

APPENDIX G

BUREAU OF LAND MANAGEMENT

VISUAL RESOURCES MANAGEMENT GUIDE

PART I: GENERAL INFORMATION

General Guidance.

A. Overview. The visual resource inventory process provides Bureau of Land Management (BLM) managers with a means for determining visual values. The inventory consists of a scenic quality evaluation, sensitivity level analysis, and a delineation of distance zones. Based on these three factors, BLM-administered lands are placed into one of four visual resource inventory classes. These inventory classes represent the relative value of the visual resources. Classes I and II being the most valued, Class III representing a moderate value, and Class IV being of least value. The inventory classes provide the basis for considering visual values in the resource management planning (RMP) process. Visual Resource Management classes are established through the RMP process for all BLM-administered lands (see also Manual 1625.3). During the RMP process, the class boundaries are adjusted as necessary to reflect the resource allocation decisions made in RMP's. Visual management objectives are established for each class. (See Section VB.)

B. Implementation Options. The detail of the inventory will vary with the visual character of the landscapes being inventoried. For example, the flat, colorless, and barren Mancos shale area in southeastern Utah should not be given the same treatment as the rugged and colorful formations of the Colorado River area. Sensitive areas such as those near major highways or communities or adjacent to national parks should be given special treatment. It may be necessary to modify or make adaptations to the inventory system in such places as Alaska where the resource characteristics and the land-use patterns are significantly different from those in the Western States. These adaptations must (1) provide a more cost-effective way to complete a quality inventory, and (2) keep the conceptual framework of the Visual Resource Management (VRM) system intact.

C. Material Storage. All visual resource inventory rating forms, overlays, slides, and written material should be filed in the Resource Area Office.

II. Scenic Quality Evaluation. Scenic quality is a measure of the visual appeal of a tract of land. In the visual resource inventory process, public lands are given an A, B, or C rating based on the apparent scenic quality which is determined using seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications (see Illustrations 1, 2, 3, and 4). During the rating process, each of these factors are ranked on a comparative basis with similar features within the physiographic province. Use the physiographic provinces as delineated by Fenneman (see Illustrations 5 and 6) to the extent possible. The boundaries of these provinces may be refined to fit local situations. The "Ecoregions of the United States" by R.C. Bailey may be helpful in making these refinements. An important premise of the evaluation is that all public lands have scenic value, but areas with the most variety and most harmonious composition have the greatest scenic value. Another important concept is that the evaluation of scenic quality is done in relationship to the natural landscape. This does not mean that man-made features within a landscape necessarily detract from the scenic value. Man-made features that compliment the natural landscape may enhance the scenic value. Evaluations should avoid any bias against man-made modification to natural landscape.

A. Delineating Scenic Quality Rating Units (SQRU's). The planning area is subdivided into scenic quality rating units for rating purposes. Rating areas are delineated on a basis of: like physiographic characteristics; similar visual patterns, texture, color, variety, etc.; and areas which have similar impacts from man-made modifications. The size of SQRU's may vary from several thousand acres to 100 or less acres, depending on the homogeneity of the landscape features and the detail desired in the inventory. Normally, more detailed attention will be given to highly scenic areas or areas of known high sensitivity. Map and number each SQRU on an overlay as shown in Illustration 7.

B. Evaluating Scenic Quality. It is recommended that an interdisciplinary team do the evaluations. Ideally, one team member should have an environmental design arts background. All participants should have an understanding of the visual resource inventory system and be familiar with the areas to be evaluated. Evaluate each SQRU by observing the area from several important viewpoints. Scores should reflect the evaluator's overall impression of the area. After evaluating all the SQRU's, show the scenic ratings on the scenic quality overlay (see Illustration 7). Record the rating on the Scenic Quality Rating Summary - Bureau Form 8400-5 (see Illustration 4). Bureau Form 8400-1 (see Illustration 3) may be used as a worksheet for completing each scenic quality evaluation. A photographic record should be maintained for the area. Photographs and completed evaluation forms should be filed for future reference.

