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Final Environmental Impact Statement for the Land Management Plan

Appendix J: Scenery Management System Mapping Process

Nez Perce-Clearwater National Forests



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Final Environmental Impact Statement for 2023 Land Management Plan for the Nez Perce-Clearwater National Forests

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Abstract: This Final Environmental Impact Statement documents the analysis of the Preferred Alternative and four additional action alternatives developed for programmatic management of the four million acres of National Forest system lands administered by the Nez Perce-Clearwater National Forests. The purpose is to provide land management direction for the Nez Perce-Clearwater National Forests, combining the 1987 Nez Perce National Forests Land Management Plan and the 1987 Clearwater National Forest Land Management Plan into one plan for the Nez Perce-Clearwater National Forests, now managed as one administrative unit.

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Introduction

As part of the Nez Perce-Clearwater forest plan revision, the forests are moving management of the scenery resource, formally referred to as the visual resource from the Visual Management System direction, to the updated and refined Scenery Management System. In 1995, the Forest Service affirmed that users and owners of the national forests have a strong interest in maintaining the character of forest and grassland settings but that the approach to managing this resource was inadequately served through the existing handbook direction. As a result, the Scenery Management System and the revised Agriculture Handbook 701 – Landscape Aesthetics Handbook (U.S. Department of Agriculture 1995) replaced Agriculture Handbook 462 – The Visual Management System (U.S. Department of Agriculture 1973, 1974), which had been the primary guidance tool for 25 years. It has now been more than 20 years since the publication of the Scenery Management System Handbook and, while further refinements have been made, direction for management of the scenery resource still follows this handbook.

Adoption of the Scenery Management System includes a transition to a system based on more ecological and cultural health and sustainability principles to manage entire ecological and cultural landscapes cohesively. Many of the basic inventory components of the Visual Management System were retained and users and practitioners will recognize overlap between the two systems, but much of the updated direction revolves around recognizing the importance of adaptability to evolving ecological conditions, as well as retaining valued cultural aspects of landscapes. This new system recognizes that the landscapes users and owners of the national forests and grasslands experience are the result of both natural and human driven processes and these factors will continue to influence the future landscapes users and owners experience. Therefore, management of the scenery on the forests and grasslands must also be adaptable to these processes and incorporate people's values, as well as ecological values, into Forest Service management decisions and approaches.

With adoption of any of the action alternatives proposed in the forest plan the Scenery Management System would also be adopted and would replace use of the Visual Management System across the Nez Perce-Clearwater. This appendix explains the five-step process of the Scenery Management System, along with the results of each step. The outcome of the process results in scenic integrity objectives, commonly referred to as SIOs, for management of the scenic resource across the Nez Perce-Clearwater. Forest plan components correlate to the mapped scenic integrity objectives and are based on this process to get to that outcome. The scenic integrity objectives are similar to the visual quality objectives in their application across the Nez Perce-Clearwater, but the inputs and process is more inclusive of the ecological and cultural values of the landscape.

The five steps are:

1. **Scenic Character Descriptions:** written descriptions of geographic areas on forests or grasslands that provide a visual and cultural image of the combination of physical, biological, and cultural attributes that make the area identifiable and unique (U.S. Department of Agriculture 1995).
 - a. An existing and desired scenic character is described for each area on the Nez Perce-Clearwater to better describe these attributes of the existing landscape, as well as facilitate movement of aspects of the landscape towards one that is more ecologically and culturally sustainable. The objective is to highlight aspects of the areas to be maintained in their current condition, as well as those aspects where the current condition is not one to be maintained because it does not contribute to the unique and identifiable attributes of the area.

