Recreation Opportunity Spectrum and Scenery Management System Review

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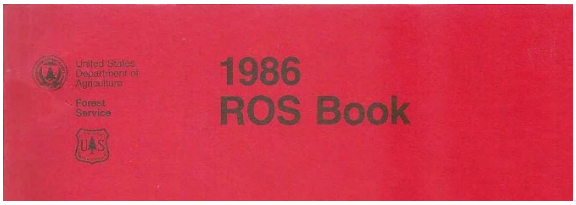

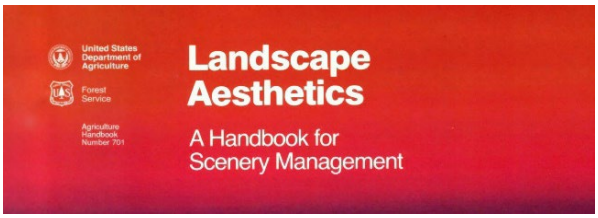

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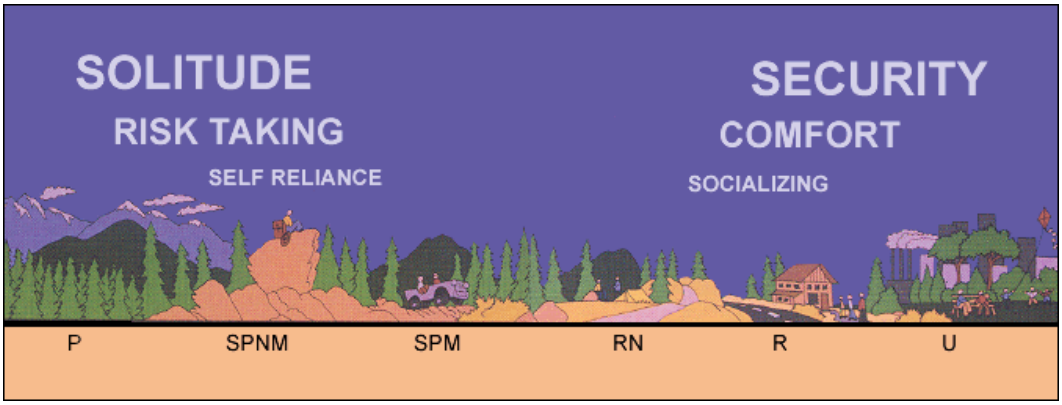
1. Recreation Opportunity Spectrum



A recreation opportunity is a chance to participate in a specific recreation activity in a particular recreation setting to enjoy desired recreation experiences and other benefits that accrue. The Recreation Opportunity Spectrum planning framework, as described in the 1986 ROS Book, continues to be the best science-based process for providing for the integration of the recreation resource in multiple-use planning. The 2012 Forest Service planning rule and 2015 planning directives properly identified the ROS planning framework as the best management tools and science for addressing the recreation resource in forest planning. The recreation setting is the surroundings or the environment for the recreational activities. The planning rule describes that the recreation setting is the social, managerial, and physical attributes of a place that, when combined, provide a distinct set of recreation opportunities. The rule describes that the Forest Service uses the Recreation Opportunity Spectrum to define recreation settings and categorizes them into six distinct classes: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, rural, and urban.

McCool, Clark, and Stankey in An Assessment of Frameworks Useful for Public Land Recreation Planning, General Technical Report PNW-GTR-705, states, "*Beginning in 1978, the concepts of an opportunity setting and spectrum of recreation opportunities were formalized as a planning framework in a series of significant papers involving two groups of researchers working with public land managers: (1) Roger Clark and George Stankey (Clark and Stankey 1979) and (2) Perry Brown and Bev Driver (Brown et al. 1978, Driver and Brown 1978, Driver et al. 1987). The series of papers that evolved described the rationale, criteria, and linkages that could be made to other resource uses. The goal of these papers was to articulate the concept of an opportunity spectrum and to translate it into a planning framework; today they serve to archive the fundamental rationale behind the ROS concept and planning framework. The ROS planning framework as a planning framework was oriented toward integrating recreation into the NFMA required forest management plans. Both the BLM and the Forest Service eventually developed procedures and user guides to do this (e.g., USDA FS 1982) …*

The fundamental premise of ROS is that quality recreational experiences are best assured by providing a range or diversity of opportunities: by allowing visitors to make decisions about the settings they seek, there will be a closer match between the expectations and preferences visitors hold and the experiences they realize (Stankey 1999). Thus, underlying the ROS idea is the notion of a spectrum or diversity of opportunities that can be described as a continuum, roughly from developed to undeveloped. Such opportunities are described by the setting. A setting is defined as the combination of attributes of a real place that gives it recreational value…

As both managers and scientists gained experience with ROS, and as collaboration continued, the efficacy of implementation also increased. The arrival of computer-based geographic information systems at about the same time as the implementation of ROS also enhanced its use as a framework for examining interactions between recreation and other resource uses and values. A major output of ROS was a map of a planning area displaying the spatial distribution of recreation opportunities. This was a distinct advance in resource management and enhanced the move away from reliance on tabular displays of data…

The ROS planning framework has become an important tool for public land recreation managers. Undoubtedly, its intuitive appeal and ease of integration with other resource uses and values are responsible for its widespread adoption and modification. Its strong science foundation, and the collaborative nature of its initial development are probably also primary reasons why it has endured over a quarter century of natural resource planning. As a planning framework, ROS forces management to explicate fundamental assumptions, but in the process of moving through the framework, it allows reviewers to follow and understand results."

Roger Clark and George Stankey in the Recreation Opportunity Spectrum – A Framework for Planning, Management, and Research, General Technical Report PNW-98[1] states, "*The end product of recreation management is a diverse range of opportunities from which people can derive various experiences. This paper offers a framework for managing recreation opportunities based on six physical, biological, social, and managerial factors that, when combined, can be utilized by recreationists to obtain diverse experiences…*

We define a recreation opportunity setting as the combination of physical, biological, social, and managerial conditions that give value to a place. Thus, an opportunity includes qualities provided by-nature (vegetation; landscape, topography, scenery), qualities associated with recreational use (levels and types of use), and conditions provided by management

[1] http://nstrail.org/carrying_capacity/gtr098.pdf

(developments, roads, regulations). By combining variations of these qualities and conditions, management can provide a variety of opportunities for recreationists."

Recreation opportunity settings are described using six factors: Access, Nonrecreational Resources Uses, Onsite Management, Social Interaction, Acceptability of Visitor Impacts, and Acceptable Level of Regimentation. The factor that is most closely related to the Scenery Management System is Non-recreational Resources Uses describing that, "*This factor considers the extent to which nonrecreational resource uses (grazing, mining, logging) are compatible with various opportunities for outdoor recreation. Other uses can severely conflict with opportunities for primitive experiences. For example, Stankey (1973) found that grazing in the Bridger Wilderness in Wyoming was the most serious source of conflict reported by visitors. In other cases, a variety of resource management activities that might even contribute to visitor enjoyment can be found in conjunction with outdoor recreation… Planners and managers must consider the lasting effects of a resource activity (mines, clearcuts), as well as short-term effects (logging trucks, noise from a mine) to determine the impacts on the recreational opportunity…*

The recreation opportunity setting is composed of other natural features in addition to the six factors. Landform types, vegetation, scenery, water, wildlife, etc., are all important elements of recreation environments; they influence where people go and the kinds of activities possible. Considerable work has gone into developing procedures for measuring and managing visual resources."

This technical report further states, "*The recreation opportunity spectrum provides a framework for integrating recreational opportunities and nonrecreational activities. The central notion of the spectrum is to offer recreationists alternative settings in which they can derive a variety of experiences. Because the management factors that give recreational value to a site are interdependent, management must strive to maintain consistency among these factors so that unplanned or undesired changes in the opportunities do not occur*."

The 1986 ROS Book states, "*The physical setting is defined by the absence or presence of human sights and sounds, size, and the amount of environmental modification caused by human activity. The physical setting is documented by combining these three criteria as described below. Physical Setting - The physical setting is best defined by an area's degree of remoteness from the sights and sounds of humans, by its size, and by the amount of environmental change caused by human activity…* (page II-11)

Chuck McConnell and Warren Bacon in the 1986 ROS Book[2] state, "*Much of the success in managing vegetation to achieve desired visual character and meet visual quality objectives in Roaded Natural and Rural areas is tied to control of viewing positions primarily on roads,*

[2] http://nstrail.org/pdf_documents/ros_1986_user_guide_no_pnw-98_no_examples.pdf

highways, and use areas. When the recreation user is traveling on trails or cross-country in Primitive or Semi-Primitive areas, near view becomes very evident. Recreation experience opportunities, which are not as available in Roaded Natural and Rural settings should become a primary goal. Some of these may include:

1. *Obtaining privacy, solitude, and tranquility in an outdoor setting.*
2. *Experiencing natural ecosystems in environments which are largely unmodified by human activity.*
3. *Gaining a new mental perspective in a tranquil outdoor setting.*
4. *Self-testing and risk-taking for self-development and sense of accomplishment.*
5. *Learning more about nature, especially natural processes, human dependence on them, and how to live in greater harmony with nature. To the extent practical, these opportunities should be goals in all ROS settings on the National Forest System.*

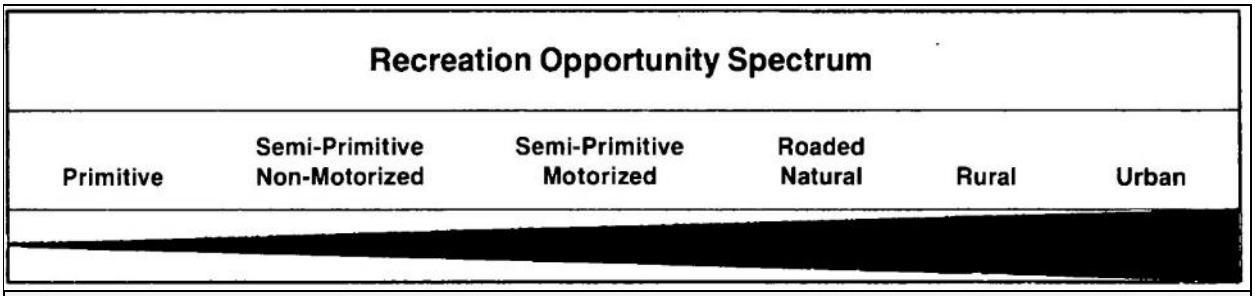
Any vegetative management must be quite subtle and for the purposes of creating and maintaining an attractive recreation setting that will offer these types of experience opportunities. Details such as the attributes of an old growth Forest (rotting logs with conks, large trees with distinctive bark, etc.,) become even more important in Primitive and Semi-Primitive than in Roaded Natural and Rural. Providing human scale or created openings generally means they must be quite small with natural appearing forest floor, edge, shape, and disbursement." (page II-17)

The Forest Service 1986 ROS Red Book repeats information that is found in the 1982 ROS User Guide and provides ROS background information, reviews research, and adds land management planning guidance. The 1986 ROS Book states, "*Settings are composed of three primary elements: The physical setting, the social setting, and the management setting. These three elements exist in various combination and are subject to managerial control so that diverse opportunity settings can be provided. These settings, however, are not ends in themselves. Providing settings is a means of meeting the third aspect of demand, desired experiences. Settings are used for providing opportunities to realize specific experiences that are satisfying to the participant. In offering diverse settings where participants can pursue various activities, the broadest range of experiences can be realized. The task of the recreation planner and manager, then, is to formulate various combinations of activity and setting opportunities to facilitate the widest possible achievements of desired experiences--or to preserve options for various types of recreation opportunities…* (page II-19)

The Forest Service ROS User Guides state, "*For management and conceptual convenience possible mixes or combinations of activities, settings, and probable experience opportunities have been arranged along a spectrum, or continuum. This continuum is called the Recreation Opportunity Spectrum (ROS) and is divided into six classes (Table 1). The six classes, or portions along the continuum, and the accompanying class names have been selected and conventionalized because of their descriptiveness and utility in Land and Resource Management*

Planning and other management applications." (Table 1 is found in the 1982 ROS Users Guide on pages 7 and 8 and in the 1986 ROS Book on pages II-32 and II-33)

Table 1



Setting Characterization					
Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between user is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human induced restrictions and controls. Motorized use within the area is not permitted.	Areas is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is not permitted.	Areas is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is permitted.	Area is characterized by predominantly natural appearing environments with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.	Area is characterized by substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people….	Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans, on-site, are predominant….

Experience Characterization					
Extremely high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance in an environment that offers a high degree of challenge and risk.	High, but not extremely high, probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance in an environment that offers challenge and risk.	Moderate probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance in an environment that offers challenge and risk. Opportunity to have a high degree of interaction with the natural environment. Opportunity to use motorized equipment while in the area.	About equal probability to experience affiliation with other user groups and for isolation from sights and sound of humans. Opportunity to have a high degree of interaction with the natural environment. Challenge and risk opportunities associated with more primitive type of recreation are not very important. Practice and testing of outdoor skills might be important…	Probability for experiencing affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities. These factors are generally more important than the setting of the physical environment. Opportunities for wildland challenges, risk-taking, and testing of outdoor skills are generally unimportant except for specific activities like downhill skiing, for which challenge and risk-taking are important element.	Probability for experiencing affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities Experiencing natural environments. Having challenges and risks afforded by the natural environment, and the use of outdoor skills are relatively unimportant. Opportunities for competitive and spectator sports and for passive uses of highly human· influenced parks and open spaces are common.

The Forest Service 1982 ROS User Guide describes in part 21.23 that, "*Evidence of Humans is used as an indicator of the opportunity to recreate in environmental settings having varying degrees of human influence or modification. Apply the Evidence of Humans criteria given in Table 5* [Repeated below in the section titled: Scenery Management System and the Recreation Opportunity Spectrum Relationships] *to determine whether the impact of human modification on the landscape is appropriate for each class designation on the inventory overlay. If the Evidence of Humans is more dominant than indicated for the designated Recreation Opportunity Spectrum class, adjust the class boundaries on the overlay so the designations accurately reflect the situation… The Evidence of Humans criteria for each Recreation Opportunity Spectrum class*

is primarily based on the visual impact and effect of modifications on the recreation experience, as distinguished from only the physical existence of modifications. The criteria take into account the variation in visual absorption capacity of different landscapes."