III. Sensitivity Level Analysis. Sensitivity levels are a measure of public concern for scenic quality. Public lands are assigned high, medium, or low sensitivity levels by analyzing the various indicators of public concern.

A. Factors to Consider.

1. Type of Users. Visual sensitivity will vary with the type of users. Recreational sightseers may be highly sensitive to any changes in visual quality, whereas workers who pass through the area on a regular basis may not be as sensitive to change.

2. Amount of Use. Areas seen and used by large numbers of people are potentially more sensitive. Protection of visual values usually becomes more important as the number of viewers increase.

3. Public Interest. The visual quality of an area may be of concern to local, state, or National groups. Indicators of this concern are usually expressed in public meetings, letters, newspaper or magazine articles, newsletters, land-use plans, etc. Public controversy created in response to proposed activities that would change the landscape character should also be considered.

4. Adjacent Land Uses. The interrelationship with land uses in adjacent lands can affect the visual sensitivity of an area. For example, an area within the viewshed of a residential area may be very sensitive, whereas an area surrounded by commercially developed lands may not be visually sensitive.

5. Special Areas. Management objectives for special areas, such as Natural Areas, Wilderness Areas or Wilderness Study Areas, Wild and Scenic Rivers, Scenic Areas, Scenic Roads or Trails, and Areas of Critical Environmental Concern (ACEC), frequently require special consideration for the protection of the visual values. This does not necessarily mean that these areas are

scenic, but rather that one of the management objectives may be to preserve the natural landscape setting. The management objectives for these areas may be used as a basis for assigning sensitivity levels.

6. Other Factors. Consider any other information such as research or studies that includes indicators of visual sensitivity.

B. Delineation of Sensitivity Level Rating Units (SLRU's).

There is no standard procedure for delineating SLRU's. The boundaries will depend on the factor that is driving the sensitivity consideration. Consequently, a thorough review of the factors referred to in IIIA should be completed before any attempt is made to delineate SLRU's. Distance zone may also play an important role in identifying the SLRU boundaries.

C. Documentation Requirements.

1. Narrative. Prepare a summary statement with the essential facts and rationale to support the conclusions reached on sensitivity levels. The format for presenting this information is optional. As a minimum, the summary data must be entered on Form 8400-6 (see Illustration 8). Backup information used to evaluate each of the factors should be maintained with the inventory record.

D. Completion of Sensitivity Rating.

The instructions for completing the sensitivity ratings are shown in Illustration 8. Ideally, the rating should be done as a team effort involving the Area or District VRM Coordinator, Area Manager, and at least one other staff person. If timing or funding will allow this approach, the rating may be done by the VRM coordinator and reviewed by the Area Manager. Management should be in agreement on the summary rating for each SLRU.

IV. Distance Zones. Landscapes are subdivided into three distanced zones based on relative visibility from travel routes or observation points. The three zones are: foreground-middleground, background, and seldom seen. The foreground-middleground (fm) zone includes areas seen from highways, rivers, or other viewing locations that are less than 3 to 5 miles away. Seen areas beyond the foreground-middleground zone but usually less than 15 miles away are in the background (bg) zone. Areas not seen as foreground-middleground or background (i.e., hidden from view) are in the seldom-seen (ss) zone.

A. Mapping Distance Zones.

Prepare a distance zone overlay (see Illustration 10) using a base map common to the scenic quality base map. Distance zones are determined in the field by actually traveling along each route and observing the area that can be viewed. If the route is a highway or trail, it should be traveled in both directions, unless it is a one-way route. River use usually is one way; however, if there is up-river travel, it too should be evaluated from both directions. If a vehicle or boat is used for this field survey, it is best to have both a driver and an observer. Distance zones should be mapped for all areas. While they are not necessary to determine classes in Class A scenic areas or for areas with low sensitivity levels, distance zones can provide valuable data during the RMP process when adjustments to VRM classes are made to resolve resource allocation conflicts.

