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Department of  
Agriculture

# Forest Service Roadless Area Conservation

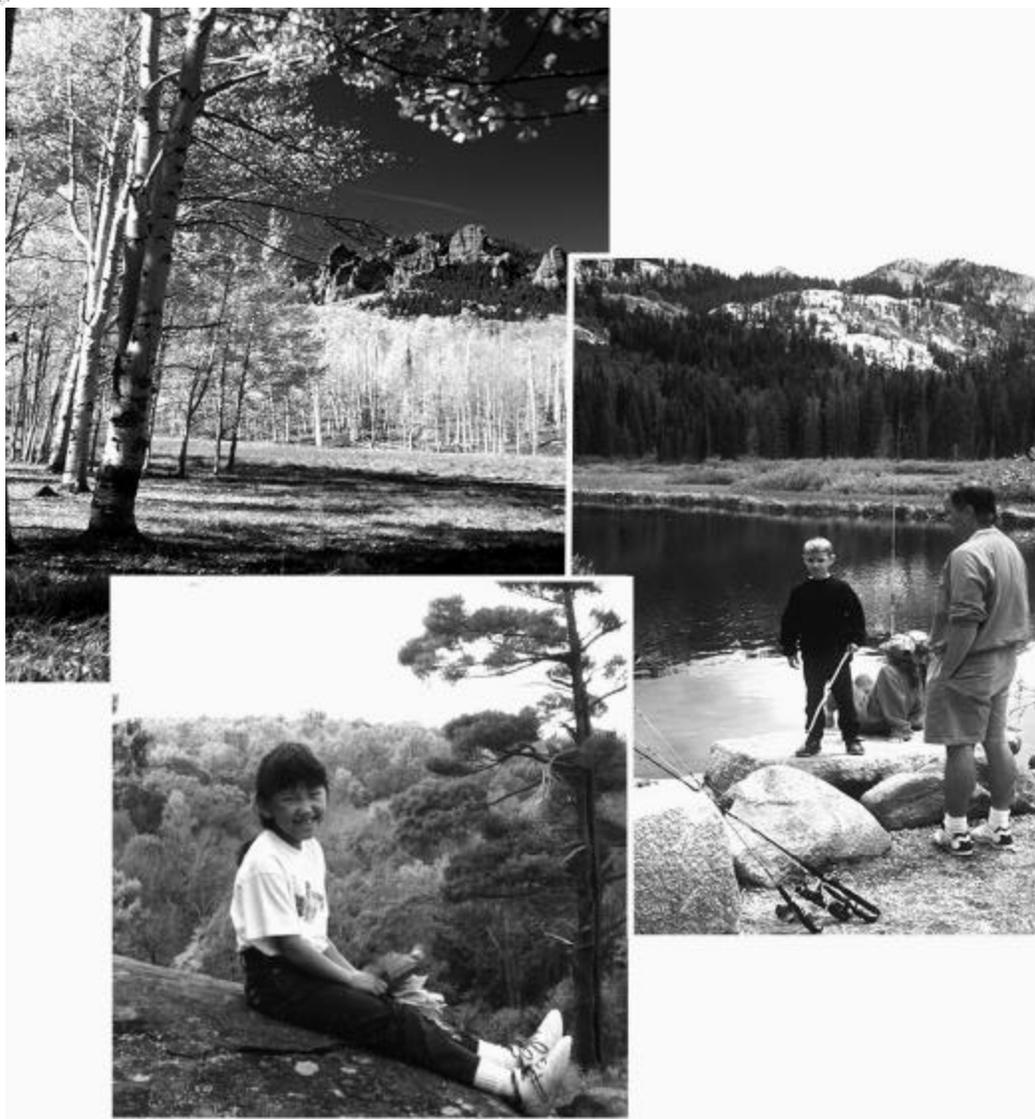
Forest Service

## Final Environmental Impact Statement

Washington  
Office

Specialist Report for Scenic Quality

November 2000





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# **SPECIALIST REPORT FOR SCENIC QUALITY**

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## Abstract:

Scenic quality is based on landscape character and scenic integrity. Landscape character is the overall visual impression of landscape attributes that provide a landscape with an identity and sense of place. Scenic integrity is a measure of the wholeness or completeness of the landscape, including the degree of visual deviation from the landscape character valued by constituents. Inventoried roadless areas generally have landscapes with High to Very High scenic integrity.