The 1986 ROS Book states, "*The ROS helps planners identify different allocations of recreation, specifying where and what types of recreational opportunities might be offered and the implications and consequences associated with these different allocations. Because the ROS requires explicit definitions of different recreation opportunities, it facilitates comparisons between different alternatives. It also helps identify what specific actions might be needed in order to achieve certain allocations in the future.* (page IV-32)

The explicit nature of the ROS assists managers in identifying and mitigating conflict. Because the ROS identifies appropriate uses within different recreation opportunities, it is possible to separate potentially incompatible uses. It also helps separate those uses that yield experiences that might conflict, such as solitude and socialization… (page IV-32)

The ROS also helps identify potential conflicts between recreation and non-recreation resource uses. It does this in several ways. First, it can specify the overall compatibility between a given recreation opportunity and other resource management activities. Second, it can suggest how the activities, setting quality, or likely experiences might be impacted by other non-recreation activities. Third, it can indicate how future land use changes might impact the present pattern of a recreation opportunity provision." (page IV-32)

The apparent naturalness of an area is highly influenced by the evidence of human developments. If the landscape is obviously altered by roads, railroads, reservoirs, power lines, pipe lines, or even by highly visual vegetative manipulations, such as clearcuttings, the area will not be perceived as being predominately natural. Even if the total acres of modified land are relatively small, "out of scale" modifications can have a negative impact… (page IV-33)

Management prescriptions[3] are the building blocks for formulating planning alternatives, and for providing site specific management. Each prescription describes a set of compatible multiple-use management practices that will produce a particular mix of resource outputs. For example, one management area prescription might allow grazing and provide for primitive recreation opportunities, but permit only minimal water development structures and place strict controls on timber harvesting and mineral development. Another prescription for the same type of land might also permit grazing, but provide for roaded-natural recreation opportunities and allow for clearcutting and strip mining… (page IV-35)

[3] Management prescription (1982 Planning Rule): Management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives. Similarly, the 2012 Planning Rule requires the establishment of plan components indicating where those components apply.

Consistent with the 1986 ROS Book, *Recreation Opportunity Setting as a Management Tool* by George Stankey, Greg Warren, and Warren Bacon states, "*A recreation opportunity setting is defined as the combination of physical, biological, social, and managerial conditions that give value to a place… The seven indicators include access, remoteness, non-recreation uses, onsite management, visitor management, social encounters, and visitor impacts:*

Access - Includes the type of transportation used by the recreationists within the area and the level of access development, such as trails and roads.

Remoteness - The distance of an area from the nearest road, access point, or center of human habitation or development.

Non-recreation uses, evidence of humans, and naturalness - Refers to the type and extent of non-recreation uses present in the area, such as timber harvesting, grazing, and mining.

On-site management - The on-site management indicator refers to modifications such as facilities, vegetation management, and site design.

Visitor management – Includes the management actions undertaken to maintain conditions and enhance visitor experiences within an ROS class.

Social encounters - The number, type, and character of other recreationists met in the area, along travel ways, or camped within sight or sound.

Visitor impacts - Includes those impacts caused by recreation use and affecting resources such as soil, vegetation, air, water, and wildlife…."

The *Recreation Opportunity Setting as a Management Tool* technical guide, on pages 22-24, reviews Roaded Modified ROS setting considerations, which is not addressed in the 1982 and 1986 ROS User Guides.[4] Setting indicators are describe in part as, "*Roads are an integral part of these classes and provide a range of opportunities for users of high clearance vehicles on dirt roads to passenger cars on pavement. Roads may be closed to recreational use to meet other resource management objectives. In addition to roads, a full range of trail types and difficulty levels can be present in order to meet recreation objectives… The natural setting is often heavily altered as this environment and access throughout are often the result of intensive commodity production. Timber harvest, for example, is constrained primarily by the NFMA regulation of shaping and blending harvest units with the terrain to the degree practicable. Harvest activities should protect user-established sites from alteration and provide access to them. It should be used to meet other recreation needs such as provide trailhead access, parking areas, and a diversity of travelway opportunities*…."

Where inventories of setting characteristics are not completely aligned with a specific ROS class, a determination should be made as to which class best represents the current specific setting. As a general rule, the physical characteristics take precedent over social and managerial characteristics. This is because social and managerial characteristics can often be altered

[4] http://nstrail.org/carrying_capacity/ros_tool_1986.pdf

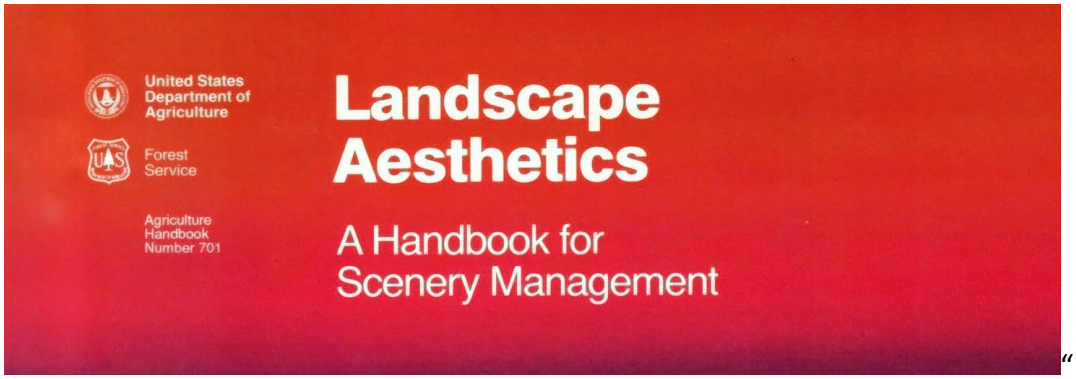
through visitor use management techniques (permits, closures, etc.) where as the physical characteristics (size, remoteness, and others) are more permanent.

Primitive and Semi-Primitive Non-Motorized ROS settings are of risk of being eliminated from available recreation opportunities as pressures increase to control insect and disease through vegetation management practices that include timber harvest and road construction (system and temporary). In addition, unauthorized OHV use and excessive mechanized vehicle use may displace traditional non-motorized users from these areas. In established Primitive and Semi-Primitive ROS settings, as adjacent lands are developed, minimizing any degradation of evidence of human indicators will increase in importance if remoteness protections diminish.

In review, the Evidence of Humans criteria is used to indicate varying degrees of modifications to the natural landscape as one moves across the spectrum. Authorized uses affecting this criterion include such things as: vegetation treatments, oil and gas development, livestock grazing, recreation developments and other infrastructure. Landscapes may vary from naturally appearing to heavily altered as one moves across the spectrum. Site management may also factor into this criterion. Site management refers to the amount or degree of on-site modification (e.g., vegetation manipulation, landscaping) and the level or scale of development of constructed features (e.g., access sites, parking areas, campgrounds, trails, administrative facilities, buildings, and other structures) ... Modifications may be caused by vegetation management, mineral extraction, road construction or any activity that creates distinct alterations in the natural or natural-appearing setting.

How are ROS setting inconsistencies addressed in providing for desired settings along a National Scenic Trail? An inconsistency is defined as a situation in which the condition of an indicator exceeds the range defined as acceptable by the management guidance. For example, the condition of the indicators for a National Scenic Trail corridor may all be consistent with its management as a Semi-Primitive Non-Motorized ROS setting, except for the presence of a trailhead and access road. In such a case, what are the implications of the inconsistency? Does the inconsistency benefit or interfere with the nature and purposes of the National Scenic Trail? What should be done about the inconsistency? Three general kinds of actions are possible. First, perhaps nothing can or should be done. It may be concluded that the inconsistency will have little or no effect on the area's general character. Alternatively, the agency may lack jurisdiction over the source of the inconsistency. A second response is to direct management action at the inconsistency to bring it back in line with the guidance established for the desired ROS class. The main point to be understood regarding inconsistencies is that they might be managed. The presence of one does not necessarily automatically lead to a change in ROS class. By analyzing its cause, implications, and possible solutions, an inconsistency may be handled in a logical and systematic fashion.

2. Scenery Management System



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Restoring and Maintaining a Resilient Scenic Landscape: Ecological (Landscape Ecology) Context for Scenery Management,” 2012, By Barry Bollenbacher and others states, “*Aesthetics has been part of forest landscape management since the 1960s. Originally conceived to mitigate “ugly” clear cuts, the Visual Management System (VMS) was largely based on the romantic view of nature-as-scenery, with emphasis on the dramatic, visual and static elements of the landscape. Leopold’s “ecological aesthetic” expands our goal of identifying and protecting the most scenic landscapes to one aimed at discovering the beauty that lies within each landscape. This shift focused ecological integrity and health as guides to aesthetic appreciation...*

In the United States, our natural landscape preference grew from a tradition of landscape paintings that portrayed natural environments that were carefully composed and embellished suing such design principles as balance, proportion, symmetry, order, unity, and variety in form, line, color and texture. This preference for idealized landscapes became the basis for addressing aesthetics in forest management. As visitors become more and more educated about ecological processes and resiliency, their perceptions of what forest should look like are also changing. Sometimes referred to as an “ecological aesthetic”, visitors are incorporating a deeper understanding and appreciation for nature that is based more on science rather than strictly on art.

With the publishing of a new Planning Rule (36 CFR Part 219, April 9, 2012), the concept of sustainability (ecological, social, and economic) is a required outcome of all Land Management Plans. This shift in land management planning presents an opportunity to further refine SMS approaches and better integrate aesthetic and ecological values. In addition to using ecological units as our framework, the “values” we assign landscapes should also be shifting from what’s pretty to a more holistic view of what’s healthy, resilient, and sustainable. There are some key concepts we must understand to ensure landscape management continues to evolve and merge the art and science of scenery management.

Natural disturbance processes such as fire, insects, and disease, are part of the natural landscape and play an important role in maintaining healthy, resilient, and scenic landscapes.

These disturbance regimes need to be evaluated as part of an evolving landscape that, when occurring within their historic range of variability, create changes that are inherently necessary for the long-term health and resiliency of the biophysical attributes of that landscape which, in turn, creates sustainable scenery (scenic integrity). It is important to emphasize that maintaining scenic integrity does not equate to maintaining a specific landscape attribute in its current condition. Disturbance regimes change the type, mix and distribution of landscape attributes. SMS needs to include these disturbance processes and resulting changes as "positive", creating a healthy, resilient and properly functioning ecosystem. The question becomes whether the changes are within a range (using HRV, climate change, and other contexts) in which the landscape is healthy and resilient as opposed to whether the changes are less attractive when viewed at a smaller scale..."

The 1974 Department of Agriculture, Agriculture Handbook 462, National Forest Landscape Management, v. 2, chapter 1, "The Visual Management System*" states, "The American people are concerned about the quality of their visual environment. Because of this concern, it has become appropriate to establish the "visual landscape" as a basic resource, to be "treated as an essential part of and receive equal consideration with the other basic resources of the land" (FSM 2380). At the same time, public demand has increased for goods and services produced on much of the same land. It has thus become necessary to both inventory the visual resource and provide measurable standards for the management of it. The Visual Management System provides the framework within which this job can be accomplished."*

The 1980 Department of Agriculture, Agriculture Handbook 559, National Forest Landscape Management, v. 2, chapter 5, "Timber"[5] states, "*Many timber harvest activities introduce harsh and incongruous visual elements in the landscape. Concurrently, many of the more visually sensitive timber stands have remained unmanaged for want of a visually acceptable method of harvesting. Many such are reaching the end of their normal life cycle, and are becoming susceptible to nature's regeneration processes: wildfire, disease, insect infestation, or windthrow. Nature's regeneration processes also often produce unpleasant visual elements in the landscape. Timber harvest can cut short these natural catastrophes and in turn does not have to be accomplish with such obvious aesthetic impacts.*"

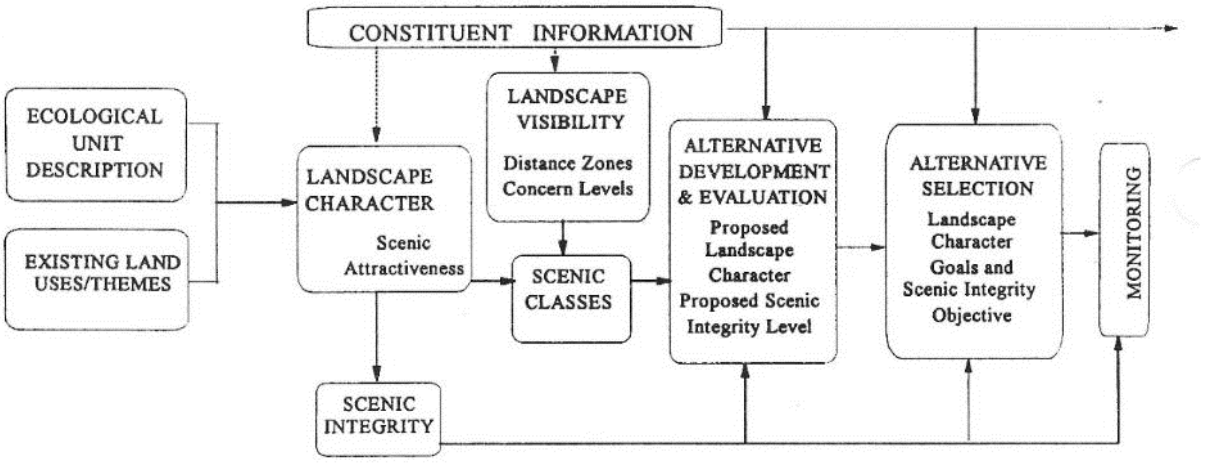
The Scenery Management System (The Landscape Aesthetics Handbook. Landscape Aesthetics - A Handbook for Scenery Management, Agricultural Handbook Number 701)[6] replaced the Visual Management System in 1995. The Scenery Management System does not consider natural events as being ecological catastrophes if the event resulted in vegetation conditions

[5] http://nstrail.org/carrying_capacity/National_Forest_Landscape_Management_Vol_2_Ch5_Timber_Handbook_559_1980.pdf

[6] http://nstrail.org/carrying_capacity/landscape_aesthetic_agriculture_handbook_701_1995_complete.pdf

and disturbance extent that were within the Natural Range of Variation. Nature's regeneration processes are not considered unpleasant visual elements in the landscape for visual assessments.

