

Recreation Use Analysis And Outfitter-Guide Need Determination

San Juan National Forest
October 1997

Part I – Recreation Use Analysis

INTRODUCTION

The recreational use of our public lands constitutes an enduring legacy to the American public. Public lands in southwest Colorado are the major land base for most outdoor recreation activities in the area. Over the past decade the population of Colorado has steadily climbed, with the state now being one of the fastest growing in the country. This growth, coupled with an increase in tourism, has caused land managers to consider at what point the rise in use creates a need to establish an upper limit. Land managers are now asking at what point does continued or expanded recreation use cause the experiences that are being sought to be diminished, and at what point does recreation use cause unacceptable effects on natural resources? This document will address the determination of upper limits of recreation use throughout the San Juan National Forest (SJNF).

While the San Juan and Rio Grande National Forests are now managed as one Forest, the Rio Grande completed their capacity allocation study along with their Forest Plan this past winter, and have already lifted their moratorium and issued a prospectus for new permits. This document deals with use only on the San Juan NF.

Limiting use may not be the only, or even the best, strategy for dealing with impacts caused by recreation. Other strategies - including education, information, user fees, and marketing - can be used to reduce these impacts. Research shows that use level is only one factor influencing the amount of impact caused by recreation in wildland and backcountry areas (Cole, 1987). If we focus on numbers and not, for example, on user behavior, than maintaining or reducing current use levels may not have any positive effect.

Although not the only factor, setting an upper or optimal use limit seems to be a strategy that makes sense in the long term. This does not mean that recreation use will immediately be rationed. For the most part this is a long-term look at what the desired future condition is in terms of amounts and types of use, and how we can maximize the recreation potential of the SJNF while protecting the resources we are entrusted to manage.

While the general public accounts for most of the recreational use on the SJNF, guides, outfitters, educational institutions, and organizations also provide public services that are essential to the use and enjoyment of the SJNF by many people. The Forest Service recognizes the value of these recreation service partners in achieving management goals such as providing access to those who

might not otherwise be able to use the Forest, offering interpretation and education opportunities, and helping those who lack specialized skills. Commercial recreation use or outfitter-guide use is allowed on National Forests through the issuance of a special-use permit. These permits allow the operator to take a prescribed number of visits and clients within an identified area. The number of applications for conducting outfitter-guide activities on the San Juan - Rio Grande National Forests has dramatically increased within the past few years. To allow land managers time to complete an analysis of recreation use and determine how many and what types of commercial uses are appropriate, a moratorium on the issuance of any new permits was established in October of 1994.

This document will effectively end the Forestwide moratorium, by establishing an allocation for commercial recreation services on the SJNF. In some areas where current use is determined to be at or above capacity, the moratorium will in effect be continued. Where additional capacity is determined to be available for certain types of commercial services, and a need for these services is identified, prospectuses will be issued to advertise for competitive interest in obtaining special-use permits.