Analysis indicated that impacts on the scenic quality from resource management activities that require roads or other modifications of the landscape would be most severe under Alternative 1 because road construction and reconstruction would continue as planned. However, under this alternative there might be some positive effects on scenic quality from silvicultural and fuel treatments that reduce the potential magnitude of natural events such as insect infestations and wildland fires. Relative to all other alternatives, however, Alternative 1 would have a low ability to maintain scenic quality.

From a national perspective, the differences under Alternatives 2 through 4 would be minimal; all action alternatives would have the ability to maintain high levels of scenic quality. Except in some localized areas, they all would be able to maintain or improve scenic integrity; thus, these alternatives have a relative rating of high.

Maintenance or enhancement of high scenic quality attributes would contribute to the economic and cultural viability of gateway communities and to the well being of its visitors and residents.

## Changes between Draft and Final EIS:

- Sections describing the cumulative effects of the alternatives have been expanded.
- Parts of the cumulative effects written for the DEIS were shifted to comparison of the alternatives discussion in the FEIS.
- Definitions have been revised for clarity and consistency, and new definitions have been added.
- Some references have been revised.

## Affected Environment

High quality scenery, especially scenery with natural-appearing landscapes, enhances people's lives and benefits society (Driver and others 1991). It is a primary reason that people choose to recreate on the NFS lands, and it contributes directly to real estate values in neighboring communities and residential areas. Scenic quality is based on two definable elements, landscape character, and scenic integrity. Landscape character is the overall visual impression of landscape attributes that provide a landscape with an identity and sense of place. It consists of the combination of physical, biological, and cultural

attributes that makes each landscape identifiable and distinct. Scenic integrity is a measure of the wholeness or completeness of the landscape, including the degree of visual deviation from the landscape character valued by constituents. A landscape, which is perceived to have minimal to no deviation from the valued landscape character, is rated as Very High or High scenic integrity. Those landscapes, which appear to be heavily altered, have Low to Very Low scenic integrity (USDA Forest Service 1996).

The scenic quality of a forest is not static, it changes over time. To varying degrees, roads, timber harvest, insect infestations, and wildland fire events all affect the scenic integrity of a landscape. Managers may influence the effects of natural events to some extent by managing vegetation with silvicultural and fuels treatments. In these instances, the positive effects on scenic quality resulting from reducing the effects of these natural events may be offset by the negative effects of road construction and vegetative treatments.

All resource management activities in inventoried roadless areas strive to achieve long-term sustainable Landscape Character Goals<sup>1</sup> within the Scenic Integrity Objectives identified in the land management planning process. The scenic integrity of landscapes in these areas is generally High or Very High, which indicates a low level of landscape modification due to a lack of high intensity management activities in the past. However, altered landscapes do exist in some areas due to activities such as mining, grazing, and special uses. These areas tend to have lower levels of scenic integrity.

## Assumptions:

Development in the wildland-urban interface will continue to put pressure on public lands for protection from fire, maintenance of scenic quality, more recreation opportunities, and other uses.

Because roadless areas are the bank from which development and special designations, such as Wilderness are withdrawn, the number of acres and areas of roadless areas (supply of lands with High and Very High scenic integrity) are decreasing.

The supply of lands with High and Very High scenic integrity is decreasing in an environment of increasing demand for development.

Those inventoried roadless areas open to road construction and reconstruction could be affected in the short term, and even those with forest land management prescriptions that currently prohibit road building could be affected over the long term as national priorities or local conditions and situations lead to a change in management prescriptions.

In order to discuss cumulative effects, the EIS Team estimated the number of NFS acres outside of designated Wilderness and inventoried roadless areas to be 15 million. The

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<sup>1</sup> Landscape Character Goals and Scenic Integrity Objectives are terms defined in the Scenery Management System (USDA Forest Service 1996a) used by the Forest Service in planning and implementing activities that affect the visual landscape.

purpose of this estimate was to characterize the magnitude of a concept; therefore, it was not necessary to collect precise data.

The proposed Roads Policy could cause a major shift in the national baseline for recreation supply. The most common scenario associated with road decommissioning is to reduce road density, not to create unroaded areas. However, the possibility exists that there could be an increase of 10%, or 8.4 million acres, of unroaded areas created over the next 40 years due to road decommissioning. This may increase the number of acres available to be managed for a heightened level of scenic quality.

