U.S. Department of the Interior - Bureau of Land Management

Manual 8400 - Visual Resource Management

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.01 Purpose. This section describes the overall policy direction for Visual Resource Management (VRM) in the Bureau of Land Management (BLM).

.02 Objectives. The objective of Visual Resource Management is to manage public lands in a manner which will protect the quality of the scenic (visual) values of these lands.

.03 Authority.

A. Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701 et. seq.;

1. Section 102 (a)(8). States that "...the public lands be managed in a manner that will protect the quality of the...scenic...values...."

2. Section 103 (c). Identifies "scenic values" as one of the resources for which public land should be managed.

3. Section 201 (a). States that "The Secretary shall prepare and maintain on a continuing basis an inventory of all public lands and their resources and other values (including...scenic values)...."

4. Section 505 (a). Requires that "Each right-of-way shall contain terms and conditions which will... minimize damage to the scenic and esthetic values...."

B. National Environmental Policy Act of 1969, 43 U.S.C. 4321 et. seq.;

1. Section 101 (b). Requires measures be taken to " ...assure for all American...esthetically pleasing surroundings...."

2. Section 102. Requires agencies to "Utilize a systematic, interdisciplinary approach which will ensure the integrated use of...Environmental Design Arts in the planning and decisionmaking...."

C. Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. 1201 et. seq.;

1. Section 102 (d). Requires that measures be taken to " ...assure that surface coal mining operations are so conducted as to protect the environment."

.04 Responsibility.

A. Director:

1. Lead responsibility for VRM functions in the Bureau is assigned to the Recreation program. This includes the development of policy, guidelines, training, and overall coordination.

2. Each program (i.e., Range, Forestry, Minerals, Lands, etc.) involved in resource development work is responsible for protecting visual values. This includes ensuring that (1) personnel in each program who are involved in activities which affect visual values are properly trained in visual management techniques; (2) visual values are adequately considered in all management activities; and (3) adequate guidance and funding is available to accomplish these purposes.

B. State Director:

1. Implements BLM policy and provides statewide program coordination and guidance for managing visual resources on public lands.

2. Provides a statewide VRM training program to maintain skill levels for personnel involved in activities which affect visual values.

3. Assigns the coordination of VRM within the State to one person and ensures that the person is properly trained.

4. Maintains at least one person within the State who has the capability and expertise to provide visual design assistance on major projects and to conduct VRM training.

C. District Manager:

1. Provides Districtwide program coordination and guidance for managing visual resources on public lands.

2. Ensures that all District personnel involved in management activities which affect visual values are properly trained in visual management techniques.

3. Provides technical assistance to Resource Area Offices on visual management applications.

4. Designates one person within the District to coordinate the VRM functions and ensures that the person is properly trained.

D. Area Manager:

1. Prepares and maintains on a continuing basis an inventory of visual values on public lands and ensures that these values are adequately considered in the land-use planning and decisionmaking processes.

2. Ensures that visual impacts are minimized in all resource development activities including non-BLM initiated projects.

3. Assigns the coordination of VRM to one person and ensures that the person is properly trained.

4. Ensures that all Resource Area personnel involved in surface disturbing activities are trained in VRM techniques.

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.05 References.

A. BLM Manual 8410.

B. BLM Manual 8431.

.06 Policy.

A. The Bureau has a basic stewardship responsibility to identify and protect visual values on public lands. The basic policy parameters for accomplishing this task are as follows:

1. The Bureau shall prepare and maintain on a continuing basis an inventory of visual values on all public lands. Priority for new inventory shall be given to those areas where it is needed for issue resolution in Resource Management Planning (RMP) or in those areas where a project is proposed and an inventory does not exist or needs updating. The goal is to have a completed VRM inventory for each RMP effort. The level of detail should vary with the relative value of the visual resources within the planning area.

2. Visual management objectives (classes) are developed through the RMP process for all Bureau lands. The approved VRM objectives shall result from, and conform with, the resource allocation decisions made in RMP's.

3. Interim visual management objectives are established where a project is proposed and there are no RMP, or Management Framework Plan (MFP) approved VRM objectives. These objectives are developed using the guidelines in Manual Section 8410 and must conform with the land use allocations set forth in the RMP which covers the project area. The establishment of interim VRM objectives will not require a plan amendment unless the project itself requires one.

4. The approved VRM objectives (classes) provide the visual management standards for the design and development of future projects and for rehabilitation of existing projects.

