to use the least restrictive measures first to meet the standards and guidelines described in the plan. If more restrictive measures are needed they will be used only as thresholds are exceeded.

Recreational-Stock Effects on Wilderness Resource

Some people feel that recreational-stock use within wilderness significantly impacts wilderness conditions, including trails, campsites, riparian areas, and meadows. Native plants are being adversely affected by the amount of grazing that is occurring from recreational stock. My decision to select alternative C should result in improvements to native vegetation that is being grazed by recreational stock. Standards will be put in place that protect native plant species and riparian areas.

Recreational-stock use is common within wilderness areas on the SJ-RG NF's. Recreational stock is frequently used because of the large distances involved and because of the high incidence of horse ownership in the surrounding areas. Many stock users have expressed concern about restrictions on the use of stock, which they feel would adversely affect their way of experiencing the wilderness. Alternative C does not specifically restrict the use of recreational stock on any trails or areas within wilderness areas on the SJ-RG NF's. The alternative does, however, establish standards and guidelines for riparian areas and meadows which could result in the reduction or prohibition of recreational stock grazing or restraining within these areas.

Response to Management Goals

Goals for wilderness management were developed during the creation of the amendment. The goals were developed through input from interested publics, Forest Service personnel and from the Wilderness Act. The SJ-RG NFs will use these goals in developing management direction for wilderness areas on the Forests:

- Manage wilderness so that changes in the ecosystem are primarily a consequence of natural forces, or within a range of natural variability and succession.
- Maintain wilderness in a natural and untrammeled condition while accommodating human uses.
- Provide outstanding opportunities for solitude and a primitive and unconfined recreation experience.
- Sustain wilderness as a place of peace, solitude and sanctuary.
- Preserve natural resources for their inherent ecosystem and bio logical diversity values and for scientific research purposes.
- Provide the opportunity for challenge and risk.

- Minimize long-term impacts caused by human uses.
- Sustain natural and indigenous life forms.
- Protect and preserve historic and cultural resources found in wilderness.

I determined that Alternative C best meets the intent of all of the goals outlined above. While some alternatives may meet an individual goal better than others, Alternative C represents the best opportunity we have to meet the interrelated intent of the goals described. With the implementation of Alternative C wilderness conditions will be improved and recreation use will continue at a level that will protect wilderness resources and provide outstanding opportunities for an unconfined recreation experience.

Decisions Not Included

Not all decision related to wilderness management are contained within this Decision Notice. Examples of other site-specific decisions that are or will be addressed in other documents include:

- Trail reconstruction and construction
- Recreation capacity
- Special use permit allocations
- Range allotment management decisions

Tiering

The Regional Forester approved the FLMP's for both the San Juan and Rio Grande National Forests. These documents discuss wilderness land allocations and other direction related to wilderness management. When direction is not amended through this decision, the FLMP's still provides the basis for overall wilderness management on both Forests. The FLMP's, as amended, and their respective EIS's are both incorporated here by reference.

Findings Required by Laws and Regulations

This decision complies with the San Juan and Rio Grande National Forest Land and Resource Management Plans and with the National Forest Management Act. This act requires documentation of the following specific findings:

Consistency with Forest Plans

The FLMP's provide general guidance for Wilderness use and management. This amendment clarifies and provides more specific direction for management of wilderness. This decision amends the existing wilderness direction found in the Rio Grande NF LRMP and the San Juan NF LRMP.

Consistency with Other Laws and Regulations

Appendix III of the EA displays the principal laws, regulations and polices governing National Forest Wilderness. The primary legislation specific to Wildereness is the Wilderness Act of 1964 (P.L. 88-577). This amendment is in compliance with the laws and regulations.

Finding of No Significant Impact

After reviewing the Environmental Assessment, I have concluded that the alternatives will not significantly impact the biological and physical components of the human environment. Thus, an Environmental Impact Statement will not be prepared. The content of the actions selected relative to the nation, the region, and affected local interests indicates that:

Evaluation of Significance.

Impacts that may be both beneficial and adverse

There will be beneficial impacts. This amendment will improve wilderness conditions for all wilderness areas on the SJ-RG NF's. Desired conditions have been developed which help determine what kind of wilderness conditions that we and the public desire for the future. Implementation of management actions described in the EA will help maintain standards and guidelines.

There will be adverse impacts to some users of wilderness if limitations or regulations are needed to help meet wilderness standards described in the EA. These limitations could result in lower recreational use in some areas and the movement of some commercial outfitter-guide services from areas that exceed crowding standards or other recreational use standards. Some stock users may not be able to graze in areas that they have previously used because of impacts to vegetation from grazing.