1. **Foreground-Middleground Zone.** This is the area that can be seen from each travel route for a distance of 3 to 5 miles where management activities might be viewed in detail. The outer boundary of this distance zone is defined as the point where the texture and form of individual plants are no longer apparent in the landscape. In some areas, atmospheric conditions can reduce visibility and shorten the distance normally covered by each zone. Also, where the foreground-middleground zone from one travel route overlaps the background from another route, use only the foreground-middleground designation.

2. **Background Zone.** This is the remaining area which can be seen from each travel route to approximately 15 miles. Do not include areas in the background that are so far distant that the only thing discernible is the form or outline. In order to be included within this distance zone, vegetation should be visible at least as patterns of light and dark.

3. **Seldom-Seen Zone.** These are areas that are not visible within the foreground-middleground and background zones and areas beyond the background zones.

B. Coordinating Distance Zones Delineation and Sensitivity Level Analyses.

It is recommended that distance zones be delineated before the sensitivity analysis is done. The distance zone delineations provide valuable information that can be very useful in the sensitivity analysis. For example, the foreground-middleground zones are more visible to the public and changes are more noticeable and are more likely to trigger public concern. Also, the boundaries of the distance zones are very useful in helping to establish sensitivity rating units.

V. Visual Resource Classes and Objectives.

A. **Purposes of Visual Resource Classes.** Visual resource classes are categories assigned to public lands, which serves two purposes: (1) an inventory tool that portrays the relative value of the visual resources, and (2) a management tool that portrays the visual management objectives. There are four classes (I, II, III, and IV).

1. **Visual Resource Inventory Classes.** Visual resource inventory classes are assigned through the inventory process. Class I is assigned to those areas where a management decision has been made previously to maintain a natural landscape. This includes areas such as national wilderness areas, the wild section of national wild and scenic rivers, and other congressionally and administratively designated areas where decisions have been made to preserve a natural landscape. Classes II, III, and IV are assigned based on a combination of scenic quality, sensitivity level, and distance zones. This is accomplished by combining the three overlays for scenic quality, sensitivity levels, and distance zones and using the guidelines shown in Illustration 11 to assign the proper class. The end product is a visual resource inventory class overlay as shown in Illustration 12. Inventory classes are informational in nature and provide the basis for considering visual values in the RMP process. They do not establish management direction and should not be used as a basis for constraining or limiting surface disturbing activities.

2. **Visual Resource Management Classes.** Visual resource management classes are assigned through RMP's. The assignment of visual management classes is ultimately based on the management decisions made in RMP's. However, visual values must be considered throughout

the RMP process. All actions proposed during the RMP process that would result in surface disturbances must consider the importance of the visual values and the impacts the project may have on these values. Management decisions in the RMP must reflect the value of visual resources. In fact, the value of the visual resource may be the driving force for some management decisions. For example, highly scenic areas which need special management attention may be designated as scenic Areas of Critical Environmental Concern and classified as VRM Class I based on the importance of the visual values. A map is developed in each RMP showing the approved visual resource management classes.

B. Objectives for Visual Resource Classes.

1. Class I Objective. The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.
2. Class II Objective. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
3. Class III Objective. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
4. Class IV Objectives. The objective of this class is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

C. Rehabilitation Areas.

Areas in need of rehabilitation from a visual standpoint should be flagged during the inventory process. The level of rehabilitation will be determined through the RMP process by assigning the VRM class approved for that particular area.

D. Interim VRM Classes and Objectives.

Interim visual management classes are established where a project is proposed and there are no RMP-approved VRM objectives. These classes are developed using the guidelines in Section I to V and must conform to the land-use allocations set forth in the RMP, which covers the project area. The establishment of interim VRM classes will not require a RMP amendment, unless the project that is driving the evaluation requires one.

PART II: RATING SCENIC QUALITY

Purpose: To rate the visual quality of the scenic resource on all BLM managed lands.

How to Identify Scenic Value: All BLM lands have scenic value.

How to Determine Minimum Suitability: All BLM lands are rated for scenic values. Also rate adjacent or intermingling non-BLM lands within the planning unit.