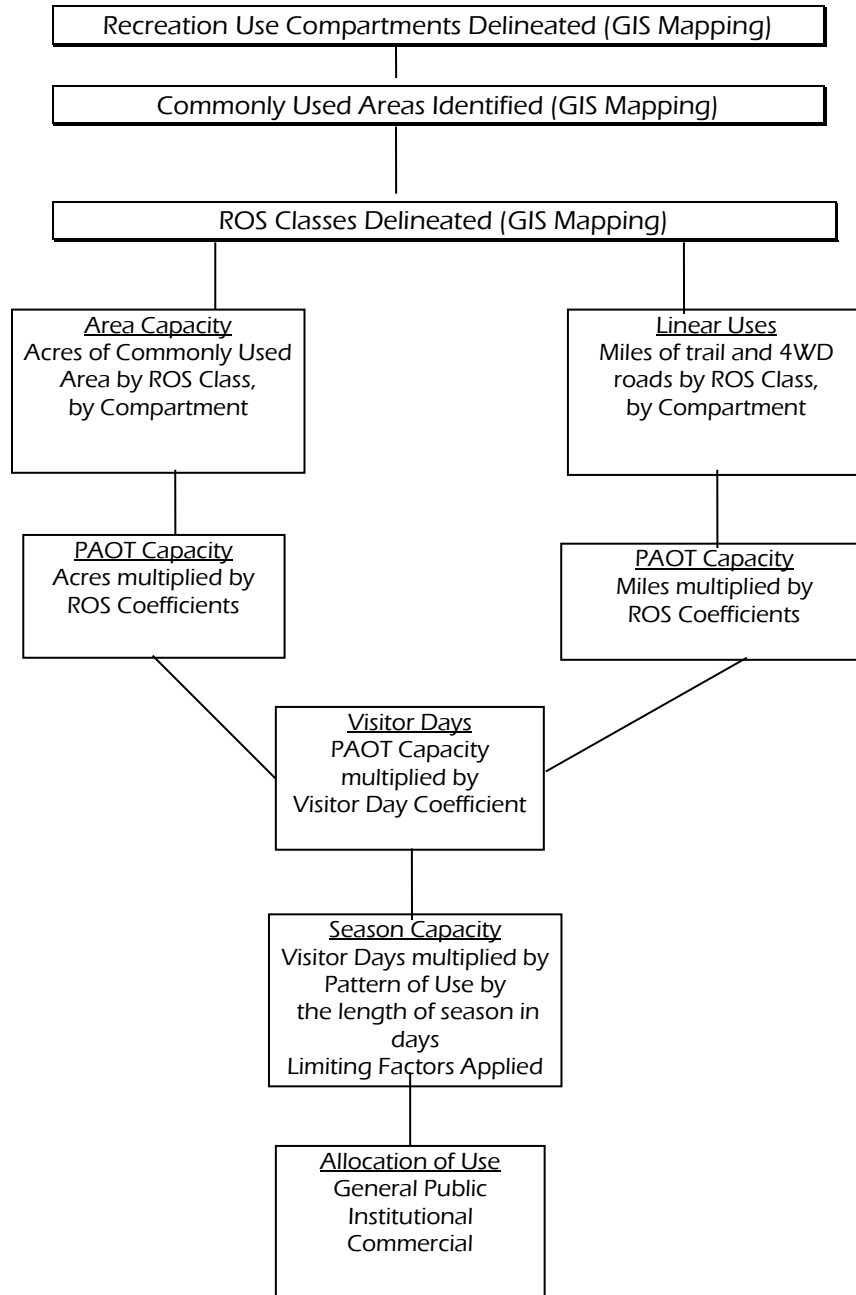
STRATEGY

In the 1970s, research centered on the development of a "carrying capacity" that defined the amount of use a portion of land was capable of withstanding. Efforts centered on determining the carrying capacity primarily in terms of ecological and physical impacts on the land. Further research found that recreation use could impact not only the physical characteristics of the landscape, but also the social recreation experience of the visitor. Recent surveys show that social needs play an increasing role in determining capacity. These social needs include uncrowded conditions, solitude, and reduced conflicts between different user groups.

Today the debate continues on various methods to determine the optimal carrying capacity. In reality there are no simple answers to the complex questions that surround this issue. Capacity is ultimately a judgment based on the best information available. The end product is not an absolute truth, but rather a constantly evolving determination. The Forest will use a method that establishes a carrying-capacity number or upper limit that will be tempered with an established monitoring program, based on defined standards and indicators developed through the Limits of Acceptable Change (LAC) process.

ANALYSIS PROCESS

A process for determining capacity was developed based on information contained in the SJNF Land and Resource Management Plan, the Forest Service Recreation Opportunity Spectrum (ROS) planning guide and the Limits of Acceptable Change (LAC) planning process. Recreation staff at the Forest and Ranger District levels formed a team to take information from these publications and develop a process that can be consistently applied across the Forest. The following steps outline the process that was used.



CAPACITY DETERMINATION (Methodology)

The components of the recreation use analysis are described in this section. A summary of the capacity analysis is contained in Appendix A.

Recreation Use Compartments

The land basis for recreation use analysis is the recreation use compartment. The Forest has been divided into 90 compartments (see Map 1). These compartments are generally delineated along topographic or watershed boundaries, and define typical use patterns. Compartments vary in size, depending on the use patterns, topography, and amount of recreation use that occurs. Compartments are named to give a geographic tie to the area where they are located.

Commonly Used Areas

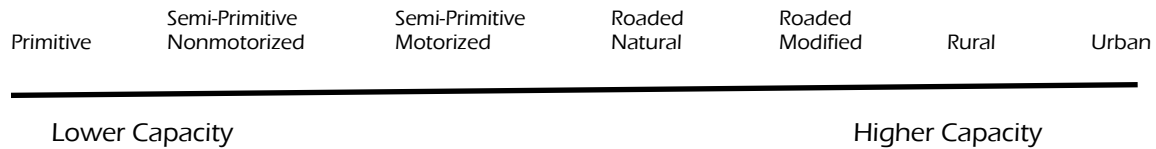
Visitors do not commonly use all land areas. While it may be difficult to find an area where someone has not traipsed over the countryside, generally people will travel along corridors where trails or roads are established, set up camp in areas where flat ground is available, and stay off of steep slopes. To approximate recreation use patterns, a computer model was developed to identify areas on the Forest where steep ground (over 40% slope) exists. Areas less than 40% slope are classified as Commonly Used Areas. Other areas classified as Commonly Used included climbing routes, which are usually over 40% slope but have established use patterns.

An analysis of this scope and magnitude is possible through the use of Geographic Information Systems (GIS) databases and mapping tools. These computerized systems allow large land areas to be analyzed through the use of layering and combining of maps, to develop the combinations with different characteristics. Map 2, shows how GIS was used to combine a map of Commonly Used Acres with a separate map showing Management Areas, to produce Commonly Used Acres by Management Area.

Recreation Opportunity Spectrum (ROS)

ROS is a planning tool that describes areas of land in terms of the recreation experience that can be expected. The ROS scale describes a range of experiences that can be found on a National Forest. The ROS classification Primitive has subsets within Wilderness that defines differing experiences and conditions. ROS classes are established during the LRMP planning process. The San Juan-Rio Grande National Forests have established three subset classes within Wilderness (Pristine, Primitive, and Semi-Primitive). These ROS subclasses are also described as Management Areas.

ROS Scale



People At One Time (PAOT)

Recreation capacities are developed in terms of PAOTs. PAOTs represent a snapshot in time, in which a calculated number of people are within a given area at a point in time. The maximum number of PAOTs that an area can sustain, based on social, physical, and biological conditions, becomes the PAOT capacity for an area.

Recreation Use Coefficients

Recreation use coefficients are derived from a mathematical equation that sets a minimum spacing between people, within an area or on a trail/road. Number of acres or miles, multiplied by an appropriate coefficient calculates a People At One Time (PAOT) capacity. Coefficients vary by the Recreation Opportunity Class (ROS) and by the type of terrain or vegetation patterns present. The closer to the Primitive end of the ROS scale the area is the lower the coefficient or PAOT capacity.

To develop capacities for each compartment, we used coefficients defined in the Forest LRMP, which described numbers of people per acre. With area coefficients, the number of acres is multiplied by the coefficient to calculate PAOTs. Because recreation use does not occur in a regulated or consistent pattern, these capacities are used only as a starting point. The following table shows the range of coefficients used in the analysis. In some cases where there was a mixture of vegetative types within a compartment, a coefficient was used that was a weighted average of the appropriate coefficients.