It is estimated that 10%, or 5.8 million acres, of inventoried roadless areas could be designated as Wilderness in the next 40 years. This amount includes the 7.2 % (4.2 million acres) of inventoried roadless acres already recommended for Wilderness designation in land management plans. It also assumes that an additional 2.8% (1.6 million acres) of inventoried roadless areas could be added to the National Wilderness Preservation System. This could potentially shift scenic quality to higher levels.

## Information Used:

Approximately 58.5 million acres of inventoried roadless areas is the supply of high scenic quality discussed in this report. *Landscape Aesthetics: A Handbook for Scenery Management* (USDA Forest Service 1996) defines high scenic quality and provided the framework for comparing alternatives and discussing cumulative effects. The measure used was the ability to maintain or enhance the supply of high scenic quality. The foundation for discussion is derived from reference sources cited throughout his document; formal data calls to Forest Service Regions during the analysis process; informal queries of and peer review by Forest Service practicing professionals in the field and Washington Office; and the professional, technical, and working knowledge of the author (see Chapter 4 – Preparers and Contributors).

## Methodology:

The Forest Service has been in the business of formally managing the scenic quality since 1974 when *The Visual Management System* (VMS) was published. Since that time the science has been evolving. In 1996, the Forest Service published *Landscape Aesthetics: A Handbook for Scenery Management* (USDA Forest Service 1996). This workbook was the result of over 20 years of landscape management field implementation, the work of dozens of researchers in fields such as landscape architecture, psychology, sociology, economics, and ecology, and guidance by regional and national Landscape Architects.

The basis for describing Scenic Quality in the affected environment and analyzing alternatives in the environmental consequences is the Scenery Management System (SMS) described in *Landscape Aesthetics*. This handbook defines a system for inventory and analysis of the aesthetic values of NFS lands and replaces the old Visual Management System. Conceptually, SMS differs from VMS by increasing the role of

constituents throughout the inventory and planning process, borrowing from and integrating with the basic concepts and terminology of ecosystem management (EM), and providing for improved integration of aesthetics with other biological, physical, social, and cultural resources in the planning process.

SMS applies primarily within the cultural-social dimension of EM, but also has critical links to the biological and physical dimensions at various scales. The frame of reference in the social dimension of EM varies from an individual human to large communities, and their relationships to one and another and to the landscape in terms of time and space. Biological and physical dimensions look at how people influence the landscape and how the landscape influences people through time (past and present) and space. Combined with the social component, this defines the reference of acceptable ecological sustainability in which scenery management operates (USDA Forest Service 1996).

SMS identifies landscape character and scenic integrity as the basis for scenic quality. Landscape character is the overall visual impression of landscape attributes that provide a landscape with an identity and sense of place. It consists of the combination of physical, biological, and cultural attributes that make each landscape identifiable and distinct. Scenic integrity is a measure of the wholeness or completeness of the landscape, including the degree of visual deviation from the landscape character valued by constituents.

## **Results:**

### **Alternative 1**

*No Action; No Prohibitions*

### **Alternative 2**

*Prohibit Road Construction and  
Reconstruction Within Inventoried Roadless Areas*

### **Alternative 3**

*Prohibit Road Construction, Reconstruction,  
and Timber Harvest Except for Stewardship  
Purposes Within Inventoried Roadless Areas*

### **Alternative 4**

*Prohibit Road Construction, Reconstruction and  
All Timber Cutting Within Inventoried Roadless Areas*

Inventoried roadless areas generally have landscapes with High to Very High scenic integrity. Evaluation of the alternatives, therefore, is based on the relative potential for reducing the scenic integrity. Reducing scenic integrity would affect the overall high

level of scenic quality. Scenic quality would be higher in those alternatives that prohibit resource management activities that create alterations in the landscape or reduce the amount of acres managed to maintain roadless characteristics. The alternatives fall into distinct groups based on the extent to which they would maintain the high level of scenic quality that exists in unroaded areas.

*Alternative 1 – No Action*

Under Alternative 1, inventoried roadless areas would be available for resource management activities that could affect their unroaded status or roadless character. Impacts on the scenic quality from resource management activities that require roads or other modifications of the landscape would be the most severe in this alternative because there would be no national prohibitions as a screen during planning. Conversely, there might be some positive effects on scenic quality from silvicultural and fuels treatments that reduce the potential magnitude of natural events such as insect infestations and wildland fires. Relative to all other alternatives, however, Alternative 1 would have a low ability to maintain scenic quality.