When to Evaluate Scenic Quality: Rate for scenery under the most critical conditions (e.g., highest user period or season of use, sidelight, proper atmospheric conditions, etc.).

How to Delineate Rating Areas: Consider the following factors when delineating rating areas:

1. Like physiographic characteristics (e.g., land form, vegetation, etc.).
2. Similar visual patterns, texture, color, variety, etc.
3. Areas which have a similar impact from cultural modifications (e.g., roads, historical and other structures, mining operations, or other surface disturbances).

Explanation of Criteria: (See Illustration 1)

NOTE: Values for each rating criteria are maximum and minimum scores only. It is also possible to assign scores within these ranges.

SCENIC QUALITY

A = 19 or more

B = 12-18

C = 11 or less

Illustration 1 - Scenic Quality - Explanation of Rating Criteria

Scenic Quality - Explanation of Rating Criteria	
Landform	Topography becomes more interesting as it gets steeper or more massive, or more severely or universally sculptured. Outstanding landforms may be monumental, as the Grand Canyon, the Sawtooth Mountain Range in Idaho, the Wrangell Mountain Range in Alaska, or they may be exceedingly artistic and subtle as certain badlands, pinnacles, arches, and other extraordinary formations.
Vegetation	Give primary consideration to the variety of patterns, forms, and textures created by plant life. Consider short-lived displays when they are known to be recurring or spectacular. Consider also smaller- scale vegetational features which add striking and intriguing detail elements to the landscape (e.g., gnarled or windbeaten trees, and joshua trees).

Water

That ingredient which adds movement or serenity to a scene. The degree to which water dominates the scene is the primary consideration in selecting the rating score.

Color

Consider the overall color(s) of the basic components of the landscape (e.g., soil, rock, vegetation, etc.) as they appear during seasons or periods of high use. Key factors to use when rating "color" are variety, contrast, and harmony.

Adjacent Scenery

Degree to which scenery outside the scenery unit being rated enhances the overall impression of the scenery within the rating unit. The distance which adjacent scenery will influence scenery within the rating unit will normally range from 0-5 miles, depending upon the characteristics of the topography, the vegetative cover, and other such factors. This factor is generally applied to units which would normally rate very low in score, but the influence of the adjacent unit would enhance the visual quality and raise the score.

Scarcity

This factor provides an opportunity to give added importance to one or all of the scenic features that appear to be relatively unique or rare within one physiographic region. There may also be cases where a separate evaluation of each of the key factors does not give a true picture of the overall scenic quality of an area. Often it is a number of not so spectacular elements in the proper combination that produces the most pleasing and memorable scenery - the scarcity factor can be used to recognize this type of area and give it the added emphasis it needs.

Cultural Modifications

Cultural modifications in the landform/water, vegetation, and addition of structures should be considered and may detract from the scenery in the form of a negative intrusion or complement or improve the scenic quality of a unit. Rate accordingly.

Illustration 2 - Scenic Quality Inventory and Evaluation Chart

Key factors	Rating Criteria and Score		
Landform	High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops, or severe surface variation or highly eroded formations including major badlands or dune systems; or detail features dominant and exceptionally striking and intriguing, such as glaciers. 5	Steep canyons, mesas, buttes, cinder cones, and drumlins; or interesting erosional patterns or variety in size and shape of landforms; or detail features which are interesting though not dominant or exceptional. 3	Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features. 1
Vegetation	A variety of vegetative types as expressed in interesting forms, textures, and patterns. 5	Some variety of vegetation, but only one or two major types. 3	Little or no variety or contrast in vegetation. 1
Water	Clear and clean appearing, still, or cascading white water, any of which are a dominant factor in the landscape. 5	Flowing, or still, but not dominant in the landscape. 3	Absent, or present, but not noticeable. 0
Color	Rich color combinations, variety or vivid color; or pleasing contrasts in the soil, rock, vegetation, water or snow fields. 5	Some intensity or variety in colors and contrast of the soil, rock and vegetation, but not a dominant scenic element. 3	Subtle color variations, contrast, or interest; generally mute tones. 1