Table I-1. Area Coefficients – People At One Time (PAOT) per Thousand Acres

ROS Classification	Alpine/Riparian	Open Meadows, Rock Area	Interspersed Forest Openings	Forested
Pristine	1	2	3	7
Pristine (1.1 1a)*	2	4	10	15
Primitive	2	5	10	25
Semi-Primitive (Non-motorized)	4	8	50	80
Semi-Primitive (Motorized)	4	8	20	40
Roaded Natural	40	80	1200	2500
Roaded Modified	40	80	1200	2500
Rural	500	800	5000	7500

**Special area within Weminuche Wilderness comprising small high-elevation lake basins that are destination areas.*

In some areas we found that area coefficients were not appropriate for determining capacities for specific types of uses such as 4WD touring, road hunting, fly fishing, day rides, etc. For these linear uses, we used coefficients developed for roads, trails, and other travel corridors as shown in Table I-2. With linear coefficients (road/trail) the coefficient is multiplied by the number of miles to calculate PAOTs.

Table I-2. Trail/Road Coefficients – People At One Time (PAOT) per Mile

ROS Classification	Alpine/Riparian	Open Meadows, Rock Area	Interspersed Forest Openings	Forested
Pristine	N/A	N/A	N/A	N/A
Primitive	.5	1	2	3
Semi-Primitive (Nonmotorized)	2	3	9	11
Semi-Primitive (Motorized)	2	3	9	11
Roaded Natural	2	3	9	11
Roaded Modified	2	3	9	11
Rural	2	3	9	11

Visitor Day Coefficient

PAOTs represent capacity at one point in time. Although useful for developing a capacity, the concept of PAOTs does not, in most cases, represent the total use within a given area for an average day. PAOTs are also difficult to monitor. The SJNF decided to adjust PAOT capacity to represent the total amount of use that a compartment could sustain in a day. For areas that experience a large proportion of day use, there is a turnover of people during the day. Some compartments also have a high amount of pass-through traffic, and thus the total amount of use during the day is higher than the PAOT capacity. For these areas, a visitor day coefficient is used to depict the average turnover rate of people within a compartment within an 8-hour period.

Pattern of Use

Establishing a maximum capacity for compartments - which would be sustained on a daily basis throughout the use season - would not be desirable, nor does it represent actual use patterns. To compensate for how use typically occurs on the SJNF, a coefficient was developed that account for a more desirable use pattern throughout the use season. Four categories of use patterns, representing (1) beginning of the season, (2) average, (3) high or weekend/holiday uses, and (4) end of season, were used to determine the coefficient. The days within the season of use were weighted by the four categories to determine a Pattern of Use coefficient. This coefficient varied by the length of season, and in some cases, on a compartment basis.

Example: Length of Season = 120 days

Beginning Season	= 40 days @ 50% of average use	= 20
Average Season	= 40 days @ 100% of average use	= 40
High Season	= 20 days @ 125% of average use	= 25
End of Season	= 20 days @ 75% of average use	= 15
	Total	100

100/120 day use season = .83 Pattern of Use coefficient

Length of Season

The average amount of days that visitors typically use a compartment is represented by the Length of Season. A separate Length of Season was determined for both summer and fall. Compartments that had high alpine terrain, where snows stayed late and came early, had an abbreviated Length of Season.

Seasonal Capacity Determination

Table I-3 displays the format used in determining seasonal capacities for each compartment. A separate table was used for summer and fall use. Seasonal capacity is shown in terms of the total number of visitor days available within a season.

Table I-3. Seasonal Capacity Calculation (Example)

ROS	Acres	Comm Used Acres	PAOT Coeff.	PAOT Capacity	Vis Day Coeff.	Total Visit Days	Pattern of Use	Length of Season	Seasonal Capacity
Pristine	500	200	.002	.4	1.0	.4	.76	120	36
Primitive	1000	700	.01	7.0	1.0	7.0	.76	120	638
Semi-Primitive	500	100	.05	5.0	1.2	6.0	.76	120	547
Total	2000	800		12.4		13.4			1221

Limiting Factors

The Seasonal Capacity is a starting point, and must be adjusted for limiting factors that may be present within a compartment. "Limiting factors" are those resource or social conditions that play a key role in defining the actual sustainable recreational-use levels. For example, an area that has limited campsites available will not be able to sustain more overnight visitors than what the campsites can accommodate. In areas with sensitive wildlife habitat, such as a peregrine falcon nesting site, use may be restricted or limited during certain times of the year.

The SJNF has also designed limiting factors to reflect how well standards developed with the Limits of Acceptable Change (LAC) process are being met. Capacity levels are not fixed and will fluctuate as conditions on the ground improve/deteriorate or social factors (such as encounter rates on trails and at campsites) meet or exceed guidelines. As monitoring data become available for campsite conditions, trail encounters, riparian conditions, etc., we will be able to make a more informed adjustment of capacity levels. Table I-4 shows an example of how limiting factors are applied to a seasonal capacity, to adjust for concerns over riparian trampling and a limited number of campsites.

Table I-4. Limiting Factors (Example)

Season	Seasonal Capacity	Sensitive Wildlife Habitat	Campsite Conditions	Trail & Road Impacts	Riparian Concerns	Campsite Density	Encounter Rate	Public Safety	Adjusted Capacity
Summer	1221	1.0	1.0	1.0	.95	.90	1.0	1.0	1038
Fall	500	1.0	1.0	1.0	.95	.90	1.0	1.0	425

Existing Recreation Use

The level of existing use was determined for both commercial and general public use on National Forest system lands. For general public use, estimates were developed through trailhead sampling to determine the level of use at trailheads. Since the capacity analysis is based on recreation use compartments, the use from trailheads was converted to compartment totals

through a modeling system. Table I-5 shows an example of estimating existing recreation use for a compartment.