### *Alternatives 2 through 4*

Alternatives 2 and 3 would allow timber harvesting that would result in short-term disturbances on the scenic integrity. However, the amount and types of timber harvest allowed in inventoried roadless areas would enhance vegetative health and reduce fuel loading, thereby providing protection from pests, diseases, and large fires. Over the long term, scenic integrity could be maintained or improved.

No short-term disturbances or long-term benefits would accrue because of timber harvesting in Alternative 4, but long-term improvement of ecosystems with health problems or other conditions that would benefit from vegetation manipulation would not occur. This alternative has the highest probability of reduced scenic quality resulting from catastrophic natural events. From a national perspective, though, the differences between these alternatives would be minimal, and they would all have the ability to maintain high levels of scenic quality. They have a relative rating of high.

Inventoried roadless areas managed for their unique characteristics and values would have a beneficial effect on scenic quality from a national perspective. These valued characteristic landscapes are visual images of geographic areas that consist of a combination of their unique and identifiable physical, biological, and cultural attributes. Managing for ecological health, viable populations of fish and wildlife, clean water, low impact recreation opportunities, and research are all complementary activities. Each contributes to the overall scenic integrity or wholeness of the landscape character.

From a local perspective, maintenance or enhancement of high scenic quality attributes would contribute to the economic and cultural viability of gateway communities and to the well being of its visitors and residents. Inventoried roadless areas are the backdrop and ‘backyard’ for many gateway communities. Communities in and around NFS lands tend to foster a unique sense of place. Sense of place is the result of the cumulative experiences a person receives by visiting or living in an area; it is the setting within which the community is identified, and it is the area where people work and play. Sense of place produces a mental image and positive feelings (Abbott and Sheridan 1997). High scenic quality is a key component of sense of place. Scenery, architecture, land-use patterns, wildlife, and available activities all contribute to quality of life.

### *Effects of Social and Economic Mitigation on Scenic Quality*

Some road construction and reconstruction associated with mineral development would be allowed. This could cause considerable deviation from the landscape character in a few areas throughout the nation; however, from a national perspective the effects on scenic quality would be minimal.

## Conclusions:

### Other Indirect and Cumulative Effects on Scenic Quality

Inventoried roadless areas generally have landscapes with High to Very High scenic integrity. Evaluation of the alternatives is based on the relative potential for reducing, maintaining, or increasing the scenic integrity. If an action alternative were selected, scenic integrity would be maintained or improved on 58.5 million acres of NFS lands. Combining the number of inventoried roadless area acres with 34.7 million acres of designated Wilderness provides a more complete picture of NFS lands with high to very high scenic quality. The total area being managed for high scenic quality would approach 93.2 million acres.

Data are unavailable to identify the number of NFS acres outside of Wilderness and inventoried roadless areas with road construction and reconstruction or other development restrictions in land management plans. However, a conservative estimate would place this figure at approximately 15 million additional acres, or 15 million additional acres that would contribute to maintenance of High to Very High scenic integrity. Although this is a rough estimate, the total acreage of inventoried roadless areas, designated Wilderness, and other NFS lands with restrictions on development can serve as a baseline for discussion of cumulative effects. Areas without restrictions, generally those with management prescriptions that allow a wide range of development activities and may have less capability to maintain high scenic quality, total 84.1 million acres.

Within the context of NFS lands, analysis identified factors that may have major, minor, and no effect on the baseline high scenic quality. The only reasonable foreseeable factor that could cause a major shift in the baseline acres managed for High and Very High scenic integrity is the proposed Roads Policy. The most common scenario associated with road decommissioning is to reduce road density, not create unroaded areas. However, the possibility exists that there could be an increase of 10%, or 8.4 million acres, of unroaded areas created over the next 40 years due to road decommissioning. This may increase the number of acres available to be managed for a heightened level of scenic quality.

Factors that might have minor effects include lands acquired through purchase, exchange, or legislation; temporary visual impacts from fire, flood, or other catastrophe; or deviations from the characteristic landscape caused by multiple-use activities. These factors may cause scenic quality shifts in localized areas or cause small incremental shifts over long periods. However, they typically would not cause a major shift in the national baseline for high scenic quality.