The flow chart below outlines the Scenery Management System processes as presented on page 6 of the summary in the Landscape Aesthetics Handbook 701.



The Scenery Management System (SMS) provides a systematic approach to inventory, assess, define, and monitor both existing and desired scenic resource conditions. Specific components of the SMS include scenic character, the degree of scenic diversity (scenic attractiveness), how and where people view the scenery (distance zones), the importance of scenery to those viewing it (concern levels), and the desired degree of intactness (scenic integrity objectives).

The following paraphrases discussions found in the Landscape Aesthetic Handbook:

> There are several over-arching concepts of the SMS that facilitate the inclusion and integration of scenery resources with planning efforts. The SMS is grounded in an ecological context; recognizes valued aspects of the built environment; and incorporates constituent input about valued features (biophysical and human-made) of settings.
>
> Scenic Attractiveness (ISA) classes are developed to determine the relative scenic value of lands within a Landscape Character. The three ISA classes are: Class A, Distinctive; Class B, Typical; Class C, Indistinctive. The landscape elements of landform, vegetation, rocks, cultural features, and water features are described in terms of their line, form, color, texture, and composition for each of these classes. The classes and their breakdown are generally displayed in a chart format. A map delineating the ISA classes is prepared.
>
> The Scenic Character (aka Landscape Character) description is used as a reference for the Scenic Integrity of all lands. Scenic Integrity indicates the degree of intactness and wholeness of the Landscape Character; conversely, Scenic Integrity is a measure of the

degree of visible disruption of the Landscape Character. A landscape with very minimal visual disruption is considered to have high Scenic Integrity. Those landscapes having increasingly discordant relationships among scenic attributes are viewed as having diminished Scenic Integrity. Scenic Integrity is expressed and mapped in terms of Very High, High, Moderate, Low, Very Low, and Unacceptably Low.

Constituent Analysis serves as a guide to perceptions of attractiveness, helps identify special places, and helps to define the meaning people give to the subject landscape. Constituent analysis leads to a determination of the relative importance of aesthetics to the public; this importance is expressed as a Concern Level. Sites, travelways, special places, and other areas are assigned a Concern Level value of 1, 2, or 3 to reflect the relatively High, Medium, or Low importance of aesthetics.

During the alternative development portion of the planning process, the potential and historical aspects of the Landscape Character Description are used to develop achievable Landscape Character Options concert with other resource and social demands. Landscape Character Descriptions and associated Scenic Integrity Objectives are identified for each option and alternative. The desired Scenic Character and Scenic Integrity are included within the descriptions of the management area and geographic area desired conditions and standards and guidelines. Generally a Very High or High Scenic Integrity Objectives is assigned to Wilderness and other statutorily designated areas.

Natural scenic character originates from natural disturbances, succession of plants, or indirect activities of humans. The existing scenic character continues to change gradually over time by natural processes unless affected by drastic natural forces or indirect human activities. In a natural-appearing landscape, the existing landscape character has resulted from both direct and indirect human activities. Scenic character may have changed gradually over decades or centuries by plant succession unless a concerted effort was made to preserve and maintain cultural elements through processes such as prescribed fires.[7]

Scenic integrity is defined as the degree of direct human-caused deviation in the landscape, such as temporary and permanent roads, timber harvests, or activity debris. Indirect deviations, such as a landscape created by human suppression of the natural role of fire, are not included in scenic integrity evaluations. Natural occurring incidents, such as insects and disease infestations, are not defined as human-caused deviations in the landscape.

Scenic integrity objectives in the context of the forest plan are equivalent to desired conditions. Scenic integrity describes the state of naturalness or a measure of the degree to

[7] Described in Landscape Aesthetic Handbook.

which a landscape is visually perceived to be "complete." The highest scenic integrity ratings are given to those landscapes that have little or no deviation from the landscape character valued by constituents for its aesthetic quality. Scenic integrity is the state of naturalness or, conversely, the state of disturbance created by human activities or alteration.

The frame of reference for measuring achievement of scenic integrity Objectives is the valued attributes of the "existing" landscape character "being viewed." In Naturally Evolving or Natural-Appearing scenic character is limited to natural or natural appearing vegetative patterns and features, water, rock and landforms. Direct human alterations may be included if they have become accepted over time as positive landscape character attributes.

Several studies have addressed public perceptions toward the ecological and economic consequences of forest insect outbreaks. Yet, little is known about the influence of naturally altered conifer forest landscapes and forest management interventions and the location of the impacted forest stands (near-view to far-view) in relation to each other on forest visitors' visual preferences (Arn Arnberger, et. al).[8] Controversial projects must have meaningful evaluation and public engagement to ensure achieving the basic principles of science-based forest management, including the use of the best available science and the application of robust decision-making processes to provide for effective and beneficial management actions to address the vital need to improve the climate and fire resiliency of our national forests and the safety of our communities.

A constituent assessment should yield information useful in developing statements about desired or preferred landscape character and scenic integrity. Ideally, the constituent assessment also produces information useful for delineating important travel routes and use areas, viewsheds, and special places in the scenic inventory. Finding out how constituents envision and value landscape character, the kinds of scenic integrity they prefer, may involve studying user behavior, talking directly with users, conducting a survey or public involvement workshop, utilizing personal observations of Forest Service personnel, and the perusal of other information sources, including information from previous scenic analyses, recreation and broader forest planning activities.

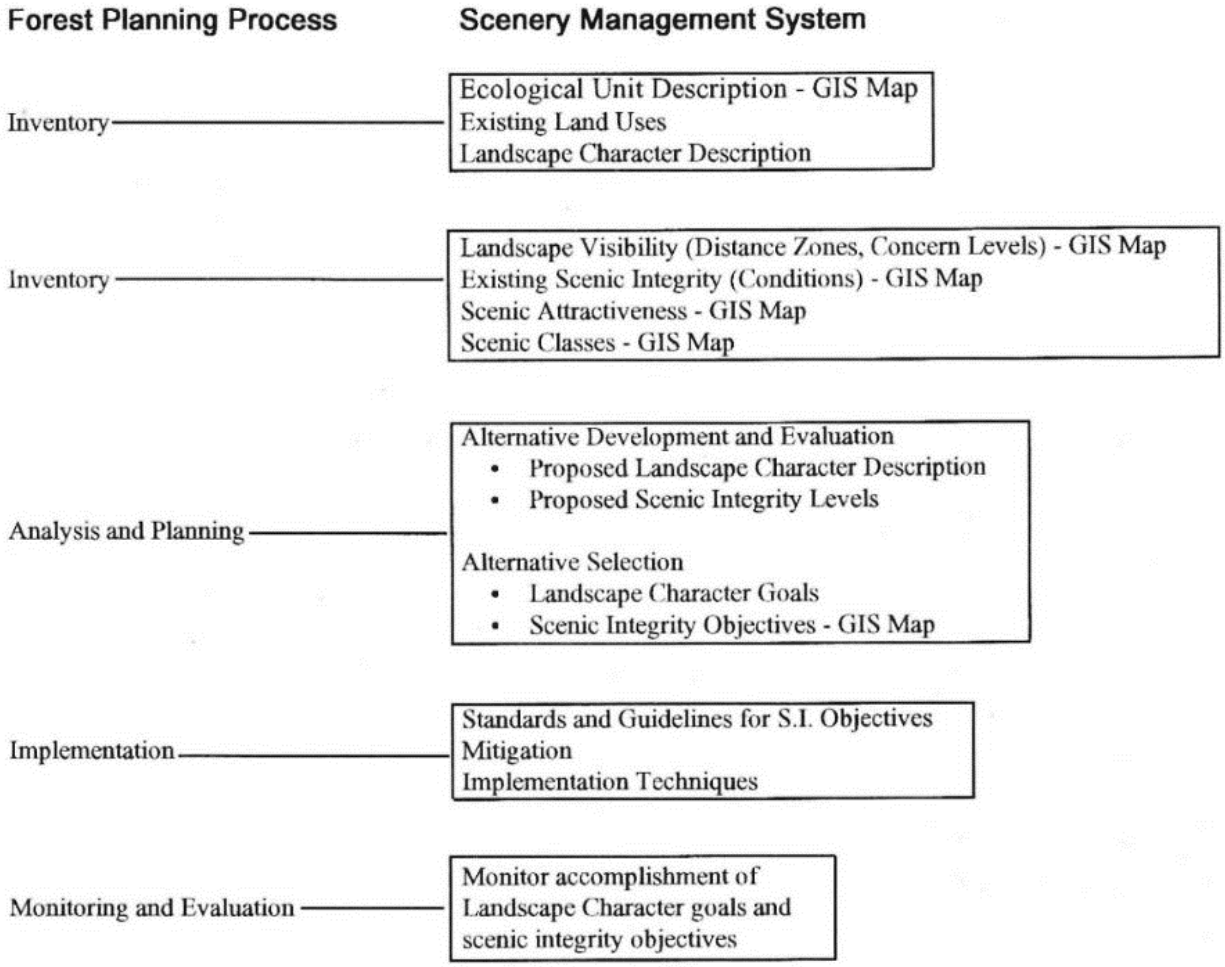
Management decisions on desired scenic character should be made by utilizing public input in some selective and systematic manner. An approach suggested by Frissell and Stankey (1972)[9] is to relate visitor objectives to management objectives. For National Scenic Trails, the opinions

[8] http://nstrail.org/insect_disease_fire/visitor_preferences_for_visual_changes_in_bark_beetle_267_2017_article_975.pdf

[9] http://nstrail.org/carrying_capacity/wilderness_environmental_quality_search_for_social_ecological_harmony_frissell_stankey_1972.pdf

visitors seeking Very High or High Scenic Integrity levels and Primitive or Semi-Primitive Non-Motorized ROS settings should be valued more than the general public that may not be supportive of the purposes from which a National Scenic Trail was designated.

The application of the Scenery Management System to the forest planning process is described on page 5-2 in the Landscape Aesthetics Handbook 701.



A recent study in Rocky Mountain National Park looked at park visitor perceptions of tree mortality in a protected area in a selective and systematic manner. This study describes, *"Bark beetle and other natural disturbances will continue to occur in forests across the globe. It is important to understand how these disturbances impact forest visitor perceptions and behaviors to inform environmental education in attempts to mitigate negative impacts… Overall, visitors continued to regard the park positively (e.g., beautiful, interesting, satisfying) despite observed bark beetle disturbance, in contrast to previous preference studies. Visitors also perceived the forest as alive and healthy despite evidence of tree mortality and awareness of bark beetle activity… Overall, knowledge about bark beetles in the forest did not influence aesthetic*

perceptions. All of the participants rated the forest as beautiful regardless of the amount of knowledge they possessed…" (Christa Cooper Sumner and Jeffrey A. Lockwood).[10]

The valued landscape character is intact from this viewpoint along the Continental Divide National Scenic Trail (CDNST). Dead trees that are caused by natural events are expected in landscapes where the desired Scenic Character is Natural Evolving or Natural Appearing.

3. Scenery Management System and Recreation Opportunity Spectrum Relationships

The relationship between the Scenery Management System and the Recreation Opportunity Spectrum systems is discussed in the 1982 and 1986 ROS Users Guides. The FSM 2310 (WO Amendment 2300-90-1) policy guidance informed and was foundational for the recreation planning direction that is found in the 2012 planning rule and 2015 planning directives.

The Landscape Aesthetics Handbook. Landscape Aesthetics - A Handbook for Scenery Management (Agricultural Handbook Number 701); Appendix F - 1 - Recreation Opportunity Spectrum states, "*Recreation planners, landscape architects, and other Forest Service resource managers are interested in providing high quality recreation settings, experiences, and benefits for their constituents. This is accomplished, in part, by linking the Scenery Management System and the Recreation Opportunity Spectrum (ROS) System. In addition, providing a single constituent inventory and analysis for both systems is helpful in coordinating management practices. Esthetic value is an important consideration in the management of recreation settings. This is especially so in National Forest settings where most people expect a natural appearing landscape with limited evidence of 'unnatural' disturbance of landscape features…*

[10] http://nstrail.org/insect_disease_fire/Visitor_Perceptions_of_Bark_Beetle_Impacted_Forests_in_Rocky_Mountain_National_Park_2020.pdf

Although the ROS User's Guide mentions the need for establishing a value for different landscapes and recreation opportunities within a single ROS class in the attractiveness overlay, there is currently no systematic approach to do so. For instance, in most ROS inventories, all lands that are classified semi-primitive non-motorized are valued equally. Some semi-primitive non-motorized lands are more valuable than other lands because of existing scenic integrity or scenic attractiveness. The Scenery Management System provides indicators of importance for these in all ROS settings. Attractiveness for outdoor recreation also varies by the variety and type of activities, experiences, and benefits possible in each setting…

In the past, there have been apparent conflicts between The Visual Management System sensitivity levels and ROS primitive or semi-primitive classes. One apparent conflict has been where an undeveloped area, having little existing recreation use and seldom seen from sensitive travel routes, was inventoried using The Visual Management System. The inventory led to a sensitivity level 3 classification, and thus apparently contradicted ROS inventory classes of primitive or semi-primitive non-motorized or semi-primitive motorized. Using criteria in The Visual Management System, in a variety class B landscape with a sensitivity level 3, the initial visual quality objective is 'modification' or 'maximum modification,' depending on surrounding land classification. However, because of factors such as few social encounters, lack of managerial regimentation and control, and feelings of remoteness, the same area having little existing recreation use may establish an ROS primitive, semi-primitive non-motorized, or semi-primitive motorized inventory classification. There have been concerns over the premise of The Visual Management System that the visual impact of management activities becomes more important as the number of viewers increases; yet, the ROS System emphasizes solitude, infrequent social encounters, and naturalness at the primitive end of the spectrum, with frequent social encounters and more evident management activities at the urban end. Value or importance is dependent on more than the number of viewers or users, and the key is that both the Scenery Management System and ROS are first used as inventory tools. Land management objectives are established during, not before, development of alternatives.