Table I-5. Recreation Use - Existing (Example)

Compartment										
Trailhead	Trihd Use/ Day	Comp % of Total	Comp Avg Daily Use	Length of Season	Summer Season Total	Season Total Number of People By Types of Uses				
						Day Hike	Backpack	Day Stock	O/N Stock	
Elk Park	30	3%	0.9	120	108	0	99	0	9	
Cunningham	12	1%	0.1	120	14	0	14	0	0	
Needle Creek	38	2%	0.8	120	91	0	90	0	1	
Pine River	48	13%	6.2	120	749	0	539	0	210	
Molas Pass	11	3%	0.3	120	40	0	34	0	6	
Jackson Mtn	14.1	4%	0.6	120	68	0	34	0	34	
Poison Park	28.3	5%	1.4	120	170	0	92	0	78	
Ute	16	10%	1.6	120	192	0	104	0	88	
Vallecito	52	5%	2.6	120	312	0	287	0	25	
Williams Creek	20.3	3%	0.6	120	73	0	55	0	18	
Total Use			15.1		1817	0	1347	0	469	0

River Capacity

Because of their unique characteristics and types of uses that occur on them, river capacities were developed using some modifications of the analysis described thus far. The river corridors that were analyzed for recreation use were the Animas, Lower Dolores, and Piedra. River rafting is the primary use on the Animas and Piedra, while fly-fishing is the predominate use on the National Forest section of the Lower Dolores. River capacities on the Animas and Piedra Rivers were calculated based on the ROS class of the river, the spacing between parties, and numbers of people per boat, to determine the desired launches per day.

Fly-fishing capacity on the Lower Dolores River was calculated by dividing the portion of the river that is on the National Forest into upper and lower sections. Each section was analyzed to determine the possible number of quality fishing sites or spots. These sites were then given a desired spacing to allow for a high quality fishing experience. Because of its popularity and higher quality fishing the upper section (closest to the dam) was given a higher density. After the numbers of sites per mile was determined, an average number of fishermen per site was used to develop a PAOT capacity for the river.

Allocation

Once a capacity for a compartment is adjusted for limiting factors, a determination is made to allocate the adjusted capacity to general-public, institutional (semi-public), and commercial recreation use (outfitter-guides). This allocation allows Forest land managers to determine what level of commercial use is appropriate and needed for a compartment. Part II of this document details the Needs Analysis for outfitter-guide use and describes how capacity is allocated.

SUMMARY

The analysis of recreation capacity shows that the San Juan National Forest has approached or reached capacity in several drainage areas or compartments. Map 3, shows the capacity information in graphic form. Most of these areas of concern are within the Weminuche Wilderness, particularly the western portion. Land managers have suspected this for several years. This is the first objective analysis to corroborate previous assumptions. Data used in the analysis need to be verified, and this is the next step in the process. Existing use data are an important component of the analysis, and steps are underway to document these figures.

As stated earlier, capacity is not set in stone and forever unchanged. It is an evolving standard that is constantly updated and modified, based on new information and how conditions on the ground are being affected. As resource conditions improve, capacity can increase; and likewise, as conditions are affected negatively by recreation use, capacity can decrease. The recreation user can, to a point, affect capacity within an area: through improved camping practices, proper campsite selection, and avoidance of high-use areas, over-capacity of an area can be avoided.

While this analysis establishes recommended numerical limits for recreation use on the Forest, it does not make “decisions” about the effect on any specific permit holder or on individual recreation use. There is a wide range of management actions available to resolve site specific issues of overcrowding and resource impacts from recreation use.

The Forest will evaluate areas that are currently identified as over-capacity. If this trend continues, management actions will need to be taken to reduce recreation use or its impacts. Potential management actions in Wilderness are described in the Wilderness Management Direction LRMP Amendment. These actions are based on information derived from this capacity analysis and other monitoring procedures described in the Amendment. In areas where commercial recreation use is contributing to the over-capacity situation, strategies will need to be developed with the permit holders to reduce use or redistribute it to other areas. During the revision of the SJNF LRMP, the Forest will examine potential management actions and strategies outside of wilderness to resolve overcrowding issues in these areas.

The Forest Service will make every effort to effect any needed changes in recreation use that are equitable to both commercial and general public users of the Forest.

Part II - Outfitter-Guide Needs Assessment

INTRODUCTION

The basis for permitting any commercial recreation use on the Forest is the determination of public need for such services. "Public need" is identified by what is essential for the well being of the public that visits the National Forest and whether this need meets the Forest Service's mission and objectives. A prospective outfitter's desire for a permit does not necessarily constitute public need, nor does market-generated demand identified by a potential applicant. It is the Forest Service's responsibility to determine need. Commercial use of public lands is a privilege.

Permit holders are partners with the Forest Service to provide services to the public, protect public health and safety, and maintain the natural resources of the Forest.

When Is a Permit Required?

A permit is required when individuals or organizations (including institutional and semi-public outfitting and guiding) are conducting outfitting and guiding activities or services *for gain* on National Forest lands.

Individuals or organizations based off National Forest lands who rent and deliver equipment or livestock to the public on National Forest lands must obtain a special-use permit if they, their employees, or their agents occupy or use National Forest lands or related water in connection with their rental programs. Delivering the public to National Forest lands off the road or trail right-of-way constitutes use of the land.

Regulation: CFR 261.10(c) – The following is prohibited: selling or offering for sale any merchandise or conducting any kind of work activity or service unless authorized by Federal law, regulation, or special-use authorization.

If a Permit Is Required, When Can a Permit Be Issued?

The following conditions determine if a special-use authorization can be issued:

- An increased allocation, capacity, or public need is identified through an analysis process. If competitive interest is identified, a prospectus is issued to advertise for needed services.
- An existing permit is revoked.
- A reduction of service days by an existing permit holder or holders makes additional service days available.
- Competitive interest in an area, unit, or activity arises where no previously authorized use exists, and where the proposed use is compatible with objectives in the Forest LRMP.