2. **Scenic Attractiveness Mapping:** This component is the primary indicator of the intrinsic scenic beauty of a landscape and the positive responses it evokes in people. It helps to determine landscapes that are important for scenic beauty, based on commonly held perceptions of the beauty of landform, vegetation pattern, composition, surface water characteristics, land use patterns, and cultural features (U.S. Department of Agriculture 1995). It is recognized that every person holds specific expectations for beauty when assessing forest landscapes. This component objectively quantifies combinations of variety, vividness, mystery, intactness, coherence, harmony, uniqueness, pattern, and balance that are generally stable and not influenced by a specific person or people's expectations. The output is an importance score or rank for the intrinsic beauty of the landform, water characteristics, cultural land use, and vegetation pattern.
3. **Landscape Visibility, including Concern Levels and Distance Zones:** This component addresses the relative importance and sensitivity of what is seen and perceived across the landscape. It consists of two parts: travel-ways and use areas with associated concern levels and distance zones. It is recognized that someone will see virtually all of the Nez Perce-Clearwater from somewhere at some time, so there is value to all scenery across the landscape. It is also recognized that any single individual may value certain aspects of the landscape more than others and likely one individual's values may not align with another individual's values. Therefore, the context of viewers, the duration of the view, the degree of discernible detail, number of viewers, and seasonal variations are the drivers for this mapping process. Through this process, individual subjective values are reduced to a more objective system to prioritize aspects and locations across the landscape. This step allows practitioners to focus on where across the landscape the scenery resource may hold more value or importance relative to other resources and their concerns in the same area (U.S. Department of Agriculture 1995).
4. **Scenic Class Mapping:** This component measures the relative importance, or value, of discrete landscape areas having similar characteristics of scenic attractiveness and landscape visibility. This component combines the scenic attractiveness and landscape visibility components to create a single numerical measure to compare the scenery resource to other resources, such as timber, wildlife, and minerals. Those areas with lower numerical scenic class values indicate a higher public value than those with a higher numerical scenic class (U.S. Department of Agriculture 1995).
5. **Scenic Integrity Objective Mapping:** This component measures the state of the scenic character being whole, complete, entire, intact, or unbroken. Human elements and alterations may raise, maintain, or lower the integrity, depending on the degree of deviation from the valued scenic character and the structural form, color, texture, pattern, and scale of the element. This is a measure of the minimum level of intactness of the scenic character or the acceptable maximum level of deviation from the scenic character (U.S. Department of Agriculture 1995).

Scenic Character

The Scenery Management System Handbook (U.S. Department of Agriculture 1995) directs that the base on which scenery management and assessments of the scenery resource lie on are scenic character descriptions. Scenic character descriptions are defined as "a combination of the objective information contained within ecological unit descriptions and the cultural values that people assign to landscapes. Together they help define the meaning of *place*, and its scenic expression" (U.S. Department of Agriculture 1995). When the Handbook was published in 1995, the term used was landscape character. The term has since been updated to be scenic character. Therefore, all references to scenic character are articulated as landscape character in the Handbook direction.

The Nez Perce-Clearwater is a diverse forest with four major divisions in scenic character. These divisions were made based on differences in both the biophysical aspects of the landscape, as well as the differences in visitor social expectations for their visit to these areas of the Nez Perce-Clearwater. The four scenic character zones include: Palouse, North Fork, Middle Fork, and South Fork. These large area scenic character descriptions are presented with both an existing scenic character based on what these areas look like today as a point in time and desired scenic character to describe what these areas might look like in the future under circumstances that create a more sustainable, ecologically and culturally, scenic composition. The desired scenic character should serve as the measure to manage the scenery resource. Scenic integrity objectives, as mapped, provide the indicators to ascertain whether or not the desired scenic character is being maintained or improved upon. In areas where there is a large difference between the existing scenic character and desired scenic character, there may be a need to undertake management actions to move the existing character towards the desired character. Project level desired scenic character descriptions should be presented when management actions are proposed to refine on a smaller scale whether or not an action will meet or exceed the assigned scenic integrity objective and contribute to sustaining or improving the desired scenic character of the larger landscape zone.

Zone based scenic character descriptions were generated following internal and external discussions about not only what the zone currently looks like and what is valued within it but also what is the desired appearance of the zone. Where there is a difference between the existing and desired scenic character, there is an opportunity to use management tools to move the scenic character of the landscape from the current state towards the desired state. It is recognized that there is a duration of time in which the landscape may appear further from the desired scenic character in the short term but this short term deterioration is acceptable for long term stability and sustainability of the scenic character and achievement of the desired scenic character.

The scenic character descriptions for both the existing condition and the desired condition are found in Appendix 7 in the Forest Plan.

Scenic Attractiveness

The process for mapping the scenic attractiveness across the Nez Perce-Clearwater is as follows. A determination was made that there are five ecological, topographic, and cultural components that influence the scenic attractiveness of the Nez Perce-Clearwater. These components were chosen in part through a review of the Scenery Management System Handbooks (U.S. Department of Agriculture 1995), suggestions of components to consider, and forest discussion and review, as well as available geographic information system data. The five components selected include: elevation change or slope, ecological regions, vegetation types, geologic layers, and unique waterways, as described by designated wild and scenic rivers and special interest places. Each of these components were divided into three categories and areas of the landscape were assigned a score of 1, 2, or 3 based on the category. Table 1 shows the components, data source used, and the criteria for each score. Then, a total score was generated by adding each individual component number together. The range of resulting total scores is 1 to 13 because there were no locations on the Nez Perce-Clearwater that scored 3 for all 6 components and some areas did not receive any score for some components.

Table 1. Scenic Attractiveness Components, GIS Data, and Score Criteria.