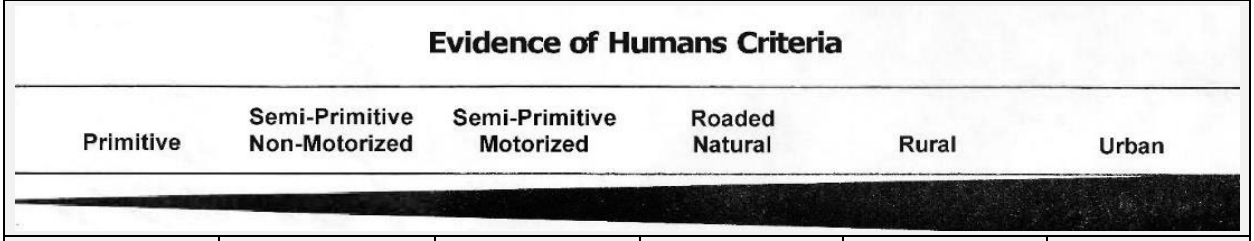
Where there does appear to be a conflict in setting objectives for alternative forest plans, the most restrictive criteria should apply. An example might be an undeveloped land area in a viewshed managed for both middleground partial retention and semi-primitive non-motorized opportunities. Semi-primitive non-motorized criteria are usually the more restrictive.

The Scenery Management System and ROS serve related, but different, purposes that affect management of landscape settings. In some cases, ROS provides stronger protection for landscape settings than does the Scenery Management System. This is similar to landscape setting protection provided by management of other resources, such as cultural resource management, wildlife management, and old-growth management. In all these examples, there may be management directions for other resources that actually provide higher scenic integrity

standards than those reached by the Scenery Management System. Different resource values and systems (the Scenery Management System, the ROS System…) are developed for differing needs, but they are all systems that work harmoniously if properly utilized. In all these examples, there are management decisions made for other resources that result in protection and enhancement of landscape settings…

Evidence of Humans Criteria and the Visual Management System – While in some ways it seems possible to equate Visual Quality Objectives, or a range of objectives, with each Recreation Opportunity Spectrum class the function of the Evidence of Humans Criteria in the Recreation Opportunity Spectrum is not the same as Visual Quality Objectives in the Visual Management System and equating the two is not recommended. For example, middle and background Visual Management System areas are often where Primitive and Semi-Primitive Recreation Opportunity Spectrum classes occur. A retention or partial retention Visual Quality Objective given to such an area for management direction could have a vastly different meaning than the delineated Recreation Opportunity Spectrum class. Thus, identify the Recreation Opportunity Spectrum classes through the setting descriptions in the Evidence of Humans Criteria—Table 5… To assist in this, the Evidence of Humans Criteria are purposely worded differently than the definitions of Visual Quality Objectives." (Table 5 is found in the 1982 ROS Users Guide on page 22 and in the 1986 ROS Red Book on page IV-10.)

Table 5



Setting is essentially an Unmodified natural environment. Evidence of humans would be unnoticed by an observer wandering through the area.	Natural setting may have subtle modifications that would be noticed, but not draw the attention of an observer wandering through the area.	Natural setting may have moderately dominant alterations, but would not draw the attention of motorized observers on trails and primitive roads [11] within the area.	Natural setting may have modifications which range from being easily noticed to strongly dominant to observers within the area. However, from sensitive travel routes and use	Natural setting is culturally modified to the point that it is dominant to the sensitive travel route observer. May include pastoral, agricultural, intensively managed	Setting is strongly structure dominated. Natural or natural-appearing elements may play an important role but be visually subordinate….

[11] "Primitive roads" are not constructed or maintained, and are used by vehicles not primarily intended for highway use (1982 User Guide and 1986 ROS Book).

			areas these alterations would remain unnoticed or visually subordinate.	wildland resource landscapes, or utility corridors….	
Evidence of trails is acceptable, but should not exceed standard to carry expected use.	Little or no evidence of primitive roads and the motorized use of trails and primitive roads.	Strong evidence of primitive roads and the motorized use of trails and primitive roads.	There is strong evidence of designed roads and/or highways.	There is strong evidence of designed roads and/or highways.	There is strong evidence of designed roads and/or highways and streets.
Structures are extremely rare.	Structures are rare and isolated.	Structures are rare and isolated.	Structures are generally scattered….	Structures are readily apparent….	Structures and structure complexes are dominant….

The following exhibit displays the relationship between ROS class and Scenic Integrity Objectives (Landscape Aesthetics Handbook).

Scenic Integrity Objectives					
ROS Class	Very High	High	Moderate	Low	Very Low
Primitive	Norm	Inconsistent	Unacceptable	Unacceptable	Unacceptable
Semi-Primitive Non-Motorized	Fully Compatible	Norm	Inconsistent	Unacceptable	Unacceptable
Semi-Primitive Motorized	Fully Compatible	Fully Compatible	Norm [12]	Inconsistent	Unacceptable
Roaded Natural-Appearing	Fully Compatible	Norm	Norm	Norm [13]	Inconsistent [14]
Rural	Fully Compatible	Fully Compatible	Norm	Norm[13]	Inconsistent[14]
Urban	Fully Compatible	Fully Compatible	Fully Compatible	Fully Compatible	Not Applicable

[12] Norm from sensitive roads and trails.

[13] Norm only in middleground-concern level 2, where Roaded Modified subclass is used.

[14] Unacceptable in Roaded Natural-Appearing and Rural where Roaded Modified subclass is used. It may be the norm in a Roaded Modified subclass.

The valued landscape character is extremely altered and the ROS setting is substantially degraded along the Cumbres Pass segment of the Continental Divide National Scenic Trail on the Rio Grande National Forest resulting in unacceptably low scenic integrity and roaded modified ROS class conditions. This timber sale and road building action is inconsistent with the inherent constraints of the National Trails System Act.

B. Recreation and Visitor Use Management

1. Interagency Visitor Use Management Council

The Interagency Visitor Use Management Council (IVUMC) has developed a Visitor Use Management Framework [15] that is designed for federal managers to collaboratively develop, implement, and monitor strategies and actions to provide sustainable access to lands and waters. The intent, and ultimate desired outcome, is to provide high quality visitor experiences, while protecting natural and cultural resources.

Responsive and effective visitor use management requires managers to:

- Identify desired conditions for resources, visitor experiences, and facilities/operations;
- Gain an understanding of how visitor use influences achievement of those goals; and
- Commit to active / adaptive management and monitoring of visitor use to meet those goals.

[15] https://visitorusemanagement.nps.gov

The framework can be incorporated into existing federal agency planning and decision-making processes and is applicable across a wide spectrum of situations that vary in complexity and spatial extent from site-specific to large-scale planning efforts. The framework is a legally defensible and transparent planning and decision-making process that:

- Integrates applicable laws and policy requirements;
- Provides sound rationale upon which to base management decisions; and
- Facilitates adaptive management.

The framework identifies four overarching elements with discrete steps under each. The framework is intended to be applied in a flexible manner using the sliding scale concept. The strengths of this framework are that it is iterative, adaptable, and flexible.

Providing for the nature and purposes of a National Scenic Trail should use the Visitor Use Management Framework and utilize Scenery Management System/Visual Resource Management, Recreation Opportunity Spectrum, and Carrying Capacity processes. A primary purpose of these systems is to provide for quality visitor experiences.

2. Unmanaged Recreation

The Chief of the Forest Service in 2003 identified "*unmanaged recreation*" as one of the Four Threats that jeopardize the health of the National Forests, the quality of recreation experiences, and essential ecosystem functions. Unmanaged recreation presents a challenge to both researchers and managers because it is shrouded in uncertainty resulting from disagreement over the definition of the problem, strategies for resolving the problem, and outcomes of management; and incomplete knowledge about recreation visitor's values and relationships with each other and the land. During this period, the Rocky Mountain Region of the Forest Service identified OHV use, mountain bike use, and dispersed recreation in high alpine environments (e.g., Colorado Fourteeners, Indian Peaks Wilderness) where there were growing issues and concerns.

Forest Service in 2006 provided the following facts about unmanaged recreation:

Growing outdoor recreation –

- A 2000 survey showed that 202 million Americans over the age of 15 participate in some form of outdoor recreation, or about 97.5 percent of the population.
- Between 1983 and 1995, percentage of Americans over the age of 15 who:
  - Participated in active outdoor recreation sometime during the year grew from 32 to 56 percent.
  - Traveled to recreation destinations grew from 70 to 90 percent.
- From 1946 to 2000, the number of National Forest System (NFS) visitors grew 18 times. In 2002, the numbers of visitors to national forests and grasslands reached

214 million. Another 215 million people drove through and/or stopped at overlooks and scenic pullouts to enjoy the vistas but did not use Forest Service facilities. As the US population is expected to more than double from 275 to 571 million by the next century (2100), the number of visitors to NFS lands is expected to dramatically increase.

- Pressures on undeveloped natural land for recreation purposes due to growth in U.S. population is:
  - Moderate to heavy through most of the West
  - Heavy through most of the Southwest and the Rockies

Growing OHV use –

- One of the fastest growing forms of outdoor recreation involves the use of OHVs. OHV users have grown tenfold since 1972, from approximately five million to 51 million in 2004. OHV users account for about 11 million annual visits to the national forests and grasslands.
- Surveys conducted in 1983 and 1995 shows that Americans over the age of 15 who:
  - Used OHVs sometime during the year grew from 4 to 14 percent.
  - Took recreational trips to distant destinations grew from 40 to 67 percent.
- Of visitors to the national forests, 11 million visits involve OHV use.
- Decreasing availability of open space outside of public land along with the surge in the use of OHVs is likely to increase the demand for OHV use on NFS lands.
- Other public and private lands are affected by the increasing use of OHVs. Increased population growth, urbanization, and changing demographics are creating competition for space and activities.

Impacts of unmanaged recreation –

- Erosion, user conflicts, spread of invasive species, damage to cultural sites, disturbance to wildlife, destruction of wildlife habitat, and risks to public safety can result from unmanaged recreation, including cross-country OHV use.

To address these issues the Forest Service in 2005 established a Travel Management Rule (36 CFR § 212) and in 2008 supporting FSM 2350, FSM 7700, and FSM 7710 directives were issued. Highlights of the rule are:

- The rule requires each national forest or ranger district to designate those roads, trails, and areas open to motor vehicles.
- Designation includes class of vehicle and, if appropriate, time of year for motor vehicle use. A given route, for example, could be designated for use by motorcycles, ATVs, or street-legal vehicles.

- The rule prohibits motor vehicle use off the designated system or inconsistent with the designations.
- Designation decisions are made locally, with public input and in coordination with state, local, and tribal governments.
- Designations are shown on a motor vehicle use map. Use inconsistent with the designations are prohibited.

Implementation of visitor use management principles would assist the agencies in the planning and management of the recreation resource and facilitate addressing unmanaged recreation concerns, issues, and opportunities on Federal lands. Travel plans developed in response to the Travel Management Rule are resource plans that must be consistent with Forest Plan direction. Amended and revised Forest Plan direction is not constrained by existing travel plan decisions.

3. Recreation and Tourism Initiatives

The publication "Recreation & Tourism Initiative, Igniting Research for Outdoor Recreation: Linking Science, Policy, and Action," 2020, edited by Steven Selin and others, PNW-GTR-987 describes, "*Public lands provide opportunities and settings for people to experience nature and the outdoors. These outdoor experiences are important for human health and well-being and result in visitor spending that benefits local communities. This report shows that new research, tools, and frameworks are needed to help us find new ways to conceptualize outdoor recreation and enhance the ability of public land managers to provide outdoor experiences while protecting natural and cultural resources….*"

The following reviews sections of this publication with quotes from the chapters and embedded remarks that reflect on several of the report propositions.

Chapter 1: "The Shifting Outdoor Recreation Paradigm: Time for Change" by Dale J. Blahna states, "*In general, the outdoor recreation paradigm tended to focus narrowly on the social science of visitor experiences, satisfaction, and economic values, while recreation ecology focused on the environmental impacts of recreation. A few integrative models were developed, such as VERP (visitor experience and resource protection) and LAC (limits of acceptable change), but these tools tend to be used rarely and they never grew or evolved into landscape-level models that could play key roles in decisionmaking or management planning like forest growth and yield, wildlife habitat, and fire spread models*…"

Observation: The 1986 "Recreation Opportunity Setting as a Management Tool" technical guide provided an integrated model for resource management on NFS lands. The guide for each ROS class described compatible recreation, timber, wildlife, range, and water resource relationships.

Publication: *"The emerging paradigm of outdoor recreation recognizes that humans are part of natural systems and that connecting with natural settings provides a broad range of human*

values and benefits that are not otherwise available, affirming these values and benefits to be essential for human health and well-being. As such, it is the responsibility of outdoor recreation professionals and agencies to increase public access and visitor diversity and expand the types of visitor experiences, opportunities, and benefits that people obtain from public lands, while simultaneously protecting the natural environment. Thus, the paradigm shift that is occurring in outdoor recreation has both a societal/conceptual component and an agency/practice component, and both require integrating social and environmental factors."

Observation: This statement improperly suggests there is a common belief that existing recreation planning models do not address humans as being part of natural systems, while improperly diminishing the recognition that humans can modify the natural environment in a manner that could substantially reduce human health and well-being benefits. A concern is that use continues to increase without adequate measures to protect the natural environment. In addition, more primitive recreation settings that are sought by many recreationists continue to be degraded by resource development actions (e.g., road building).

The recreation resource does not need to be a catch-all resource category for addressing the many dimensions of human connections to the natural environment. Describing many aspects of native American use of public lands as recreation would be a mistake. The Arctic National Wildlife Range manager in 1977 asked that I include the Gwitchin and Inuit people in a visitor use questionnaire survey. These native people continue to be part of the dynamics of the Refuge. After speaking with Gwitchin and Inuit individuals, I found that it was clear that their connections and experiences in the Refuge would not be captured by my visitor use survey instrument. The dimensions of their use in the Refuge were complex and could not be readily described as recreation. Some aspects of Gwitchin and Inuit use of public lands in Alaska were recognized and protected by the Alaska National Interest Lands Conservation Act.