- An application has been submitted to provide outfitter-guide services for an area or activity that has not previously been authorized, and in which there is no competitive interest.
- An existing permit expires or terminates.

Mission, Goals, and Objectives for Outfitter-Guides on the SJNF

In partnership with commercial outdoor recreation providers, the SJNF has a mission to protect and care for the natural resources within its boundaries, and to serve the visitors that come to recreate. The Forest Service wants to encourage skilled and experienced individuals and entities to conduct outfitting and guiding activities in a manner that protects environmental resources and ensures that National Forest visitors receive high-quality services. Because of our large land base, the SJNF will focus on providing unconfined outdoor recreation opportunities that are free of urban influence.

Outfitters and guides are our agents in helping to provide a wide range of services to the public. We want to support and maintain outfitter-guide services that are viable, professional, and effective in delivering these services. The following goals and objectives guide the SJNF in the management of outfitter-guide services.

- The SJNF and permitted Outfitter-Guide operators are partners in providing high-quality outdoor recreation opportunities for visitors to the National Forest.
- Outfitter-guides provide a broad spectrum of dispersed recreation opportunities in accordance with the established ROS classification for the management area (SJNF-LRMP).
- We will maintain an equitable balance between motorized and non-motorized recreation opportunities and assure that high-quality settings for these activities are maintained (SJNF-LRMP).
- Dispersed recreation activities will be managed to not exceed the capacity levels that are determined by PAOT levels established in the Forest Plan (SJNF-LRMP).
- Outfitter-guide operations will provide interpretation, education, and awareness of our natural settings and environment.
- We will encourage permitted operations that provide opportunities for special populations, such as the disabled, low-income groups, and those from urban areas, who wish to visit and learn about the National Forests.
- Outfitter-guide operations are an integral part of the recreation program on the SJNF, and are an important component of the economy of southwest Colorado. The SJNF encourages the development of outfitter-guide businesses that contribute to the local economy and provide employment and income to the private sector.

The San Juan-Rio Grande NFs are responsible for managing nearly one million acres of land that has been designated by Congress for Wilderness purposes. Wilderness provides a setting that is favorable for many types of outfitter-guide activities. The 1964 Wilderness Act allows for

commercial services where it can be demonstrated that these services are performed *to the extent necessary for activities that are proper for realizing the recreational or wilderness purposes of the area*. Because of the unique characteristics of Wilderness, the Forest has developed goals and objectives for commercial services specifically for these areas.

- Provide outstanding opportunities for solitude and a primitive and unconfined recreation experience (SJ-RG NFs Wilderness LRMP Amendment).
- Prohibit competitive contests, group demonstrations, ceremonies, and other similar events. (SJNF-LRMP).
- Manage outfitter-guide operations in the same manner as other visitors. Permit camping only in sites specified in O&G permits. Keep outfitter-guide activities harmonious with activities of non-guided visitors. (SJ-RG NFs-LRMP).
- Permit only those uses authorized by Wilderness legislation, which cannot be reasonably met on non-Wilderness lands. (SJ-RG NFs Wilderness LRMP Amendment).
- Maintain Wilderness in a natural and untrammled condition while accommodating human uses (SJ-RG NFs Wilderness LRMP Amendment)
- Minimize long-term impacts caused by human use (SJ-RG NFs Wilderness LRMP Amendment).
- Specific Standards and Guidelines for management of Wilderness use are defined using the Limits of Acceptable Change process (SJ-RG NFs Wilderness LRMP Amendment).

CRITERIA FOR DETERMINING NEED

The following criteria will be used in determining the need for continued or additional outfitter-guide services on the SJ-RG NFs.

1. **Skills and Equipment** – What skills and equipment are needed by public to experience the National Forest? Are specific skills for certain locations such as mountaineering areas, remote campsites etc., which require substantial time and talent to learn or complete needed? Learning skills and participating in certain activities require acquisition and consistent use of expensive, specialized equipment. Does this opportunity require the use of such specialized equipment? Are unique skills, such that the use of an outfitter is almost a prerequisite if the public is to have any opportunity to participate, needed?
2. **Knowledge** – Does having the availability of knowledgeable outfitter-guides improve the ability of the public to enjoy the recreation opportunities in a manner that reduces resource damage and user conflicts?
3. **Safety** – Are an outfitter-guide's skill and equipment needed to maintain a reasonable level of safety for the public? Without outfitter assistance, could members of the public seriously endanger their health or lose their lives?

4. **Education** – Will an outfitter-guide’s experience and background provide information, interpretation, and education on Forest resources, conditions, minimum-impact techniques, and management of public lands?
5. **Special Management Objectives** – Will outfitters and guides insure special management objectives are met for:
 - Providing opportunities for special populations, which include disabled, minorities, and the elderly, to access certain areas and to participate in recreation and educational activities?
 - The protection of fragile resources?
 - Assisting in reducing critical resource impacts and conflicts between users?
 - Increasing the diversity of recreation opportunities?
 - Reducing the occurrence of illegal outfitting and guiding?
6. **Demand** – While demand is not the overriding criterion for issuance of a permit, it is an important consideration in determining the need for outfitter-guides. The extent to which current services are being used is an indicator of needed services. Is there public demand for the types of services being offered?
7. **Compatibility** – Will an outfitter-guide operation be compatible with existing general-public and/or institutional use of an area?
8. **Feasibility of Offering Services Elsewhere** - The extent, to which the proposed service can be offered on private land or, in the case of Wilderness, in areas outside designated Wilderness, is a consideration for the need of an outfitter-guide service. Are there alternate areas off National Forest lands available to conduct these types of activities?
9. **Contribution to rural economies** – The sustainability of rural economies is dependent on creating a diverse economic base. Small businesses such as outfitting and guiding can contribute to a local economic base. What role does a particular outfitting or guiding service contribute to the local economy?