Another factor that would not change the baseline for high scenic quality, but would generally raise the scenic integrity levels, is future Wilderness designations. It is estimated that 10%, or 5.8 million acres, of inventoried roadless areas could be designated as Wilderness in the next 40 years. This amount includes the 7.2% (4.2 million acres) of inventoried roadless acres already recommended for Wilderness designation in land management plans. It also assumes that an additional 2.8% (1.6 million acres) of inventoried roadless areas could be added to the National Wilderness

Preservation System. This would maintain the baseline, but potentially shift scenic quality to higher levels.

Actions taken by other land management and regulatory agencies are important factors in maintaining high scenic quality from a national perspective. Most land management agencies administer their lands with some form of visual goals integrated into their planning processes. However, the mission of each agency determines that they will manage the natural landscape for high scenic quality. For instance, the National Park Service, U.S. Fish and Wildlife Service, and some parkland managed by local and State agencies manage their lands to maintain the very highest levels of scenic quality. Although a small percentage of these lands are highly modified to handle the large numbers of people drawn to the attraction. Other agencies, such as Bureau of Land Management or State resource development departments, have missions that focus on resource management. The Army Corps of Engineers, Bureau of Reclamation, and local parks, have missions to primarily manage for developed or road-based recreation. Lands managed by these agencies would typically have higher percentages of modified landscapes resulting in lower scenic quality of natural landscapes in some areas.

Certain regulatory agencies have effects on the scenic quality of landscapes at the regional and local scale. For instance, State Coastal Commissions have strong mandates to maintain high scenic quality along their coastlands. Various local commissions throughout the nation use zoning to preserve particular views or valued landscape features. Much of the scenic backdrop and open space around communities is private land. Large ranches, private landholdings, and agricultural lands are being developed at an accelerated pace. As more and more of this land is developed, public awareness of the loss of natural landscapes with high scenic quality has increased and resulted in national efforts focused on maintaining areas of high scenic value. These efforts resulted in the Scenic Highway movement, Wild and Scenic Rivers System Act, American Heritage Rivers program, anti-billboard campaigns, and anti-litter laws.

High scenic quality of natural landscapes is an important component of our national heritage. Over time, the last vast natural landscapes with high scenic quality will be those managed by agencies responsible for the Federal lands. Over the next 40 years, as private lands continue to be developed, and as public lands continue to be altered by management actions, the value of natural landscapes of high scenic quality will continue to increase. Because consideration for maintenance of natural landscapes with high scenic quality will play an increasingly larger role in decisions that would cause visual impacts, the number of acres available to be managed for a heightened level of scenic quality may increase.

## **References Cited:**

Abbott, S. and S. Sheridan. 1997. Building Gateway Partnerships, A Process for Shaping the Future of Your Community. Rivers, Trails, and Conservation Assistance. U. S. Department of Interior, National Park Service, Seattle, Washington.

Driver, B. L., P. J. Brown, and G. L. Peterson. 1991. *Benefits of Leisure*. State College, Pennsylvania: Venture Publishing.

USDA, Forest Service. 1996. *Landscape Aesthetics: A Handbook for Scenery Management*. Washington, D.C. 34 p.

## Definitions:

**Backcountry** – A generic term that refers to areas that are relatively unmodified and usually accessible only by foot, horse, watercraft, or off highway vehicle (OHV).

**Carrying capacity** – A measure used to signify the optimum use that the area can accommodate without having unacceptable degradation of resources or undesirable social interaction, in accordance with specified standards usually found in the land management plan.

**Developed recreation** – Activities that are consistent with the settings and experiences identified with the Roaded Natural (RN), Rural (R), and Urban (U) classes of the Recreation Opportunity Spectrum. These activities are usually associated with an area that has been improved or developed for recreation, such as campgrounds and picnic areas, scenic overlooks and interpretive sites, or visitor centers and resorts.

**Dispersed recreation** – Activities usually associated with backcountry and trails and are consistent with the settings and experiences identified with Primitive (P), Semi-Primitive Non-Motorized (SPNM), and Semi-Primitive Motorized (SPM) classes of the Recreation Opportunity Spectrum. Examples of these activities include hiking, snowmobiling, mountain biking, wilderness use, backpacking, horseback riding, and OHV use.