Publication: *"Dated recreation planning tools, a downward trajectory for appropriated government funding, and shifting societal values and growing diversity all lend urgency to the need for new ways of thinking about our profession and new practices in recreation management. Outdoor recreation is still viewed as a secondary consideration in decisionmaking by federal land management agencies, with resource production and environmental protection values dominant. Ironically, recreation access and use are the primary ways that Americans connect with public lands, and public lands could be viewed as an essential component of the nation's health infrastructure. We need to act now for three reasons: (1) natural systems will benefit from a better relationship with human society, (2) there is an immediate need for increased government support for recreation management and infrastructure, and (3) public lands require consistent and more public support if they are to continue to exist as a valued component of our well-being…*

The anomalies and emerging agency initiatives are the converse of the assumptions underlying the current paradigm. Although solitude, remoteness, traditional uses, counting visitors, and reducing onsite conflicts will always be important parts of public lands recreation management, they are not and should not be the primary focus of the new and emerging goals of sustainable recreation. Recognizing different cultural beliefs and expectations regarding human-nature interactions, expanding understanding and measurement of the diversity of benefits of human-nature contacts, and creating an outdoor recreation ecosystem science will require significant changes for both recreation research and agency management, not unlike the scientific revolutions in fire and wildlife ecology in the 20th century…"

Observation: The statement that recreation planning tools are dated is not substantiated. The Recreation Opportunity Spectrum, as envisioned in 1986, would continue to be an effective recreation resource integration tool in forest planning if properly implemented. However, over the last several years the agencies have tended to move away from managing recreation settings; instead, recreation management has been mostly focused on recreation activities. In 2020, the Forest Service FSM 2310 recreation planning directive was modified, which will further diminish the role that the recreation resource will have in multiple use decision making. The ROS planning framework and Limits of Acceptable Change will continue to contribute to integrated planning for multiple use programs if their protocols are adhered to by agencies.

Chapter 5: Rethinking "Outdoor Recreation" to Account for the Diversity of Human Experiences and Connections to Public Lands, Dale Blahna and others state, "*A challenge for recreation managers is overcoming the trap of past mental models that have focused on the notion that recreation is a mix of a small set of activities and a small set of settings that result in recreation satisfaction and then a resultant desired benefit. The Recreation Opportunity Spectrum (ROS), for example, which is the dominant recreation analysis tool of the Forest Service and the Bureau of Land Management (BLM), is a case in point…"*

Observation: The BLM no longer uses the Recreation Opportunity Spectrum. The current BLM recreation planning process is described as the Recreation Setting Characteristics (BLM H-8320-1). The BLM states, "*the ROS process mapped the physical, social, and operational RSCs separately and then combined all maps into one final composite map. This often resulted in inconsistencies between the physical, social, and operational recreation settings. The conflicts were resolved by emphasizing the physical character of the landscape or averaging the differences. Unfortunately, this often resulted in a misrepresentation of the social and operational qualities of the recreation area, making the ROS difficult to understand and implement. In response, the BLM has modified the application of the ROS by not requiring the integration of the physical, social, and operational RSCs into one final composite map*."

This change may reduce the ability of the BLM to protect recreation settings. To protect the qualities and values of National Scenic and Historic Trails, the BLM should use the ROS planning framework.

Publication: *"The ROS is an abstraction of human experiences that classifies an agency's lands into six very general categories (urban, rural, roaded natural, semi-primitive motorized, semi-primitive non-motorized, and primitive) based on seven criteria (remoteness, access, naturalness, facilities, social encounters, visitor impacts, and management characteristics). This abstraction has taken the diversity of the natural world and our relationship to it and has reduced the richness and complexity of our imagination. Today, the ROS appears overly reductionist and does not recognize the simultaneous effects of incongruous setting characteristics and personal and social experiences in time, space, mind, or memory."*

Observation: The ROS is based on the idea that visitors participate in different recreation activities in different settings in order to realize certain experiences. There are many different types of experiences. Some relate to solitude, risk, and challenge and we typically associate these with opportunities at the primitive end of the spectrum. Others relate to meeting and enjoying others or family togetherness. The Forest Service planning directives, consistent with the ROS planning framework, states "*The interdisciplinary team is encouraged to use new approaches for managing recreation within the plan area. The interdisciplinary team should be proactive in developing a coherent system of sustainable and socially compatible recreation opportunities*."

ROS setting attributes provide for a degree of integration with other resources, which are important elements of achieving desired experiences. The recreation opportunity setting is composed of other natural features in addition to the six factors. Landform types, vegetation, scenery, water, wildlife, etc., are all important elements of recreation environments; they influence where people go and the kinds of activities possible. Considerable work has gone into developing procedures for measuring and managing visual resources.

Publication: *"Like ROS, most visitor management concepts and tools used today were developed in the 1970s and 1980s. They reflect the post-World War II "recreation boom" mentality, when a new generation of recreationists provided new challenges to managers, and recreation use levels, visitor conflicts, resource impacts, and crowding became dominant agency concerns. In the 21st century, agency policies and leadership priorities are emphasizing increasing visitor use and access, diversifying the visitor base, enhancing experiences, sharing stewardship, and expanding collaborators in land management and decisionmaking. As noted in the prologue, these are very different from the boom era concerns, and concepts like visitor satisfaction, specialization, and carrying capacity are ghosts of past models that are limiting our ability to address today's challenges…"*

Observation: Agencies continue to face new generations of recreationists that provide new challenges to managers. Visitor conflicts, crowding, and resource issues have not been abated. These lasting issues and the desire to enhance experiences are confounded by agency policies and leadership priorities that emphasize increasing visitor use and access, increased resource production that diminish recreation opportunities, and establishing management priorities that reduce recreation budgets and the number of professional wildland recreation management specialists. Wildland recreation planning and management specialists would help ensure that the agency had adequate subject matter expertise to address the recreation resource.

Chapter 12: Integrating Social, Ecological, and Economic Factors in Sustainable Recreation Planning and Decisionmaking by Dale J. Blahna and others state, *"If a primary objective of sustainable recreation is sustaining both recreation experiences and environmental conditions while encouraging increasing recreation use and visitor diversity, we know little about how to integrate with broader system resilience objectives. And goals conceived in this way will require newer and more integrated sets of principles and practices than are currently available to managers. Existing recreation management tools are limited, and existing large-scale planning and decision frameworks tend to be very complex and based on generic systems characteristics and standardized metrics, rather than context and place-specific issues. Different research approaches are needed to develop a new generation of integrated principles and practices."*

Observation: The ROS planning framework continues to be an important tool for integrated resource land management planning. Its intuitive appeal and ease of integration with other resource uses and values are responsible for its widespread adoption ~~and modification~~. It has a strong science foundation. As a planning framework, ROS forces management to explicate fundamental assumptions, but in the process of moving through the framework, it allows agency and public reviewers to follow and understand results.

There is no evidence that protecting natural settings using the ROS planning framework is subjectively limiting the ability of the agencies to address current human use needs and challenges. It should not be assumed that different research approaches will lead to the development of a new generation of integrated principles and effective practices. The ROS planning framework was not intended to never change, but modifications to the ROS planning framework, and changes to other planning models, should only occur through robust public involvement processes and be based on science.

4. Recreation Opportunity Spectrum Plan Components

The Forest Service 1982 ROS User Guide states, "*Managing for recreation requires different kinds of data and management concepts than does most other activities. While recreation must have a physical base of land or water, the product—recreation experience--is a personal or*

social phenomenon. Although the management is resource based, the actual recreational activities are a result of people, their perceptions, wants, and behavior.

While the goal of the recreation is to obtain satisfying experiences, the goal of the recreation resource manager becomes one of providing the opportunities for obtaining these experiences. By managing the natural resource settings, and the activities, which occur within it, the manager is providing the opportunities for recreation experiences to take place. Therefore, for both the manager and the recreationist, recreation opportunities can be expressed in terms of three principal components: the activities, the setting, and the experience.

For management and conceptual convenience possible mixes or combinations of activities, settings, and probable experience opportunities have been arranged along a spectrum, or continuum. This continuum is called the Recreation Opportunity Spectrum (ROS) and is divided into six classes. The six classes or portions along the continuum, and the accompanying class names have been selected and conventionalized because of their descriptiveness and utility in Land and Resource Management Planning and other management applications. The Recreation Opportunity Spectrum provides a framework for defining the types of outdoor recreation opportunities the public might desire, and identifies that portion of the spectrum a given National Forest might be able to provide.

Planning for recreation opportunities using the Recreation Opportunity Spectrum are conducted as part of Land and Resource Management Planning. The recreation input includes factors such as supply and demand, issues and identification of alternative responses to those issues, which the planner must assess in order to develop management area prescriptions designed to assure the appropriate recreation experience through setting and activity management on the Forest…

Land and Resource Management Planning assure that National Forest System lands provide a variety of appropriate opportunities for outdoor recreation… Each prescription should contain minimum guidelines and standards to be met as well as directions concerning the type of activities, settings, and experience opportunities to be managed for during the planning time periods… The land and water areas of the Forest are inventoried and mapped by Recreation Opportunity Spectrum class to identify which areas are currently providing what kinds of recreation opportunities. This is done by analyzing the physical, social, and managerial setting components for each area. The characteristics of each of these three components of the setting affect the kind of experience the recreationist most probably realizes from using the area.

- *Physical Setting – The physical setting is defined by the absence or presence of human sights and sounds, size, and the amount of environmental modification caused by human activity.*
- *Size of Area - Size of area is used as an indicator of the opportunity to experience self-sufficiency as related to the sense of vastness of a relatively undeveloped area. In some settings, application of the remoteness criteria assures the existence of these experience*

opportunities; in other settings, the remoteness criteria alone do not. Therefore, apply the size criteria to the map or overlay developed using the remoteness criteria to ensure that the appropriate experience opportunities are available. (Most useful for ROS setting inventory.)

- *Evidence of Humans – Evidence of Humans is used as an indicator of the opportunity to recreate in environmental settings having varying degrees of human influence or modification.*
- *Social Setting – The social setting reflects the amount and type of contact between individuals or groups. It indicates opportunities for solitude, for interactions with a few selected individuals, or for large group interactions.*
- *Managerial Setting – The managerial setting reflects the amount and kind of restrictions placed on people's actions by the administering agency or private landowner which affect recreation opportunities."*

Remoteness characteristics in established Primitive and Semi-Primitive ROS settings may become degraded over time if adjacent Roaded Natural ROS settings are developed. Rural, roaded natural, semi-primitive motorized recreation opportunity spectrum settings should describe those new motorized routes and areas shall be located so the new route does not change the setting of an adjacent semi-primitive nonmotorized and primitive recreation opportunity

The Forest Service Planning Handbook (FSH 1909.12 – Part 23.23a) addresses recreation resources. *"The Forest Plan must include desired conditions for sustainable recreation using mapped desired recreation opportunity spectrum classes. This mapping may be based on management areas, geographic areas, designated areas, independent overlay mapping, or any combination of these approaches. The plan should include specific standards or guidelines where restrictions are needed to ensure the achievement or movement toward the desired recreation opportunity spectrum classes." Forest Service planning regulations define recreation opportunity as, "An opportunity to participate in a specific recreation activity in a particular recreation setting to enjoy desired recreation experiences and other benefits that accrue…."* Recreation setting is defined as*, "The social, managerial, and physical attributes of a place that, when combined, provide a distinct set of recreation opportunities. The Forest Service uses the recreation opportunity spectrum to define recreation settings*…."

To meet the planning rule analysis requirements of using the Best Available Scientific Information and to ensure CEQ requirements for Methodology and Scientific Accuracy, ROS plan components with desired conditions, standards, and guidelines must be described in the plan.

The Planning Rule requires "plan components for sustainable recreation, including recreation settings, opportunities, access; and scenic character…" and that "plan components guide future project and activity decisionmaking. The plan must indicate whether specific plan components apply to the entire plan area, to specific management areas or geographic areas, or to other areas as identified in the plan" (36 CFR § 219.7 Part (e)). Knowing where ROS and Scenic

Character (and SIO) plan components apply is essential to developing an integrated Forest Plan. Modifying where the ROS and Scenic Character (and SIO) direction applies must follow amendment processes and not be addressed as an administrative change. A plan amendment is required to add, modify, or remove one or more plan components, or to change how or where one or more plan components apply to all or part of the plan area.

The following describes ROS setting plan components that represent each ROS class desired characteristics with supporting standards, guidelines, and suitability determinations. Standards and guidelines may have qualifications or allowed ROS class inconsistencies.

Recommended Recreation Opportunity Spectrum Plan Components

Primitive ROS Setting

Primitive ROS Class Desired Conditions
Setting: The area is essentially an unmodified natural environment. Interaction between users is very low and evidence of other users is minimal.
Experience: Very high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of outdoor skill in an environment that offers a high degree of challenge and risk.
Evidence of Humans: Evidence of humans would be un-noticed by an observer wandering through the area. Natural ecological processes such as fire, insects, and disease exist. The area may provide for wildlife connectivity across landscapes. Primitive ROS settings contain no motorized and mechanized vehicles and there is little probability of seeing other groups. They provide quiet solitude away from roads and people or other parties, are generally free of human development, and facilitate self-reliance and discovery. Signing, and other infrastructure is minimal and constructed of rustic, native materials. Scenic Integrity Objective is Very High.
Primitive ROS Class Standards and Guidelines
Standards: Motor vehicles are not allowed unless the use is mandated by Federal law and regulation. Permanent and temporary roads may not be constructed.
Guidelines: (1) No new permanent buildings should be constructed, since buildings may degrade the unmodified character of these landscapes; (2) Less than 6 parties per day encountered on trails and less than 3 parties visible at campsite since an increase in the number of groups may lead to a sense of crowding; (3) Party size limits range between 6 and 12; and (4) No roads, timber harvest, or mineral extraction are allowed in order to protect the remoteness and naturalness of the area.
Primitive ROS Class Suitability of Lands
Suitability: (1) Motorized and mechanized recreation travel are not suitable; and (2) lands are not suitable for timber production.