5. Visual design considerations shall be incorporated into all surface disturbing projects regardless of size or potential impact. Emphasis shall be placed on providing these inputs during the initial planning and design phase so as to minimize costly redesign and mitigation at later phases of project design and development. Ensuring early visual design inputs into non-Bureau initiated projects in many cases is beyond Bureau control. However, every effort should be made to inform potential applicants of the visual management objectives so they can adequately incorporate visual design considerations into their initial planning and design efforts.

6. The contrast rating process (Manual Section 8431) is used as a visual design tool in project design and

as a project assessment tool during environmental review. Contrast ratings are required for proposed projects in highly sensitive areas or high impact projects, but may also be used for other projects where it would appear to be the most effective design or assessment tool. A brief narrative visual assessment is completed for all other projects which require an environmental assessment or environmental impact statement.

7. Ensure that project monitoring efforts include timely and thorough compliance evaluations, especially during the construction phase, to ensure that visual management provisions are effectively carried out.

B. Visual Resource Management is a management responsibility shared by all resource programs (Section .04A.2).

C. VRM training shall be conducted in each District and Resource Area to maintain skill levels for VRM coordinators and project coordinators. Emphasis shall be placed on improving design skills so that visual design considerations will be incorporated into all project proposals beginning with initial planning and design.

.07 Overview of Visual Resource Management System.

A. The VRM System. Public lands have a variety of visual values. These different values warrant different levels of management. Because it is neither desirable nor practical to provide the same level of management for all visual resources, it is necessary to systematically identify and evaluate these values (Illustration 1) to determine the appropriate level of management. Visual values are identified through the VRM inventory (Manual Section 8410) and are considered with other resource values in the Resource Management Planning (RMP) process. Visual management objectives are established in RMP's in conformance with the land use allocations made in the plan. These area specific objectives provide the standards for planning, designing, and evaluating future management projects.

The contrast rating system (Manual Section 8431) provides a systematic means to evaluate proposed projects and determine whether these projects conform with the approved VRM objectives. It also provides a means to identify mitigating measures that can be taken to minimize adverse visual impacts. The VRM system, therefore, provides a means: to identify visual values; to establish objectives through the RMP process for managing these values; and to provide timely inputs into proposed surface disturbing projects to ensure that these objectives are met.

B. Use of Basic Landscape Design Principles. Assigning values to visual resources is a subjective process. The phrase, "beauty is in the eye of the beholder," is often quoted to emphasize the subjectivity in determining scenic values. Yet, researchers have found consistent levels of agreement among individuals asked to evaluate visual quality. Designers have used the basic design elements of form, line, color, and texture to describe and evaluate landscapes for hundreds of years. Modifications in a landscape which repeat the landscape's basic elements are said to be in harmony with their surroundings. Modifications which do not harmonize often look out of place and are said to contrast or stand out in unpleasing ways. These basic design elements and concepts have been incorporated into the VRM system to lend objectivity, integrity, and consistency to the process. The VRM system is designed to separate the existing landscape and the proposed project into their features and elements and to compare each part against the other in order to identify those parts which are not in harmony. Then, ways are sought to bring them back into harmony. An understanding of basic design principles and how they relate to the appearance of projects is essential in order to minimize visual impacts. The references listed in the Bibliography provide source information on environmental design concepts and techniques and their application in minimizing visual impacts. The information generated through the VRM system is to be used as a guide. The decision on the amount of visual change that is acceptable is made by the

field manager.

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Glossary of Terms

- A -

(a)esthetics: relates to the pleasurable characteristics of a physical environment as perceived through the five senses of sight, sound, smell, taste, and touch.

adverse visual impact: any modification in land forms, water bodies, or vegetation, or any introduction of structures, which negatively interrupts the visual character of the landscape and disrupts the harmony of the basic elements (i.e., form, line, color, and texture).

angle of observation: the angle, both vertical and horizontal, between a viewer's line of sight and the landscape being viewed.

areas of critical environmental concern (ACEC's) for scenic values: areas within the public lands where special management attention is required to protect or prevent irreparable damage to important scenic values.

- B -

background distance zone: the visible area of a landscape which lies beyond the foreground middleground. Usually from a minimum of 3 to 5 miles to a maximum of about 15 miles from a travel route, use area, or other observer point. Atmospheric conditions in some areas may limit the maximum to about 8 miles or less.

basic elements: the four design elements (form, line, color, and texture) which determine how the character of a landscape is perceived.