Land Capabilities

The capability of the land and its natural resources to sustain outfitter-guide activities is an important consideration. The SJNF has developed a capacity analysis that defines the capability of an area to sustain recreation use from both a physical and social perspective. Other considerations include effects on wildlife habitat, riparian areas, vegetation, and soil and water resources.

Demand/Supply

The San Juan National Forest currently permits 118 outfitter-guide operations. These permit holders provide a wide range of services to the public. Table II-1 describes the types of services in terms of service days, by activity type and mode of transport.

Table II-1. Current Commercial Use Allocated (Service Days)

Primary Activity	Method of Transport								
	4WD	ATV	Foot	Horse	Llama	Snow-mobile	X-Ctry Ski	Mtn Bike	Raft / Boat
Camping			4,648	2,322					
Experiential Education			7,767						
Fishing	60		466	1,135					30
Hunting	425		656	11,322					
Mountaineering			161				55		
Rentals				189					
River Running									1,287
Touring/Sightseeing	3,708	320	1,205	18,637	148	5,551		181	
Totals	4,193	320	14,903	33,605	148	5,551	55	181	1,317

There is a significant amount of use allocated to foot and horse types of activities. Guided and/or outfitted horse-supported hunting trips account for 19% of the total service days allocated on the Forest. A large proportion of the foot service days is allocated to Outward Bound, which conducts educational trips for students. This group accounts for over 40% of the existing allocated service days for transport by foot.

		1994	1995
ALLOCATED USE	Priority	33,532	34,592
	Temporary	12,816	12,592
	Total	48,342	50,719
ACTUAL USE	Priority	30,650	30,625
	Temporary	10,466	11,263
	Total	41,116	41,888
% Of Allocated Use Actually Used		85%	83%

An indication of demand is the amount of allocated use that is actually used by permit holders. Table II-2 describes the actual use

versus permitted or allocated use between 1994-1995. The range of actual use of 84-85% shows that a high percentage of allocated use is being used on the Forest.

During the time that the Forest has had a moratorium in effect for new outfitter-guide permits, a waiting list has been maintained to allow potential applicants to be kept informed of any opportunities that may come up. To date, 95 potential applicants have expressed an interest in obtaining a special-use permit. Table II-3 below summarizes the activities for which they would like to obtain a permit.

Type of Use	Potential Applicants
Backpacking	11
Mountain Biking	10
Hunting	16
Jeep Touring	9
Horse Packing	5
Fishing	11
Educational/Historical Tours	6
River Rafting	6
Hiking	9
Llama Trips	5
Trail Rides	8
Climbing	3
Snowmobiling	1
Goat Packing	1

NEEDS ASSESSMENT

Field staff conducted a needs assessment to determine if there is a need for the services to meet land management objectives. The need for a particular service is based on the criteria listed earlier. Appendix B displays the available commercial use. It indicates the types of additional recreation services that are appropriate and needed by compartment. In some cases the need may be shown as “limited” because of capacity considerations. The “limited” category is used to give the District Ranger discretion in issuing permits to uses such as serving special populations, which may be a critical public need even though capacity might be exceeded.

Needs Assessment by Activity

Backpacking and Hiking – Summer backpacking and hiking are skills that are relatively easy to master and do not require substantial time or talent to learn. There is some need for guided backpacking or cross-country treks, especially on non-system trails. Outfitters who provide environmental education, interpretive information, or access for special populations may fill a public need in this category. Organizations that provide for experiential learning experiences within a wilderness or outdoor setting fulfill a need for the public. Although a designated Wilderness is not necessarily a requirement for these types of activities, a setting that provides risk, challenge and solitude are essential to allowing participants to experience conditions that affect their personal lives. Programs that emphasize working with youth groups will be emphasized.

Climbing and Mountaineering – Learning to navigate high-elevation technical routes is a skill that requires special knowledge that takes substantial time and talent to learn. Climbing also requires this expertise plus expensive, specialized equipment. Many of the technical climbing routes on the Forest are in the Weminuche and Lizard Head Wildernesses, which are at or over capacity. Until adjustments can be made to existing commercial recreation use within these areas, no additional climbing or mountaineering permits will be available.

Overnight Stock Pack Trips - The expense of buying a horse and pack equipment for taking a trip into the backcountry is high. Also, to navigate a pack string through a backcountry setting requires skills that take a substantial amount of time to learn. Many of the Wilderness settings where this activity is popular are at or near capacity. Overnight pack trips that provide environmental education, interpretation, or access for special populations are desired. There are limited opportunities for pack trips, particularly on the Pagosa Ranger District.

Trail Rides – As with overnight pack trips, the expense of horse ownership is high, and there are special skills and abilities needed to participate in this activity. The Forest currently permits more use for this type activity than for any other. Opportunities exist for additional permits in areas primarily outside Wilderness. The proposed Wilderness Management Direction for the SJ-RG NFs indicates that permits for day use in high-use areas in Wilderness will be limited.

Mountain Biking – Southwest Colorado is a destination for mountain bike enthusiasts across the country. Mountain biking requires skill and knowledge in operating and negotiating Forest trails and roads. With the popularity of this sport growing and demand high, the current amount of permitted use does not meet the need. Opportunities for mountain-biking guided and outfitted services exist on the Columbine and Pagosa Ranger Districts.

Fishing – Fishing (primarily fly-fishing) requires skill and specialized equipment, which an outfitter can provide. The Colorado Division of Wildlife has identified Cascade Creek, Needle Creek, and the Pine River above Vallecito Reservoir, Lime Creek, and the headwaters of East Dolores River as areas where current fishing pressure is high. They are recommending that no additional commercial-use permits be issued for these stream systems. The Lower Dolores River below McPhee Reservoir has opportunities for additional use. The Forest has divided the section of river on the National Forest into upper and lower sections, to control and distribute use along the entire stretch.