Semi-Primitive Non-Motorized ROS Setting

Semi-Primitive Non-Motorized ROS Class Desired Conditions
Setting: The area is predominantly a natural-appearing environment where natural ecological processes such as fire, insects, and disease exist. Interaction between users is low, but there is often evidence of other users.
Experience: High probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of outdoor skill in an environment that offers a high degree of challenge and risk.
Evidence of Humans: Natural setting may have subtle modifications that would be noticed but not draw the attention of an observer wandering through the area. The area provides opportunities for exploration, challenge, and self-reliance. The area may contribute to wildlife connectivity corridors. Closed roads may be present, but are managed to not dominate the landscape or detract from the naturalness of the area. Rustic structures such as signs and footbridges are occasionally present to direct use and/or protect the setting's natural and cultural resources. Scenic Integrity Objective is High.
Semi-Primitive Non-Motorized ROS Class Standards and Guidelines
Standards: (1) Motor vehicle use is not allowed unless the use is mandated by Federal law and regulation; and (2) Permanent and temporary roads may not be constructed.
Guidelines: (1) The development scale of recreation facilities should be 0-1 to protect the undeveloped character of desired SPNM settings; (2) Less than 15 parties per day encountered on trails and less than 6 parties visible at campsite, since an increased in the number of groups may lead to a sense of crowding; (3) Party size limits range between 12 and 18; (4) Vegetation management may range from prescribed fire to very limited and restricted timber harvest for the purpose of maintaining or restoring a natural setting; and (5) To protect resources, any existing road should be decommissioned, including obliteration and recontouring with natural slopes.
Semi-Primitive Non-Motorized ROS Class Suitability of Lands
Suitability: (1) Motorized recreation travel is not suitable; and (2) Lands are not suitable for timber production.

Semi-Primitive Motorized ROS Setting

Semi-Primitive Motorized ROS Class Desired Conditions
Setting: The area is predominantly a natural-appearing environment. Concentration of users is low, but there is often evidence of other users.
Experience: Moderate probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance in an environment that offers a high degree of challenge and risk. Opportunity to have a high degree of interaction with the natural environment. Opportunity to use motorized equipment.

Evidence of Humans: Natural setting may have moderate alterations, but would not draw the attention of motorized observers on trails and primitive roads within the area. The area provides for motorized recreation opportunities in backcountry settings. Vegetation management does not dominate the landscape or detract from the experience of visitors. Visitors challenge themselves as they explore rugged landscapes. Scenic Integrity Objective is Moderate.
Semi-Primitive Motorized ROS Class Standards and Guidelines
Guidelines: (1) The development scale of recreation facilities should be 0-1 to protect the undeveloped character of desired SPM settings; (2) Low to moderate contact between parties to protect the social setting; (3) Vegetation management may range from prescribed fire to limited and restricted timber harvest for the purpose of maintaining or restoring natural vegetative conditions; and (4) Motorized routes are typically designed as motorized trails (FSH 2309.18 part 23.21, Trail Class 2, No Double Lane) and Four-Wheel Drive Vehicles routes (FSH 2309.18 part 23.23, Trail Class 2, No Double Lane) offering a high degree of self-reliance, challenge, and risk in exploring these backcountry settings.
Semi-Primitive Motorized ROS Class Suitability of Lands
Suitability: Lands are not suitable for timber production.

Roaded Natural ROS Setting

Roaded Natural ROS Class Desired Conditions
Setting: The area is predominantly natural-appearing environments with moderate evidences of the sights and sounds of human activities. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.
Experience: About equal probability to experience affiliation with other user groups and for isolation from sights and sound of humans. Opportunity to have a high degree of interaction with the natural environment. Challenge and risk opportunities associated with a more primitive type of recreation are not very important. Practice and testing of outdoor skills might be important. Opportunities for both motorized and non-motorized forms of recreation are possible.
Evidence of Humans: Natural settings may have modifications, which range from being easily noticed to strongly dominant to observers within the area. However, from sensitive travel routes and use areas these alternations would remain unnoticed or visually subordinate. The landscape is generally natural with modifications moderately evident. Concentration of users is low to moderate, but facilities for group activities may be present. Challenge and risk opportunities are generally not important in this class. Opportunities for both motorized and non-motorized activities are present. Construction standards and facility design incorporate conventional motorized uses.

The **Roaded Modified** subclass includes areas that exhibit evidence of extensive forest management activities that are dominant on the landscape, including having high road densities, heavily logged areas, highly visible mining, oil and gas, wind energy, or other similar uses and activities. Scenic Integrity Objective is Low. Desired Scenic Character may be described as "Agricultural" expressing dominant human agricultural land uses producing domestic products.
Roaded Natural ROS Class Suitability of Lands
Suitability: Lands may be suitable for timber production.

Rural ROS Setting

Rural ROS Class Desired Conditions
Setting: Area is characterized by substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and parking are available.
Experience: Probability for experiencing affiliation with individuals and groups is prevalent as is the convenience of sites and opportunities. These factors are generally more important than the setting of the physical environment. Opportunities for wildland challenges, risk-taking, and testing of outdoor skills are generally unimportant except for specific activities like downhill skiing, for which challenge and risk-taking are important elements.
Evidence of Humans: Natural setting is culturally modified to the point that it is dominant to the sensitive travel route observer. May include intensively managed wildland resource landscapes. Pedestrian or other slow-moving observers are constantly within view of the culturally changed landscape.

How are ROS setting inconsistencies addressed in providing for desired settings along the National Scenic Trail? An inconsistency is defined as a situation in which the condition of an indicator exceeds the range defined as acceptable by the management guidelines. For example, the condition of the indicators for the National Trail corridor may all be consistent with its management as a semi-primitive non-motorized area, except for the presence of a trailhead and access road. In such a case, what are the implications of the inconsistency? Does the inconsistency benefit or interfere with the nature and purposes of the National Trail? What should be done about the inconsistency? Three general kinds of actions are possible. First, perhaps nothing can or should be done. It may be concluded that the inconsistency will have little or no effect on the area's general character. Alternatively, the agency may lack jurisdiction over the source of the inconsistency. A second response is to direct management action at the inconsistency to bring it back in line with the guidelines established for the desired ROS class.

The main point to be understood about inconsistencies is that they might be managed. The presence of one does not necessarily automatically lead to a change in ROS class. By analyzing its cause, implications, and possible solutions, an inconsistency may be handled in a logical and systematic fashion.

5. ROS and the Roadless Rule

Land Management Plans are developed pursuant to the final rule must comply with all applicable laws and regulations" (36 CFR § 219.1(f), 77 FR 21206). The planning rule provides no direct guidance for integrating IRAs designated by the Roadless Rule into the forest planning process; however, the planning rule and directives do require that Land Management Plans establish desired ROS classes.

To be consistent with the planning rule and directives, 2001 Roadless Area prohibitions and restrictions would dictate that the Land Management Plan must establish Primitive, Semi-Primitive Non-Motorized, or Semi-Primitive Motorized ROS settings, as described in the 1986 ROS Book, for Roadless Areas if their values are to be protected. These ROS settings are not suitable for timber production and associated developments, since timber production and related developments are contrary to the physical attributes for "*Evidence of Humans*," "*Non-Recreation Uses*," and "*Naturalness.*"

C. Forest Service Manual 2310 (2300-2020-1) – Recreation Planning

The Sustainable Recreation Planning directive, FSM 2310 (WO Amendment 2300-2020-1), was approved by Tina Terrell, Associate Deputy Chief on April 23, 2020. Unfortunately, this amended FSM 2310 guidance is inconsistent with the recreation opportunity spectrum planning framework and the comprehensive planning requirements of the Wild and Scenic Rivers Act and National Trails System Act. It is improper that the Forest Service modified the 1986 ROS class definitions without articulating compelling reasons for the modifications and disclosing the consequences to those recreationists seeking Primitive and Semi-Primitive ROS settings as described since 1982.

The recreation opportunity spectrum provides a framework for integrating recreational opportunities and nonrecreational activities. The central notion of the spectrum is to offer recreationists alternative settings in which they can derive a variety of experiences. Because the management factors that give recreational value to a site are interdependent, management must strive to maintain consistency among these factors so that unplanned or undesired changes in the opportunities do not occur.

The amended policy makes substantial changes to the recreation planning policy direction without the benefit of 36 CFR § 216 public involvement processes. This policy replaces FSM 2310 (WO Amendment 2300-90-1). The 1990 directive provided the following direction:

2310.3 - Policy. In addition to general planning policy presented in 36 CFR 219.1, FSM 1903, FSM 1920.3, FSM 1922.03, and FSM 2303:

1. *Use the Recreation Opportunity Spectrum (ROS) to establish planning criteria, generate objectives for recreation, evaluate public issues, integrate management concerns, project recreation needs and demands, and coordinate management objectives.*
2. *Use the ROS system to develop standards and guidelines for proposed recreation resource use and development.*
3. *Use the ROS system guidelines to describe recreation opportunities and coordinate with other recreation suppliers.*
4. *Recognize individual National Forests need not provide recreation opportunities in each ROS class.*
5. *Do not provide urban opportunities with appropriated or other public funds. Channel urban class provided by private sector funds to private land if available…*

2311.1 - Recreation Opportunity Spectrum (ROS). Use the Recreation Opportunity Spectrum (ROS) system and the ROS Users Guide (U.S. Department of Agriculture, Forest Service. ROS Users Guide. Washington, DC: U.S. Department of Agriculture, Forest Service; 1982. 37p.) to delineate, define, and integrate outdoor recreation opportunities in land and resource management planning. Recreation integration/coordination provides for integrated management prescriptions and associated standards to deal with the recreation resource. ROS defines six recreation opportunity classes that provide different settings for recreational use: primitive, semi-primitive nonmotorized, semi-primitive motorized, roaded natural, rural, and urban. Use ROS classes to describe all recreation opportunity areas--from natural, undisturbed, and undeveloped to heavily used, modified, and developed. Apply the criteria involving the physical, social, and managerial environments found in the ROS Users Guide to delineate the different ROS classes of land. Urban class areas are not normally an appropriate management objective for National Forest lands…."

FSM 2310 (WO Amendment 2300-2020-1) "Digest" describes substantive changes as: "*2311* – *Replaces obsolete direction on Resource Opportunities in Recreation Planning with direction on Corporate Data and Tools that have been in place for over 20 years.*" This "Digest" statement is factually inaccurate. The use of the ROS planning framework and the ROS User Guide continue to be relevant, especially for addressing the recreation resource in forest planning.

The National Recreation Opportunity Spectrum Inventory Mapping Protocol, August 2019, refers to: *Evidence of Humans - The evidence of humans criteria is used to indicate varying degrees of modifications to the natural landscape as one moves across the spectrum. Authorized uses affecting this criteria include such things as: vegetation treatments, oil and gas development, livestock grazing, recreation developments and other infrastructure…*

The 2019 protocol includes descriptions of each ROS class, but the Appendix A descriptions are incomplete. ROS class definitions to be used for establishing ROS settings need to be expanded to add descriptions of Non-Recreation Uses, Evidence of Humans, and Naturalness characteristics for all ROS classes.

The ROS planning framework use for forest planning is supported by a 2007 publication by McCool, Clark, and Stankey in "An Assessment of Frameworks Useful for Public Land Recreation Planning," General Technical Report PNW-GTR-705.

The 1986 ROS Book, which repeated the 1982 ROS User Guide information, was the basis for the 2012 Planning Rule/PEIS and 2015 planning directives. As the Acting Recreation Planning National Program Manager, I prepared comments on the draft FSH 1909.12 planning directives that were based in part on the FSM 2310 direction to use the 1986 ROS Book technical guidance for addressing NFMA and planning rule requirements (16 U.S.C. § 1604(f)(1) and 36 CFR §§ 219.1(f), 219.3, 219.6(b)(9), 219.8(b)(2), 219.10(a)(1) & (b)(1), and 219.19 definitions for Recreation Opportunity and Setting). In this position, I reviewed drafts of a proposed amendment to FSM 2310. These drafts addressed remoteness and evidence of humans as setting indicators.

The recreation opportunity spectrum planning framework, as described in the 1986 ROS Book, continues to be the best science-based process for providing for the integration of the recreation resource in multiple-use planning. The 2012 Forest Service planning rule and 2015 planning directives properly identified the ROS planning framework as the best management tools and science for addressing the recreation resource in forest planning. The recreation setting is the surroundings or the environment for the recreational activities. The planning rule describes that the recreation setting is the social, managerial, and physical attributes of a place that, when combined, provide a distinct set of recreation opportunities. The rule describes that the Forest Service uses the recreation opportunity spectrum to define recreation settings and categorizes them into six distinct classes: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, rural, and urban.

The amended 2020 FSM 2310 ROS direction allows for establishing social, managerial, and physical attributes of a place independently, which does not resolve inconsistencies between recreation setting components. This approach is not aligned with the Recreation Opportunity Spectrum planning framework. As such, the 2020 FSM 2310 ROS direction allows for development actions in Semi-Primitive Non-Motorized and Semi-Primitive Motorized ROS settings that are incongruent with the desired conditions of these ROS classes.

The amended 2020 FSM 2310 ROS direction degrades the usefulness of existing National Trail, Wild and Scenic River, and Wilderness policy direction that is intended to protect the values for which each congressionally designated area was established:

- The 2009 CDNST Comprehensive Plan states, "*Use the ROS system in delineating and integrating recreation opportunities in managing the CDNST*."
- FSM 2353.44 – National Scenic Trails. The amended 2009 CDNST Comprehensive Plan and FSM 2353.44b policy relies in part on the FSM 2310 (WO Amendment 2300-90-1) direction. FSM 2353.44b(8) – "*Use the Recreation Opportunity Spectrum (ROS) and the ROS Users Guide in delineating and integrating recreation opportunities in CDNST unit plans and managing the CDNST (FSM 2311.1)*."
- FSM 2354.32 – Wild and Scenic Rivers. "*Management plans for designated [wild and scenic] rivers must: 1. Establish management objectives for each segment of the river. As a minimum, state the Recreation Opportunity Spectrum class featured (ROS, FSM 2310) and procedures for maintaining the ROS for each segment over time. To the extent possible, the management objectives should reflect the river's recreational relationship to nearby rivers*."
- FSM 2320.3 – Wilderness. "*Use the Recreation Opportunity Spectrum (FSM 2310) as a tool to plan adjacent land management*."

It is incorrect to infer that the 2012 Planning Rule and 2015 Planning directives guidance for the recreation resource were based on "*obsolete direction*." The 2020 "Digest" and the substance of the 2020 FSM 2310 direction has improperly influenced an objection review of the Custer-Gallatin proposed revised plan.[16] The 2020 FSM 2310 digest and policy needs to be corrected.