- C -

characteristic: a distinguishing trait, feature, or quality.

characteristic landscape: the established landscape within an area being viewed. This does not necessarily mean a naturalistic character. It could refer to an agricultural setting, an urban landscape, a primarily natural environment, or a combination of these types.

computer graphics: visual displays of information produced by an electronic computer. This includes both hard-copy and screen displays.

contrast: opposition or unlikeness of different forms, lines, colors, or textures in a landscape.

contrast rating: a method of analyzing the potential visual impacts of proposed management activities.

cultural modification: any man-caused change in the land form, water form, vegetation, or the addition of a structure which creates a visual contrast in the basic elements (form, line, color, texture) of the naturalistic character of a landscape.

- D -

distance zones: a subdivision of the landscape as viewed from an observer position. The subdivision (zones) includes foreground-middleground, background, and seldom seen.

- E -

easement, scenic: a right to make use of land to protect the scenic values.

enhancement: a management action designed to improve visual quality.

- F -

foreground-middleground distance zones: the area visible from a travel route, use area, or other observation point to a distance of 3 to 5 miles. The outer boundary of this zone is defined as the point where the texture and form of individual plants are no longer apparent in the landscape. Vegetation is apparent only in patterns or outline.

form: the mass or shape of an object or objects which appear unified, such as a vegetative opening in a forest, a cliff formation, or a water tank.

- H -

harmony: a combination of parts into a pleasing or orderly whole: congruity; a state of agreement of proportionate arrangement of form, line, color, and texture.

- I -

interdisciplinary team: a group of individuals with different training, representing the physical sciences, social sciences, and environmental design arts, assembled to solve a problem or perform a task. The members of the team proceed to a solution with frequent interaction so that each discipline may provide insights to any stage of the problem and disciplines may combine to provide new solutions.

- K -

key observation point (KOP): one or a series of points on a travel route or at a use area or a potential use area, where the view of a management activity would be most revealing.

- L -

landscape character: the arrangement of a particular landscape as formed by the variety and intensity of the landscape features and the four basic elements of form, line, color, and texture. These factors give the area a distinctive quality which distinguishes it from its immediate surroundings.

landscape features: the land and water form, vegetation, and structures which compose the characteristic landscape.

lighting:

- back lighting: a situation where the light source is coming from behind the object being viewed. Objects are generally in shadow with highlighted edge

- front lighting: a situation where the light source is coming from behind the observer and shining directly upon the area being viewed.
- side lighting: a situation where the light source is coming from the side of a scene or object being viewed. It is usually the most critical for revealing contrast.

line: the path, real or imagined, that the eye follows when perceiving abrupt differences in form, color, or texture. Within landscapes, lines may be found as ridges, skylines, structures, changes in vegetative types, or individual trees and branches.

- M -

management activity: a surface disturbing activity undertaken on the landscape for the purpose of harvesting, traversing, transporting, protecting, changing, replenishing, or otherwise using resources.

mitigation measures: methods or procedures designed to reduce or lessen the adverse impacts caused by management activities.

multidisciplinary team: a group specialists with different backgrounds, assembled to solve a problem. The problem is broken into pieces and each specialist works on a portion of the problem. Partial solutions are then linked together to provide the final solutions.

- N -

naturalistic character: a landscape setting where the basic elements are displayed in a composition that appears unaltered by man.

- O -

observer position: the placement and relationship of a viewer to the landscape which is being viewed.

- P -

photomontage: the technique of combining in a single photographic composition, parts of different photographs by superimposition.

physiographic province: an extensive portion of the landscape normally encompassing many hundreds of square miles, which portrays similar qualities of soil, rock, slope, and vegetation of the same geomorphic origin (Fenneman 1946, Sahrhaftig 1975).

- R -

rehabilitation: a management alternative and/or practice which restores landscapes to a desired scenic quality.

- S -

scale: the proportionate size relationship between an object and the surroundings in which the object is placed.

scenery: the aggregate of features that give character to a landscape.

scenic area: an area whose landscape character exhibits a high degree of variety and harmony among the basic elements which results in a pleasant landscape to view.

scenic quality: the relative worth of a landscape from a visual perception point of view.

scenic quality evaluation key factors: the seven factors (land form, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications) used to evaluate the scenic quality of a landscape.

scenic quality ratings: the relative scenic quality (A, B, or C) assigned a landscape by applying the scenic quality evaluation key factors; scenic quality A being the highest rating, B a moderate rating, and C the lowest rating.

scenic quality rating unit: a portion of the landscape which displays primarily homogenous visual characteristics of the basic landscape features (land and water form, vegetation, and structures).

scenic values: (refer to scenic quality and scenic quality ratings).

seen area: that portion of the landscape which is visible from roads, trails, rivers, campgrounds, communities, or other key observation positions.

seldom seen distance zone: portions of the landscape which are generally not visible from key observation points, or portions which are visible but more than 15 miles distance.

sensitivity levels: measures (e.g., high, medium, and low) of public concern for the maintenance of scenic quality.

simulation: a realistic visual portrayal which demonstrates the perceivable changes in landscape features caused by a proposed management activity. This is done through the use of photography, artwork, computer graphics, and other such techniques.