Component	GIS Data	Score Criteria		
		1	2	3
Elevation Change	Slope 10-meter raster	0-5%	5-15%	Greater than 15%
Ecological Regions	Bailey's EcoRegions	None ¹	Lochsa Uplands, Wallowas/Seven Devils Mountains, Glaciated Bitterroot Mountains and Canyons, Hot Dry Canyons, Lochsa-Selway-Clearwater Canyons	High Idaho Batholith, High Northern Rockies, Canyons and Dissected Highlands, Canyons and Dissected Uplands, Grassy Potlatch, Palouse Hills, Lower Clearwater Canyons, Subalpine-Alpine Zone, Nez Perce Prairie, Weippe Prairie
Vegetation Types	Region 1 Vegetation Layer	Other ²	Aspen, Birch - Green Ash, Boxelder, Red alder, Larch, Cottonwood	Western redcedar
Geologic Type	Region 1 Geology Layer	None ¹	Igneous and Metamorphic, undifferentiated; Metamorphic and Sedimentary, undifferentiated; Metamorphic, amphibolite; Metamorphic, gneiss; Metamorphic, intrusive; Metamorphic, undifferentiated	Igneous, volcanic; sedimentary, clastic; unconsolidated and sedimentary, undifferentiated; unconsolidated, undifferentiated
Unique Waterways	Nez Perce-Clearwater Wild & Scenic River	None ¹	None ¹	All
Special Areas	Nez Perce-Clearwater Special Interest Area	None ¹	None ¹	All

¹There were not three categories used for these components because review of the options indicated that there was not rationale to divide into three categories. For the Waterways and Special Interest Areas, these designations were deemed to be distinct on their own so they were automatically assigned a score of three.

²Vegetation identified as *non-forest* was not given a score; this identifier was used in the data for locations of water or exposed rock. Source: Nez Perce-Clearwater GIS data and model to rank and tally scores.

A review of the total scores indicated that the bulk of the Nez Perce-Clearwater fell between a score of 4 and 9. Lands with these scores were reclassified as “Scenic Attractiveness B,” or common. The bulk of the forest should fall into this Scenic Attractiveness range. Those locations above a score of 9 were deemed to be distinct and unique. They were reclassified as “A” landscapes. There are far fewer portions of the Nez Perce-Clearwater that are categorized as “A” landscapes, which follows the Scenery Management System direction to highlight the distinct and rare portions of the forest (U.S. Department of Agriculture 1995). Finally, the locations below a score of 4 were reclassified as “C,” or indistinct landscapes. This is the smallest portion of the forest and represents those areas where there are few unique components of the area. These classifications, and the resulting map, were reviewed by the Nez Perce-Clearwater forest leadership subcommittee and the forest landscape architect for field validity and verification. For further verification, the forest landscape architect generated a professional experience-based attractiveness map, which very closely matched the GIS model results. Table 2 and the Scenic

Attractiveness map in Appendix A display the distribution of the classifications across the Nez Perce-Clearwater.

Table 2. Scenic Attractiveness scores and acreage across the Nez Perce-Clearwater.

Classification	Score	Acres
A	1, 2 or 3	194,347
B	4, 5, 6, 7 or 8	3,739,454
C	9, 10, 11, 12, 13	352

Source: Nez Perce-Clearwater GIS data and model output.

Concern Levels

The process for mapping the ‘Concern Levels’ and ‘Visibility’ across the Nez Perce-Clearwater is as follows. Using the Scenery Management System Handbooks (U.S. Department of Agriculture 1995), concern level criteria for travelways, including roads, trails and waterways, as well as special interest areas and recreation sites, were categorized as Concern Level 1, 2, or 3. The criteria for a Concern Level 1 includes international or national use with primary use and high volumes of use. The criteria for Concern Level 2 include regional use with secondary use and moderate volumes of use. Those areas where use is dominated by local visitors and is a tertiary use area or travelway with low volume were categorized as Concern Level 3. Concern Level 3 locations were not mapped but include all use areas not categorized as 1 or 2. These categories, and the resulting map, were reviewed by the Nez Perce-Clearwater forest leadership subcommittee and the forest landscape architect for field validity and verification. Table 3 describes the criteria used to determine the concern levels across the Nez Perce-Clearwater.

Table 3. Criteria used to assess and determine concern level locations across the Nez Perce-Clearwater.

Concern Level	Travelways	Recreation Areas	Special Areas
1	State highways, designated scenic byways, trails, and roads to or adjacent to special interest areas.	Facility Class 5 campgrounds and day-use sites.	National Historic Landmarks, designated wild and scenic rivers, designated special interest areas.
2	Trails and roads accessing designated wilderness; trails and roads accessing designated wild and scenic rivers.	x	Designated wilderness, designated wild and scenic rivers.
3	All other locations		

Source: Nez Perce-Clearwater and Scenery Management System criteria descriptions.