The 2015 Forest Service planning directives require the establishment of mapped ROS settings through Forest Planning processes (FSH 1909.12 – Part 23.23a). Mapped ROS classes based on the 1986 ROS Book class descriptions would help ensure the integration of multiple use programs through Forest Plan decisions. The ROS class descriptions and policy direction as modified by FSM 2310 (WO Amendment 2300-2020-1) diminishes the usefulness of having mapped ROS settings and using the ROS as a management tool.

The ROS planning framework was not intended to never change, but modifications to ROS class characteristics definitions should only occur through robust public involvement processes, based on science that supports modifying ROS characteristic definitions, and to improve readability. The amended FSM 2310 direction does not meet any of these need for change criteria. Furthermore, effects of any change to ROS class characteristics need to be disclosed.

The planning rule and planning directives were grounded in the 1986 ROS Book guidance and related research. It is concerning that some in the Forest Service have relied on informal and inappropriate Corporate Data and Tools for over 20 years resulting in the degradation of Primitive ROS and Semi-Primitive ROS settings.

[16] http://nstrail.org/planning/gallatin_nf/Final_CG_LMP_Objection_Response_April_15_2021.pdf

A review of the amended FSM 2310 (2300-2020-1) follows:

Amended **FSM 2310.2** objectives state, "*The overarching objective of sustainable recreation planning is to inform decisions that result in sustainable recreation outcomes. To be sustainable, recreation settings, opportunities, and benefits must: … 1. Be compatible with other multiple uses….*"

Observation: The intent of this objective is unclear; however, a literal reading of the guidance would indicate that the objective is inconsistent with "*multiple use*" as defined by the Multiple Use Sustained Yield Act of 1960 (16 U.S.C. § 531). NFMA integration requirements are reviewed in FSH 1909.12 part 22. Clearly, the recreation resource is not inferior to other multiple use resources. For example, Forest Plan allocations of Primitive, Semi-Primitive Non-Motorized, and Semi-Primitive Motorized ROS settings without a timber resource purpose would be consistent with the Multiple Use and Sustained Yield Act. The ROS User Guide is consistent with the principles described by the Interagency Visitor Use Management Council.

The Landscape Aesthetics Handbook states, "*The Scenery Management System and ROS serve related, but different, purposes that affect management of landscape settings. In some cases, ROS provides stronger protection for landscape settings than does the Scenery Management System. This is similar to landscape setting protection provided by management of other resources, such as cultural resource management, wildlife management, and old-growth management. In all these examples, there may be management directions for other resources that actually provide higher scenic integrity standards than those reached by the Scenery Management System. Different resource values and systems (the Scenery Management System, the ROS System…) are developed for differing needs, but they are all systems that work harmoniously if properly utilized. In all these examples, there are management decisions made for other resources that result in protection and enhancement of landscape settings."*

> "*Humans Need Nature. Nature Needs Protection. Protected areas serve as a critical conservation tool for protecting nature and biodiversity. Humans also depend on intact ecosystems and benefit from the environmental services they provide. Guaranteeing the effective use and management of protected areas will ensure that all future generations will be able to enjoy the benefits they provide. Protected areas require adept, well-trained personnel and strong partnerships to deal with many challenges including lack of funding, undertrained personnel and personnel shortages, and an ever-increasing list of traditional and emerging transboundary threats…."* (Warner College of Natural Resources)

Primitive and Semi-Primitive ROS classes will constrain some actions such as mechanical treatments with heavy equipment or road development if these desired ROS class opportunities are to be available to recreationists seeking those experiences. The recreation opportunity setting since its inception has been composed of other natural features in addition to the six factors. Landform types, vegetation, scenery, water, and wildlife are all important elements of

recreation environments; they influence where people go and the kinds of activities possible. Making choices between competing resource priorities is often the nature of integrated resource management planning as required by the National Forest Management Act (16 CFR § 1604(f)(1), 36 CFR § 219.10(a), FSH 1909.12 Part 22).

This objective should be deleted, but could be restated describing that, "*Be derived through integrated planning processes*" (36 CFR § 219.10(a)). The Multiple-Use Sustained-Yield Act makes that principle clear by explaining that "*multiple use*" means management to make "*judicious use of the land for some or all*" of the renewable resources thereon, with some land "used for less than all of the resources" (16 U.S.C. § 531).

Amended **FSM 2310.2** also describes, "*These ecological and socio-economic outcomes are not only important to the sustainability of recreation, but also contribute to the sustainability of the unit and Agency as a whole….*"

Observation: The direction in parts 1 through 7 improves on the prior FSM 2310 direction and provides for important integration considerations that are also found in the planning directives (FSH 1909.12). The statement, "*contribute to the sustainability of the unit and Agency as a whole*" is an inappropriate declaration and should be deleted.

Amended **FSM 2310.2 part 8** states, "*Resource program plans (such as, travel management plans, and so forth), area plans (for example, Comprehensive River Management Plans, and so forth) and project decisions implement, support, and are consistent with relevant land management plan(s) decisions.* FSH 1909.12, sec. 24."

Observation: Comprehensive River Management Plans and National Scenic and Historic Trail Comprehensive Plans should be consistent with the relevant Forest Plan, but this statement would suggest that designated area plan decisions are subordinate to Forest Plan decisions regardless of the Forest Plan direction. FSM 2310.2 part 8 should be redrafted plainly stating that NFMA, W&SR, and National Scenic and Historic Trail plan decisions must provide for the purposes for which an area is designated. In addition, FSM 2310 should clearly state that, "*Comprehensive Plans developed in response to the requirements of the National Trails System Act (16 U.S.C. §§ 1244(e), 1244(f)), and the Wild and Scenic Rivers Act (16 U.S.C. § 1274(d)) are not resource plans as defined by the NFMA (16 U.S.C. §1604(i) and 36 CFR §219.15(e))*." The phrase, "*and so forth*" is not helpful and should be deleted.

National Scenic Trails, Wild and Scenic Rivers, and Wilderness legislation keeps the management of the federal land under the agencies existing authorities, but subject to the overriding purpose of protecting qualities and values described by the designated area legislation. The establishment of these designated areas thus constitutes an overlay on the management regime otherwise applicable to lands managed by the agency. By eliminating

activities and uses incompatible with the purposes for which an area is designated, the designated area limits the management discretion that the agency might otherwise have.

Amended **FSM 2310.3** policy begins by describing that, "1. *Units shall review and use relevant land management plan decisions to guide and inform smaller-scale planning decisions. To ensure attainment of sustainable recreation, all projects and activities must be consistent with the applicable plan components of the land management plan* (36 CFR 219.15 (d))."

Observation: An element that is missing from the direction is to describe policy that responsible officials are to ensure that land management plans are prepared through NEPA interdisciplinary processes that address the integration of the recreation resource in planning analyses and decisions (16 U.S.C. 1604(f), 36 CFR 219.10). In addition, Forest Plans must provide for the purposes for which designated areas are established.

Amended **FSM 2310.5** defines Resource Programs and Area Plans as, "*Plans that address a specific multiple use or resource program on the forest or grassland, or portion of one or more forests or grasslands. The plan area can be delineated by ecological units (such as, watersheds, wildlife habitat areas, riparian areas, geological formations or features, and so forth), and/or by socio-economic considerations (such as, market area, designated area, urban interface area, administrative units such as a ranger district, and so forth). Common examples of recreation-related resource program plans include: facilities plans, travel management plans, interpretive plans, etc. Area-specific plans include: National Scenic or Historic Trail Plans, National Monument Plans, Comprehensive River Management Plans, National Recreation Area Plans, etc. Resource program and area plans must be consistent with land management plan direction. Reference 36 CFR 219.15*."

Observation: FSM 2310 should describe that planning processes must provide for the purposes for which an area was designated. FSM 2310 should clearly state that Comprehensive Plans developed in response to the requirements of the National Trails System Act (16 U.S.C. §§ 1244(e), 1244(f)) and the Wild and Scenic Rivers Act (16 U.S. Code § 1274(d)) are not resource plans as defined by the NFMA (16 U.S.C. §1604(i) and 36 CFR §219.15(e)).

Amended **FSM 2310.5** defines Recreation Opportunity Spectrum classes.

Observation: The characterizations of ROS classes are a significant deviation from established Physical Setting descriptions. "*Evidence of Humans*," "*Non-Recreation Uses*," and "*Naturalness*" setting indicators are improperly omitted in the narratives for Primitive, Semi-Primitive Non-Motorized, and Semi-Primitive Motorized ROS settings.

Primitive settings allow for mechanized use outside of wilderness in the amended FSM 2310 direction. Bicycles should not be allowed in Primitive ROS settings. Primitive means ''*of or relating to an earliest or original stage or state*.'' Mountain bikes are not primitive in nature. Asymmetric impacts between bicyclists and traditional nonmotorized users will tend to displace

hikers and equestrians from non-wilderness trails. The asymmetric or one-way nature of conflict suggests that active management is needed to maintain the quality of recreation for visitors who are sensitive to conflicting uses. Visitors who are sensitive to conflict are likely to be dissatisfied or ultimately displaced.[17] FSM 2310 should describe that the trail class norm is Pack and Saddle Stock Class 2 and 3 (FSH 2309.18 23.12 – Exhibit 01).

Semi-Primitive Non-Motorized ROS settings exempts open roads stating that, "*occasional administrative use occurs on these roads for the purpose of natural and cultural resource protection and management*." This ROS setting does not allow for new administrative or public use roads except in very limited situations – closed roads may be present, but are managed to not dominate the landscape or detract from the naturalness of the area.

This subjective guidance that, "*occasional administrative use occurs on these roads for the purpose of natural and cultural resource protection and management*" does not support SPNM desired conditions and needs to be changed. This ROS setting may only have subtle modifications that would be noticed but not draw the attention of an observer wandering through the area. Rarely would permanent and temporary roads be consistent with protecting SPNM ROS setting desired conditions where defined using the 1982/1986 ROS planning framework.

Semi-Primitive Motorized ROS class is described in the ROS User Guide on pages II-32 stating, "*Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size*." Page II-36 states, "*Moderate probability of experiencing isolation of the sights and sounds of humans*." Page IV-6 states, "*An area designated within ½-mile of primitive roads[18] or trails used by motor vehicles; but not closer than ½-mile from better than primitive roads.*" Page IV-10 states, "*Natural setting may have moderately dominant alterations but would not draw the attention of motorized observers on trails and primitive roads within the area.*" Equally important is the timber production and associate roads in Semi-Primitive Motorized ROS settings would degrade adjacent Semi-Primitive Non-Motorized ROS settings. The ROS User Guides describes that a SPNM area is "*at least ½-mile but not further than 3 miles from all roads, railroads or trails with motorized use; can include the existence of primitive roads and trails if usually closed to motorized use*."

Observation: Exhibit 01, Vegetation states that, "*Treatments enhance forest health and mimic natural vegetation patterns.*" Due to social and resource conditions, large-scale

[17] Manning, R.E. (2010). Studies in Outdoor Recreation: Search and Research for Satisfaction. Studies in Outdoor Recreation: Search and Research for Satisfaction. Page 218.

[18] "Primitive roads" are not constructed or maintained, and are used by vehicles not primarily intended for highway use (1982 User Guide and 1986 ROS Book).

vegetation harvest and associated road construction will need to be restricted to meet desired forest conditions.

Natural vegetation patterns have in some cases been created by large fire events, such as the Great Fire of 1910. Hurricane-force winds, unlike anything seen since, roared across the rolling country of eastern Washington. Then on into Idaho and Montana forests that were so dry they crackled underfoot. In a matter of hours, fires became firestorms, and trees by the millions became exploding candles. By noon on the twenty-first, daylight was dark as far north as Saskatoon, Canada, as far south as Denver, and as far east as Watertown, New York. To the west, the sky was so filled with smoke, ships 500 miles at sea could not navigate by the stars. Smoke turned the sun an eerie copper color in Boston. Soot fell on the ice in Greenland. The Great Fire of 1910 burned three million acres and killed enough timber to fill a freight train 2,400 miles long. Merchantable timber destroyed was estimated to be eight billion board feet, or enough wood to build 800,000 houses. Twenty million acres were burned across the entire Northwest. The current insect and disease situation are having similar ecological effects as some past fire events, but at a much slower rate of change.

Desired conditions must stress the need to reflect the constraints described for "*Evidence of Humans*," "*Non-Recreation Uses*," and "*Naturalness*" setting indicators for this Semi-Primitive Non-Motorized ROS class. Specifically, the statement that treatments are to enhance forest health is vague and could lead to actions that benefit timber programs over allowing for natural processes to unfold. Describing that treatments are to mimic natural vegetation patterns is also unclear and should be deleted.

Forest health is an increasingly important concept in natural resource management. The definition of forest health is difficult and dependent on desired conditions. From an ecosystem-centered perspective, forest health has been defined by resilience, recurrence, persistence, and biophysical processes which lead to sustainable ecological conditions. Most important, so as to minimize the evidence of humans, vegetation management actions need to avoid restoration actions that require the construction of permanent and temporary roads within Semi-Primitive Non-Motorized ROS settings and minimize new roads in Semi-Primitive Motorized ROS settings. Exhibit 01, Scenic Integrity states that, "*Typically High*." The desired Scenic Integrity Objective should be simply described as High.

Observation: Some revised forest plans are establishing Semi-Primitive Motorized settings for timber production areas, which is inconsistent with the intent of this ROS class as used in the planning rule. Semi-Primitive Motorized settings allows for maintenance level 2 roads, which are not primitive roads as described in the 1982 ROS direction. Possibly, FSM 2310 could describe that, "*Motorized routes are typically designed as motorized trails (FSH 2309.18 part 23.21, Trail Class 2, No Double Lane) and Four-Wheel Drive Vehicles routes (FSH 2309.18 part 23.23, Trail Class 2, No Double Lane), offering a high degree of self-reliance,*

challenge, and risk in exploring these backcountry settings." These trail classes would provide for the desired motorized experiences, while protecting soil and water resources through design parameters.

FSM 2310.5 defines ROS Class Characteristics as, "*The physical, social, and managerial features that function collectively to define a specific recreation opportunity spectrum setting (ROS class) … Both summer and winter setting characteristics for each of the six primary ROS classes are summarized in section* 2311, exhibit 01."