- T -

texture: the visual manifestations of the interplay of light and shadow created by the variations in the surface of an object or landscape.

- U -

use volume: the total volume of visitor use each segment of a travel route or use area receives.

- V -

variables: factors influencing visual perception including distance, angle of observation, time, size or scale, season of the year, light, and atmospheric conditions.

variety: the state or quality of being varied and having the absence of monotony or sameness.

viewshed: the landscape that can be directly seen under favorable atmospheric conditions, from a viewpoint or along a transportation corridor.

visual contrast: (see contrast).

visual quality: (see scenic quality).

visual resources: the visible physical features on a landscape (e.g., land, water, vegetation, animals, structures, and other features).

visual resource management classes: categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. There are four classes. Each class has an objective which prescribes the amount of change allowed in the characteristic landscape.

visual resource management (VRM): the inventory and planning actions taken to identify visual values and to establish objectives for managing those values; and the management actions taken to achieve the visual management objectives.

visual values: (see scenic quality).

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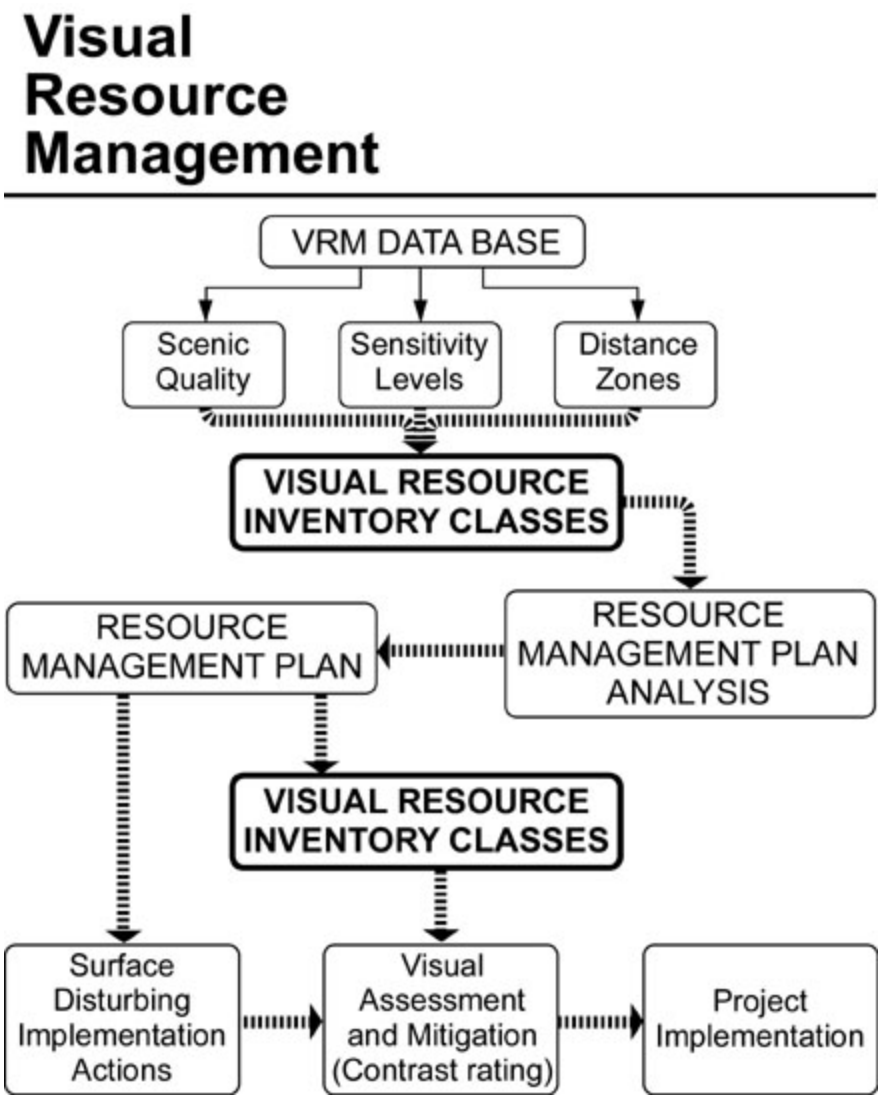

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