4WD Touring (Jeep Tours) – Guided tours offer those without 4-wheel-drive vehicles an opportunity to experience the high country on primitive roads. Special populations can also enjoy the backcountry in this manner. The public generally has access to 4-wheel-drive vehicles and the skills necessary to drive most of the primitive roads on the Forest. Many of these primitive roads are becoming more heavily congested each year, as the popularity of sport-utility vehicles increases. Commercial recreation opportunities for 4WD touring will be limited, with permits available primarily in areas that are not heavily used by the general public.

Heritage Touring – This is a new and growing activity that requires trained guides and, at times, professional archaeologists to conduct these types of trips. The SJNF has a large number of both prehistoric and historic sites that can provide outstanding opportunities for developing heritage tourism programs. The Forest Heritage Team is currently inventorying potential sites for this type of activity and determining appropriate levels of use. After this effort is completed, the Forest will make a determination on the extent of commercial-use opportunities.

Hunting – Colorado currently licenses about 585,000 big-game hunters per year. In areas with roads, the need for guided hunting trips is minimal. Over 19% of the total existing commercial use is allocated to this type of hunting. As trends change and capacity becomes an issue in many compartments, other types of fall uses may compete for the remaining available use. We have identified some limited additional opportunities on the Dolores and Pagosa Ranger Districts.

Game Packing – Demand for this type of use is increasing. Hunters want to be able to access their remote hunting areas on foot but have the availability of a packer to carry out their game. The equipment necessary to do this requires pack stock. Skills are necessary for the packer to accomplish this. Opportunities have been identified on the Pagosa and Dolores Ranger Districts for this type of activity have been identified.

Special Populations – The National Forest is an ideal environment for special populations - such as low income, inner-city youth, the physically and mentally disabled, and the elderly - to

experience a different setting from what they may be accustomed to. Many of these groups might not have the skills, experience, or ability to access the backcountry without guided and outfitted services. The Forest would like to promote outfitter-guide operations that serve this clientele.

River Rafting – River-rafting opportunities exist on the Upper Animas, Piedra, and Dolores Rivers. Each of these rivers has commercial rafting companies operating on them. Public safety is a concern on the Piedra and Upper Animas Rivers, because of their technical difficulty. The need for commercial services on these rivers is high.

Upper Animas – The 28-mile float from Silverton to Rockwood is considered one of the most difficult and dangerous commercial river trips in the western U.S. The boating season begins with the snowmelt in April or May and continues through mid-June to July. The run can be a one- or two-day float; five commercial outfitters offer both. The total commercial user days in 1994 were around 300. Total private use is estimated to be between 500-1000. Camping is the limiting factor on this river, as good campsite locations for large groups are limited.

Piedra River – The floatable section is divided into two distinct ten-mile segments. The upper section flows from the Piedra Road Bridge to the First Fork Bridge, and the lower from the First Fork Bridge to Hwy. 160. The upper section is remote, rated Class III-IV, and suited for upper-intermediate boaters. The lower section rated Class III-IV, is more technical and requires more experienced and skilled boaters. There is opportunity for limited commercial use for outfitters with high skill levels.

Upper Dolores River – The Upper Dolores River is defined as the 37-mile stretch between Rico and Dolores. The river is usually rated between Class I and III. At high water it has the potential for fast water, big waves, and very few eddies. For inexperienced boaters it can be very hazardous. The best boating occurs from May to July. There is very little camping associated with boating here.

Lower Dolores River – This is primarily floated by fisherman from below McPhee Dam to Bradfield Bridge. Peak boating on this stretch occurs in May and June. Peak fishing along the shoreline occurs in July, August, and September. There is very little rafting at present, but the use of inflatables (small, narrow watercraft) is expected to increase.

Institutional Outfitters

The Forest has experienced a large increase in the numbers of organized groups who wish to conduct outfitted activities which do not fit within the classification of a typical outfitter-guide operation because they are generally intermittent and not open to the general public. These groups are typically universities, schools, clubs, religious organizations, camps, rehabilitation centers or special interest groups. Membership or affiliation with the group is required. In many instances these groups have been operating on the Forest for many years without obtaining any authorization to do so.

Both public and institutional outfitted and guided groups are commercial if a reward for services has been rendered or compensation is in some way made to the trip's leader or organization. Once the determination of a commercial entity is made, the public versus institutional outfitter determination rests on whether the clientele is limited or not. National direction (FSH 2709.11, 41.53h) prohibits the issuance of priority use assignments to institutional outfitters, therefore all assignments are temporary.

The Forest has established a pool of visitor days available which is described in the capacity analysis which identifies areas and use which are available for temporary use. This pool of use will be available through an application process that will be consolidated prior to the year that the use is anticipated. Applications will be evaluated and applicants notified to allow them time to schedule and advertise for the trips.

Process for Permitting Institutional Groups

- Institutional groups that have conducted activities on the Forest or who are interested in doing so, will be notified that the San Juan-Rio Grande National Forest is moving towards a more business-like approach to permitting.
 - The Forest will advertise for and notify potential applicants that applications will be accepted until December 31st of the year prior to operation (After this first year, the date may be moved back to earlier in the fall to allow more time for groups to plan and advertise their programs.)
 - The Forest will review proposed uses. If capacity is available and there are no conflicts with other resources or existing permit holders; a temporary permit will be issued for a one year time period.
 - Where there are more applicants than capacity available, an equitable system will be set up to determine whom permits are issued to.
 - Applicants will be notified by February 15th as to whether their request for a permit has been granted.
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Service Oriented Trips

Many of the institutional groups and organizations educate their participants about wildland values and ethics and perform service projects to benefit the Forest. In some cases the line between when the group is performing needed services for the agency and when they are conducting services primarily for the benefit of the clients is blurred. To clarify these roles the Forest has developed a policy to determine when an institutional permit will or will not be issued based on the primary purpose of the trip.