The degree to which the proposed action affects public health and safety

This amendment will not affect the environment in a manner that is harmful to public health or safety. Certain management actions may actually improve public safety from a standpoint of reducing bear-human contacts, improved sanitation measures, and reduced opportunities for conflict.

Unique characteristics of the geographic area such as proximity to cultural resources, scenic areas, wild and scenic river corridors and critical ecological areas.

This amendment does not address Wild and Scenic River Corridors. Because of the management direction to preserve wilderness resources the actions described in this amendment will not adversely affect scenic areas, cultural resources or critical ecological areas.

The degree to which the effects on the quality of the human environment are likely to be highly controversial

This amendment process has incorporated public involvement from the beginning stages. While some of the proposed management actions may be controversial if implemented, the effects of implementation, whether adverse or beneficial, to the resources are not. No substantial scientific information was introduced during the lengthy scoping period that would demonstrate that any of the effects disclosed are highly controversial.

The degree to which possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The selected alternative will not affect the human environment in ways that are highly uncertain or involve unique or unknown risks. We believe the environmental risks are known. The ID team, relying on public involvement, scientific research and past experience made reasoned predictions on effects.

The degree which the action may establish a precedent for future actions with significant effects or represents a decision in principal about future considerations.

This decision does not preclude or set a precedent for the consideration of other future management activities other than those described in the decision. We will analyze other future actions within the area when proposed.

Whether the action is related to other actions with insignificant but cumulatively significant impacts.

We have considered cumulative, direct and indirect effects of the alternatives and there is no indication of significant (40 CFR 1508.27) adverse effects to the environment.

The degree to which the action may adversely affect districts, sites, highways, structures or objects that are eligible for listing in the National Register of Historic Places or may cause a loss of scientific, cultural or historic resources.

This amendment does not propose any management actions that will adversely affect districts, sites, highways, structures or objects that are eligible for listing in the National Register for Historic Places. This amendment meets the intent of the Wilderness Act to preserve and protect historic structures and sites.

The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

The standards, guidelines and management actions contained in the environmental assessment are designed to protect and preserve species that are covered under the Endangered Species Act. Actions that are proposed are all designed to reduce or eliminate potential adverse effects on Endangered Species.

Whether the action threatens a violation of Federal, State or local law or requirements imposed for the protection of the environment.

The selected alternative meets Federal, State and local laws for air, water, cultural resources and threatened and endangered species and meets the National Environmental Policy Act disclosure requirements.

Implementation

This decision will not be implemented sooner than 30 days after the legal notice appears in the local newspapers of record. The time needed to bring all activities into compliance with the direction contained in this decision will vary. Regulations will need to be written, information developed and signing provided to begin implementation.

As a long-range management guide for wilderness the FLMP amendment is a programmatic document and does not make site-specific project decisions or set specific resource outputs. During implementation, when various projects occur, they will be performed in compliance with the National Environmental Policy Act of 1969. Many of these actions will be tiered to the FLMP EIS's and this EA pursuant to 40 CFR 1508.28.

Appeal Rights

This decision is subject to appeal pursuant to 36 CFR 217. Any written notice of appeal must be fully consistent with 36 CFR 217.9, ``Content of a Notice of Appeal", including the reasons for appeal. The Notice of Appeal must be postmarked or received by the Appeal Deciding Officer, Lyle Laverty, Regional Forester, Rocky Mountain Region, no later than 45 days after the date of the legal notice of this decision in the Durango Herald, a newspaper published in Durango, La Plata County, Colorado.

The Regional Forester approves any significant amendments to the FLMP's while the Forest Supervisor may approve non-significant amendments. My determination of non-significance is appealable under 36 CFR 217.

Appeals may be submitted to:

Lyle Laverty
USDA Forest Service
Rocky Mountain Region
P.O. Box 25127
Lakewood, CO 80225-0127

Appellants must submit two copies of a Notice of Appeal when the Notice is more than ten pages in length. Any appeal of my decision does not halt implementation of this direction. Requests to stay the approval of this Amendment, prepared pursuant to 36 CFR Part 217.9, shall not be granted. However, where a project or activity would be implemented before an appeal decision could be issued, the Regional Forester will consider written requests to stay the implementation of that project pending completion of the review of the Amendment appeal.

The Wilderness Direction Amendment may be implemented 30 days after notification by legal notice in the Durango Herald of this decision.

For further information contact Jim Upchurch, San Juan-Rio Grande NF's, 701 Camino Del Rio, Durango, CO 81301, (970) 385-1209.

/s/ James B. Webb *8/3/1998*

JAMES B. WEBB Date

Forest Supervisor

San Juan-Rio Grande National Forests