Observation: Exhibit 01 describes ROS characteristics as "*themes*," which is not defined nor recognized as a plan component in forest planning processes (36 CFR § 219 and FSH 1909.12 directives). Failing to identify desired conditions and other plan components in the FSM 2310 definition reduces the importance and effectiveness of the planning directives requirement that states, "*The plan must include plan components, including standards or guidelines, to provide for sustainable recreation integrated with other plan components as described in 23.21a. To meet this requirement the plan: … (a) Must include desired conditions for sustainable recreation using mapped desired recreation opportunity spectrum classes*..." (FSH 1909.12 23.23a).

General Technical Report PNW-98 December 1979 states, "*The ROS is a helpful concept for determining the types of recreational opportunities that should be provided. And after a basic decision has been made about the opportunity desirable in an area, the ROS provides guidance about appropriate planning approaches—standards by which each factor should be managed*."

The 2012 Planning Rule Programmatic Environmental Impact Statement states the analysis of the recreation resource is based on the 1986 ROS Book, Scenery Management System, and Recreation facility analysis: "*Three recreation planning and management tools that shape the recreation program include:*

- *Recreation opportunity spectrum – ROS 1986;*
- *Scenery management system; and*
- *Recreation facility analysis.*

These tools are used to define existing conditions, describe desired conditions, and monitor change. These tools, along with overarching guidance at the national, Department, and Agency levels, serve as the context by which individual national forests and grasslands engage with their communities. In doing so, the unit's recreation-related and amenity-based assets are considered and integrated with a vision for the future that is sustainable and that the unit is uniquely poised to provide. As the current planning rule procedures related to recreation are quite general, these tools contribute to consistency in recreation planning across NFS units.

The recreation opportunity spectrum has been an effective land management planning tool since 1982. The recreation opportunity spectrum is a framework for identifying, classifying,

planning, and managing a range of recreation settings. The setting, activity, and opportunity for obtaining experience are arranged along a spectrum of classes from primitive to urban. In each setting, a range of activities is accommodated. For example, primitive settings accommodate primarily non-motorized uses, such as backpacking and hiking; whereas roaded settings (such as roaded natural) or rural settings accommodate motorized uses, such as driving for scenery or access for hunting. Through this framework, planners compare the relative tradeoffs of how different patterns of settings across the landscape would accommodate (or not accommodate) recreational preferences, opportunities, and impacts (programmatic indirect environmental effects) with other multiple uses." (Forest Service Planning Rule, PEIS, page 209).

ROS Mapping Protocol - The National Recreation Opportunity Spectrum Inventory Mapping Protocol, August 2019 states, "*This National inventory protocol identifies mapping criteria and provides repeatable instructions to inventory, map, and classify existing Recreation Opportunity Spectrum (ROS) settings based on forest recreation opportunities and off-forest influences (e.g. motorized routes of other jurisdiction). The product is an existing condition inventory of ROS settings, mapped inconsistencies with those settings, and mapped unique or special opportunities. The settings mapped in this inventory protocol reflect travel management decisions. Inconsistencies with the mapped recreation opportunities may occur due to unauthorized or administrative uses. Inconsistencies with the existing ROS settings are documented in this process, but do not change the overall ROS settings mapped and identified. Rather the inconsistencies are used with the ROS settings mapped in this process to provide an overall existing condition for ROS and help identify places that may need management actions to improve consistency with desired conditions*…

Since the early 1980s, the Recreation Opportunity Spectrum (ROS) has been used as a framework to identify, classify, plan, and manage a range of recreation settings for both existing and desired conditions. ROS remains the best available framework for recreation planning. Six distinct settings: urban, rural, roaded natural, semi-primitive motorized, semi-primitive non-motorized, and primitive are defined using specific physical, social, and managerial criteria…

The physical characteristics are defined by the absence or presence of the sights and sounds of people, size, and the amount of environmental modification caused by human activity and authorized uses.

> *Remoteness - Remoteness from the sights and sounds of people is used to indicate greater or lesser amounts of social interaction and corresponding primitive to urban influences as one moves across the spectrum. The further one is from the sights and sounds of humans, the more remote the setting and more remote one feels. Remoteness is measured by the distance from motorized use on roads and trails.*

Size - The size of an area is used to indicate greater or lesser potential for self-sufficiency related to a sense of vastness, where large, relatively undeveloped areas tend to provide a sense of vastness and smaller, developed areas less so as one moves across the spectrum.

Evidence of Humans - The evidence of humans criteria is used to indicate varying degrees of modifications to the natural landscape as one moves across the spectrum. Authorized uses affecting this criteria include such things as: vegetation treatments, oil and gas development, livestock grazing, recreation developments and other infrastructure. Landscapes may vary from naturally appearing to heavily altered as one moves across the spectrum. Site management may also factor into this criteria. Site management refers to the amount or degree of on-site modification (e.g., vegetation manipulation, landscaping) and the level or scale of development of constructed features (e.g., parking areas, campgrounds, trails, administrative facilities, buildings and other structures) …

Physical Characteristics - In previous mapping steps, the evidence of humans criteria was only applied to differentiate between Roaded Natural, Rural, and Urban ROS settings. In this step, the evidence of humans criteria may also be applied to Primitive, Semi-primitive Non-motorized and Semi-primitive Motorized settings to identify inconsistences with those settings.[19] The overall inventoried ROS setting will not be changed in Primitive, Semi-primitive Non-motorized and Semi-primitive Motorized settings, but will be mapped as an inconsistency…

Inconsistencies with the existing ROS settings are documented in this process, but do not change the overall ROS settings mapped and identified. Rather the inconsistencies are used with the ROS settings mapped in this process to provide an overall existing condition for ROS and help identify places that may need management actions to improve consistency with desired conditions."

The protocol includes descriptions of each ROS class, but the Appendix A descriptions in the protocol are incomplete. ROS class definitions to be used for establishing ROS settings need to be expanded to add descriptions of Non-Recreation Uses, Evidence of Humans, and Naturalness characteristics for all ROS classes.

The mapping protocol mistakenly avoids assessing administrative and permitted roads and the use of those roads for vegetation management actions. Primitive and Semi-Primitive ROS classes must constrain some management actions such as mechanical treatments of vegetation that utilize heavy equipment and permanent or temporary roads if these desired ROS class opportunities as described in the 1986 ROS Book and referenced in the planning rule PEIS are to

[19] Evidence of Humans indicators are critical to describing Primitive and Semi-Primitive ROS settings.

be protected. The Evidence of Humans criteria has been used since 1982 to help describe Primitive, Semi-Primitive Non-motorized and Semi-primitive Motorized settings.

The Forest Service in response to Land Management Plan proposed directives comments on pages 22 and 47 states, "*FSH 1909.12, chapter 10, section 13.4 has been modified to indicate that the interdisciplinary team shall identify and evaluate available information about recreational settings and opportunities, including seasonal variation, using the recreation opportunity spectrum (ROS). An update of ROS information is not required during the assessment, though additional information not included in ROS may also be identified and included in the assessment process. The Forest Service uses the recreation opportunity spectrum to define recreation settings and categorize them into six distinct classes: primitive, semi-primitive non- motorized, semi-primitive motorized, roaded natural, rural, and urban (36 CFR 219.19). The desired ROS class is not required to be the same as the existing ROS class.*

FSH 1909.12, chapter 20, section 23.23 states that the interdisciplinary team may create desired recreation opportunity spectrum subclasses. For example, the subclass "roaded modified" was first defined in the Pacific Northwest to distinguish those settings significantly altered by past timber harvest from other roaded natural. The interdisciplinary team may also create desired recreation opportunity spectrum classes to reflect seasonal variations. Desired winter recreation opportunity spectrum classes can be developed to depict changes in the location, mix and distribution of setting opportunities (both motorized and nonmotorized)."

An example of a consequence if FSM 2310 (2300-2020-1) definitions are applied to plan components is that an established Semi-Primitive Non-Motorized ROS setting would no longer protect Continental Divide National Scenic Trail nature and purposes qualities and values. A Semi-Primitive Motorized ROS setting could be like what is described as a Roaded Modified ROS setting. A Roaded Modified ROS setting is defined by extensive forest management activities and road networks, which is clearly incompatible with providing for high-quality scenic, primitive hiking and horseback riding opportunities and the conservation of natural, historic, and cultural resources within the CDNST corridor. The ROS class protection norm for the CDNST should be restricted to the establishment of a Primitive ROS setting if FSM 2310 (2300-2020-1) direction is implemented.

The Forest Service did not provide a reasoned basis or a detailed justification for modifying the 1982 ROS User Guide and 1986 ROS Book recreation opportunity spectrum setting definitions and disclosing the consequences of those changes to recreationists seeking Primitive and Semi-Primitive ROS settings, including those seeking high-quality scenic, primitive hiking and horseback riding experiences along the Continental Divide National Scenic Trail.

Permanent and temporary roads in Semi-Primitive ROS settings must be constrained using Evidence of Humans criteria as described in the 1986 ROS Book. Rarely would permanent and

temporary roads be consistent with a SPNM setting. If a road was to be built for any reason, it should be decommissioned with full obliteration, recontouring, and restoring natural slopes. Monitoring must ensure that surface areas are stabilized and revegetated with native plants.

The formulation and issuance of FSM 2310 (2300-2020-1) is not in compliance with the Public Participation requirement of FRRRPA and the Public Notice and Comment for Standards, Criteria, and Guidance Applicable to Forest Service Programs (16 U.S.C. § 1612(a), 36 CFR § 216). The amended policy (2300-2020-1) is inconsistent with the 36 CFR § 219 forest planning regulations and the Planning Rule PEIS.

The APA ensures that agencies do not change course based on the "*whim and caprice of the bureaucracy*," and prevents agencies from subverting the rule of law by making policy based on shifting "*political winds and currents*." When reversing a prior policy that "*has engendered serious reliance interests*," the agency must "*provide a more detailed justification than what would suffice for a new policy created on a blank slate*." This requires a "*reasoned explanation… for disregarding the facts and circumstances that underlay or were engendered by the prior policy*."

FSM 2310 (2300-2020-1) policy should be reissued through a Federal Register Notice following 36 CFR § 216 public involvement processes to define the ROS Classes as desired conditions, to include ROS Class Characteristics descriptors that address, in part, "Evidence of Humans," "Non-Recreation Uses," and "Naturalness" characteristics, and to make other changes that support providing for the integration of the recreation resource in natural resource planning processes.

Sustainable Recreation Planning directives must be consistent with the 1986 ROS Book guidance and related research, which informed the planning rule. Forest Service directives must be consistent with the USDA Departmental Regulation 1074-001 scientific integrity policy that relates to the development, analysis, and use of data for decision-making. This DR is intended to instill public confidence in USDA research and science-based public policymaking by articulating the principles of scientific integrity, including reflecting scientific information appropriately and accurately.

FSM 2310 (WO Amendment 2300-2020-1) direction is not in conformance with the National Forest Management Act, National Trails System Act, Wild and Scenic Rivers Act, NEPA, and regulations (16 U.S.C. §§ 1604(f)(1), 1612(a), 1244(e), 1244(f), 1274(d); 36 CFR §§ 216, 219.3, 219.10(b)(1)(i)); 40 CFR §§ 1502.24 (2005), 1502.23 (2020)), and APA (5 U.S.C. § 706(2).

D. Regulatory Planning Framework

The planning and management of National Scenic Trails is addressed by many interrelated laws, regulations, and policies. The following summarizes regulatory framework provisions that are important to Forest Plan decisions and the recreation resource:

- USDA DR 1074-001 – Scientific Integrity in policymaking that relates to the development, analysis, and use of data for decision-making.
- 36 CFR § 216 (16 U.S.C. § 1612(a)) – To give adequate notice and an opportunity to comment upon the formulation of standards, criteria, and guidelines applicable to Forest Service programs.
- Executive Order 11644 and 11989 – Use of off-road vehicles on the public lands.
- 36 CFR 212 Subpart B - Designation of Roads, Trails, and Areas for Motor Vehicle Use (§§ 212.50 - 212.57)
- 36 CFR § 212 Subpart C - Over-Snow Vehicle Use (§§ 212.80 - 212.81)
- 16 U.S.C. § 1604(f)(1) – Form one integrated plan
- 36 CFR § 219.3 – Best Available Scientific information
- 36 CFR § 219.7 – Plan Components (where they apply)
- 36 CFR § 219.10(a) – Integrated Resource Management for Multiple Use.
- 36 CFR § 219.10(b)(1)(i) – Sustainable recreation
- 36 CFR § 219.11(a)(1)(i) – Lands not suited for timber production – Statute prohibits timber production on the land
- 36 CFR § 219.11(a)(1)(iii) Lands not suited for timber production – Timber production not compatible with desired conditions
- Forest Service Directives
    - FSH 1909.12 part 22 – Requirements for an Integrated Plan
    - FSH 1909.12 part 22.1 – Plan Components
    - FSH 1909.12 part 23 – Resource Requirements for Integrated Plan Components
    - FSM 2310.3 (WO Amendment 2300-90-1) – Recreation Planning
    - FSM 2382.1 – Scenery Management System
    - FSH 1909.12 part 23.23a – Sustainable Recreation Resources
    - FSH 1909.12 part 23.23f – Scenery, Aesthetic Values, and Viewsheds

E. References

The following are a few references that are important to Forest Plan decisions and the recreation resource:

- USDA Forest Service. 1990. Chapter 2310 of Forest Service Manual 2300 – Planning and Data Management. (WO Amendment 2300-90-1)
- USDA Forest Service. 1986. ROS Book.
- USDA Forest Service. 1986. Recreation Opportunity Setting as a Management Tool Technical Guide by George Stankey, Greg Warren, and Warren Bacon. Pacific Northwest Region.
- USDA Forest Service. 2007. An Assessment of Frameworks Useful for Public Land Recreation Planning by McCool, Clark, and Stankey, General Technical Report PNW-GTR-705. 2007.
- USDA Forest Service. 1979. The Recreation Opportunity Spectrum: A Framework for Planning, Management, and Research, General Technical Report PNW-98 by Roger Clark and George Stankey. 1979.

References are posted online at http://nstrail.org/references.htm.