**Forest road or trail** – Any road or trail wholly or partly within, or adjacent to, and serving the National Forest System and which is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

**Gateway communities** – Communities that are economically and socially interdependent on the associated public lands. Proximity to these lands contributes to the quality of life and sense of place for residents and visitors.

**Inventoried roadless area** – Undeveloped areas typically exceeding 5,000 acres that met the minimum criteria for wilderness consideration under the Wilderness Act and that were inventoried during the Forest Service's Roadless Area Review and Evaluation (RARE II) process, subsequent assessments, or forest planning. These areas are identified in a set of inventoried roadless area maps, contained in *Forest Service Roadless Area Conservation, Final Environmental Impact Statement, Volume 2*, dated November 2000, which are held at the National headquarters office of the Forest Service.

**Motorized equipment** – Machines that use a motor, engine, or other nonliving power sources. This includes, but is not limited to, chain saws, aircraft, snowmobiles, generators, motorboats, and motor vehicles. It does not include small battery or gas powered hand carried devices such as shavers, wristwatches, flashlights, cameras, stoves, or other similar small equipment.

**Primitive (P)** – A definition used in the Recreation Opportunity Spectrum (ROS) to characterize an area that is essentially an unmodified natural environment of large size. Interaction between users 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.

**Road** – A motor vehicle travelway over 50 inches wide, except those designated and managed as a trail. A road may be classified, unclassified, or temporary.

**Road based recreation** – Activities that are normally associated with classified roads and are consistent with the settings and experiences identified with Semi-Primitive Motorized (SPM), Roaded Natural (RN), Rural (R), and Urban (U) classes of the Recreation Opportunity Spectrum. Examples of these activities include car camping and picnicking, gathering berries and firewood, driving for pleasure, wildlife viewing, and OHV use.

**Roaded Natural (RN)** – A definition used in the Recreation Opportunity Spectrum (ROS) to characterize an area that has predominantly natural-appearing environments with moderate evidences of the sights and sounds of humans. Such evidences are usually in harmony with the natural environment. Interaction between users may be low to moderate, but evidence of other users is prevalent. Resource modification and practices are evident but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and facilities design.

**Roadless areas** – For the purposes of this EIS, a generic term that includes inventoried roadless area and unroaded areas.

**Roadless characteristics** – Roadless area characteristics include the following:

Soil, water, and air

Sources of public drinking water

Diversity of plant and animal communities

Habitat for threatened, endangered, proposed, candidate, and sensitive species, and for those species dependent on large, undisturbed areas of land

Primitive, Semi-Primitive Non-Motorized, and Semi-Primitive Motorized classes of recreation opportunities

Reference landscapes

Landscape character and scenic integrity

Traditional cultural properties and sacred sites

Other locally identified unique characteristics

**Rural (R)** – A definition used in the Recreation Opportunity Spectrum (ROS) to characterize an area with a substantially modified natural environment. Sights and sounds of humans are readily evident, and the interaction between users is moderate to high. A considerable number of facilities are designed for use by large numbers of people. Facilities for intensified motorized use and parking are available.

**Semi-Primitive Motorized (SPM)** – A definition used in the Recreation Opportunity Spectrum (ROS) to characterize an area that has 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.

**Semi-Primitive Non-Motorized (SPNM)** – A definition used in the Recreation Opportunity Spectrum (ROS) to characterize an area that has 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 they are subtle. Motorized use is not permitted.

**Sense of place** – The aesthetic, nostalgic, or spiritual effects of physical locations on humans based on personal, use-oriented or attachment-oriented relationships between individuals and those locations. The meaning, values, and feelings that people associate with physical locations because of their experiences there.

**Trail** – A pathway for travel by foot, stock, or trail vehicles.

**Urban (U)** – A definition used in the Recreation Opportunity Spectrum (ROS) to characterize a substantially urbanized environment, although the background may have natural appearing elements. Affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities. Large numbers of users can be expected, both on-site and in nearby areas. Facilities for highly intensified motor vehicle use and parking are available. Regeneration and controls are obvious and numerous.

**Wilderness** – A designated area defined in the Wilderness Act of 1964 in the following way: A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which – (a) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (b) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (c) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (d) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

**Wildland** – Land other than that dedicated for other uses such as agriculture, urban, mining, or parks.