Service Oriented Trip Policy - If the primary purpose of the trip is to accomplish specific tasks, as described by the authorized officer, of previously identified resource management needs than a permit may not be required. Resource management needs will primarily consist of work that provides for improvement, maintenance, protection or monitoring of forest resources. To qualify for an exemption of the need for a special use permit, the work performed by the organization or group must constitute more than 70% of the time that the group spends on the National Forest in conducting services and activities. This percentage is based on the proportion of time of an eight- (8) hour workday. While engaged in these activities the groups will generally be covered under a volunteer agreement.

ALLOCATION OF RECREATION USE

The allocation of commercial recreation use is based on the overall capacity determination, as described in Part 1 of this document. Recreation use is allocated to three categories: general public, institutional (semi-public), and commercial permit holders or outfitter-guides. All three represent use by the public. Whether people do the trip on their own or are with an organized group, or have the assistance of a professional outfitter-guide determines the category to which they are allocated.

Determination of Mix of Commercial, Institutional, and General-Public Use

One of the key decisions is the mix or percentage that constitutes an allocation between commercial, institutional (semi-public), and general-public use in an area. Allocation will be determined within compartment boundaries. The mix of the three categories could also be determined within individual compartments, or could apply to the entire Forest.

There are no magic formulas for determining the correct mix of uses. Traditionally, it has been a judgmental decision, often based on historic patterns. As we take a fresh look at our objectives and needs, historical patterns may not be what the future holds. In areas where capacity is not a problem, these mixes will not become the issue. Where there is competition for a limited allocation, however, the question of who gets what piece of the pie becomes critical.

Some considerations that can be used to determine the appropriate mix are:

- Availability of services and experience at other locations, on both private and public lands. Is the service provided dependent on the resources available in the area?
- Assure that the general public is not pushed out or adversely affected by a preponderance of commercial-use activities.
- Wildlife management considerations.
- Potential conflicts with other resource users and activities.
- Type of clientele involved (disabled).
- Forest objectives.
- Terrain, distances from access points, safety considerations.
- Traditional patterns of commercial and public use.
- Interpretation needs

Table II-4 displays the allocation method for recreation use on the SJNF by recreation use compartment. The explanation below corresponds to the numbering shown on the table.

1. Generally the allocation is shown by season (summer/fall) unless there are specific linear uses such as 4WD touring, mountain biking, river rafting, trail rides, etc., that resulted in the capacity being determined for those specific uses, rather than for an area as a whole.
2. The Adjusted Capacity is the capacity developed from the capacity analysis.
- 3, 4. The Adjusted Capacity is divided into percentages for public and commercial use, based on the factors described above.
- 5, 6. This represents the Adjusted Capacity multiplied by the allocation percentage.

- 7.8. Existing public and commercial recreation use for each compartment has been developed through sampling and from permit records.
9. The potential capacity for commercial recreation use. This represents the commercial visitor days available minus the existing commercial use in the compartment. Potential capacity represents only what is possible and does not signify the need for commercial uses which is based on the Needs Analysis.
10. For institutional or temporary use, a percentage of the general public use is taken to derive this figure.
11. The temporary pool represents the percentage for institutional use multiplied by the public visitor days that are available. The temporary pool can be used for institutional groups that apply for available days.
12. Commercial Service Days Needed are the total visitor days allocated to commercial recreation uses within a compartment, based on the Outfitter-Guide Needs Analysis. This figure is equal to or less than the Potential Commercial Recreation Visitor Days that are available.
13. The general-public visitor use days available within a compartment.

Table II-4. Allocation of Recreation Use (example) for the Animas River Compartment, Columbine Ranger District

Season/ Type of Use (1)	Adjusted Capacity (2)	Public % (3)	Comm. % (4)	Public Visitor Days (5)	Comm. Visitor Days (6)	Existing Public Use (7)	Existing Comm Use (8)	Comm Visitor Days Potential (9)	% Reserved For Temp Pool (10)	Temp Pool Avail (11)	Comm Service Days Needed (12)	Public VisitorD ays Avail (13)
Rafting	3143	0.4	0.6	1257	1886	720	675	1211	0.1	54	1211	483
Non - rafting	779	0.9	0.1	701	78	600	45	33	0.1	10	33	91
Fall	828	0.9	0.1	745	83	200	0	83	0.1	55	83	491

Appendix A contains the allocation computations for each compartment on the SJNF where an allocation of recreation use has been made.

Glossary

Guiding – Providing services or assistance (such as supervision, protection, education, training, packing, touring, subsistence, or interpretation) to individuals or groups in their pursuit of a natural-resource-based outdoor activity for pecuniary remuneration or other gain.

Institutional and Semi-Public Use – Includes a variety of membership or limited-constituency institutions such as service clubs and religious, conservation, youth, fraternal, and social groups; educational institutions such as schools, colleges, and universities; and similar common-interest organizations and associations. Semi-public outfitters may operate commercially on an intermittent or irregular basis in providing services to select clientele rather than the public at large. As a rule, membership or affiliation is required, rather than being open to the public at large.

Limits of Acceptable Change (LAC)—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.

Outfitting – Providing through rental or livery any saddle or pack animal, vehicle or boat, tents, camping gear, or similar supplies or equipment, for pecuniary or other gain.

Pecuniary or other gain –Involving money. Remuneration can mean (1) To give or pay (a person) something for some work or service done, loss incurred, etc.; reward; recompense or (2) To make up for; compensate.

Service Day – A day or any part of a day on National Forest System lands for which an outfitter or guide provides goods or services, including transportation, to a client.

Visitor Day – A day or any part of a day on National Forest System lands that use occurs by an outfitters clients and/or the outfitter-guide or the general public.