The concern level feature classes were buffered by the distance zones outlined in the Scenery Management System Handbooks (U.S. Department of Agriculture 1995) as follows. The immediate foreground from 0 to 300 feet was not buffered for this landscape scale map. It is expected that during project specific scenery analysis this distance zone would be applied on a site-specific basis. The foreground distance zone is 0 to 0.5 miles, the middle ground distance zone is 0.5 to 4 miles, and background distance zone equals greater than 4 miles.

Visibility modeling through use of GIS digital elevation models, or DEMS, at 10 meters were run using the concern level travelways and points. This output was overlaid by the distance zone buffer feature class to create a concern level based visible distance zones feature class. Those areas that are not visible from one or more of the concern level locations are classified as seldom seen areas

Scenic Class

The process for mapping the scenic class across the Nez Perce-Clearwater is as follows. Using the Scenery Management System Handbook (U.S. Department of Agriculture 1995), the scenic attractiveness and visibility by concern level and distance zone feature classes are intersected to determine the scenic classes across the Nez Perce-Clearwater. Table 5 shows the intersection of the scenic attractiveness and the visibility to determine the scenic classes across the Nez Perce-Clearwater.

Table 4. Scenic class determination based on scenic attractiveness and visibility intersection.

Scenic Attractiveness	Visibility					
	Foreground		Middle ground		Background	
	1	2	1	2	1	2
A	1	2	2	3	3	3
B	1	2	2	3	3	4
C	2	3	3	4	4	4

Source: Nez Perce-Clearwater GIS data and model output.

Table 6 lists the acres of the Nez Perce-Clearwater in each scenic class. A map of the scenic classes across the forest can be found in Appendix A.

Table 5. Scenic class distribution acreage across the Nez Perce-Clearwater.

Scenic Class	Acres
1	113,463
2	207,033
3	638,068
4	6,529

Source: Nez Perce-Clearwater GIS data and model output.

Scenic Integrity Objectives

The final step in the mapping process is to overlay the scenic classes of the Nez Perce-Clearwater with the management area information and recreation opportunity spectrum information to relate the scenery resource to other resources across the forest. The recreation opportunity spectrum classes were lumped together based on whether or not they include suitable motorized because it was determined that there is a difference in expectations between motorized and non-motorized users for scenery, as well as different management tools and actions available based on this suitability criteria. Therefore, not every recreation opportunity spectrum class is shown but the groupings are as follows: Primitive and Semi-Primitive Non-Motorized are combined as Non-Motorized and Semi-Primitive Motorized and Roaded Natural and Rural are grouped together as Motorized.

The output of this step is the scenic integrity objectives, which are the minimum levels of scenic integrity allowable on each acre of the forest in order to indicate whether or not the scenic character is being maintained or enhanced. As discussed before, a short-term degradation of the scenic integrity objectives is allowable if the long-term scenic integrity objective is maintained or enhanced in order to create a more stable and sustainable scenic character. Table 7 describes the relationship between the scenic class and the management areas and recreation opportunity spectrum.

Table 6. Scenic integrity objective determination based on intersecting the scenic class and the management area and recreation opportunity spectrum.

Scenic Class	Management Area and Recreation Opportunity Spectrum					
	1		2		3	
	Non-Motorized	Motorized	Non-Motorized	Motorized	Non-Motorized	Motorized
1	Very High	High	High	High	High	Moderate
2	Very High	High	High	Moderate	Moderate	Moderate
3	Very High	High	Moderate	Moderate	Moderate	Low
4	Very High	High	Moderate	Low	Low	Low

Source: Nez Perce-Clearwater GIS data and model output.

The implications of each scenic integrity objectives follow the Scenery Management System Handbook direction (U.S. Department of Agriculture 1995) for each minimum level. They are summarized in Table 8 and are again in reference to the desired scenic character for each zone.

Table 7. Scenic integrity objective descriptions and criteria.

Scenic Integrity Objective	Dominance ¹	Degree of Deviation ²	Intactness ³
Very High	Scenic Character	None	Fully Expressed
High	Scenic Character	Not Evident	Largely Expressed
Moderate	Scenic Character	Evident but Not Dominate	Slightly Altered and Moderately Expressed
Low	Management Activity Deviation	Dominant	Altered and Lowly Expressed

1 Dominance is the measure of dominance between scenic character and management activity deviation

2 Degree of Deviation is the measure of deviation from the scenic character

3 Intactness is the measure of the intactness of the scenic character

Source: Adapted from Scenery Management System Handbook (U.S. Department of Agriculture 1995)

Since the draft scenic integrity objectives vary by alternative based on the differences in management areas and recreation opportunity spectrum acres, they are discussed in the Scenery Resource section of the FEIS. A map of the scenic integrity objectives across the Nez Perce-Clearwater by alternative can be found in Appendix A.

Literature Cited

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