Influence of adjacent scenery	Adjacent scenery greatly enhances visual quality. 5	Adjacent scenery moderately enhances overall visual quality. 3	Adjacent scenery has little or no influence on overall visual quality. 0
Scarcity	One of a kind; or unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing, etc. * 5+	Distinctive, though somewhat similar to others within the region. 3	Interesting within its setting, but fairly common within the region. 1
Cultural modifications	Modifications add favorably to visual variety while promoting visual harmony. 2	Modifications add little or no visual variety to the area, and introduce no discordant elements. 0	Modifications add variety, but are very discordant and promote strong disharmony. -4

* A rating of greater than 5 can be given but must be supported by written justification.

Part III: Determining the Visual Resource Inventory Classes

- Class I.** Class I is assigned to all special areas where the current management situations requires maintaining a natural environment essentially unaltered by man.
- Classes II, III, and IV.** These classes are assigned based on combinations of scenic quality, sensitivity levels, and distance zones as shown in the following matrix:

		High			Medium			Low
Special Areas		I	I	I	I	I	I	I
Scenic Quality	A	II	II	II	II	II	II	II
	B	II	III	III*	III	IV	IV	IV
	C	III	IV	IV	IV	IV	IV	IV
		f/m	b	s/s	f/m	B	s/s	s/s
DISTANCE ZONES								

* If adjacent areas is Class III or lower assign Class III, if higher assign Class IV

PART IV: MITIGATION

A. LANDFORM/WATER BODY.

1. Reduce Size of Cut and Fill Slopes. Consider:
 - a. Relocating to an area with less slope;
 - b. Changing road width, grade, etc;
 - c. Changing alignment to follow existing grades; and,
 - d. Prohibiting dumping of excess material on downhill slopes.
2. Reduce Earthwork Contrasts. Consider:
 - a. Rounding and/or warping slopes;
 - b. Retaining rocks, trees, drainage, etc;
 - c. Toning down freshly broken rock faces with asphalt emulsion spray or with gray point;
 - d. Adding mulch, hydromulch, or topsoil;
 - e. Shaping cuts and fills to appear as natural forms;
 - f. Cutting rock areas so forms are irregular;
 - g. Designing to take advantage of natural screens (i.e., vegetation, land forms); and,
 - h. Grass seeding of cuts and fills.
3. Maintain the Integrity of Topographic Units. Consider:
 - a. Locating projects away from prominent topographic features; and,
 - b. Designing projects to blend with topographic forms in shape and placement.

B. VEGETATION.

1. Retain Existing Vegetation. Consider:
 - a. Using retaining walls on fill slopes;
 - b. Reducing surface disturbance; and,
 - c. Protecting roots from damage during excavations.
2. Enhance Revegetation. Consider:
 - a. Mulching cleared areas;
 - b. Controlling planting times;
 - c. Furrowing slopes;
 - d. Planting holes on cut/fill slopes;
 - e. Choosing native plant species;
 - f. Stockpiling and reusing topsoil; and,
 - g. Fertilizing, mulching, and watering vegetation.
3. Minimize Impact on Existing Vegetation. Consider:
 - a. Partial cut instead of clear cut;
 - b. Using irregular clearing shapes;
 - c. Feathering/thinning edges;
 - d. Disposing of all slash;
 - e. Controlling construction access;
 - f. Utilizing existing roads;
 - g. Limiting work within construction area;
 - h. Selecting type of equipment to be used;
 - i. Minimizing clearing size (i.e., strip only where necessary); and,
 - j. Grass seeding of cleared areas.
4. Maintain the Integrity of Vegetative Units. Consider utilizing the edge effect for structure placement along natural vegetative breaks.

C. STRUCTURES.

1. Minimize the Number of Visible Structures.
2. Minimize Structure Contrast. Consider:
 - a. Using earth-tone paints and stains;
 - b. Using cor-ten steel (self-weathering);
 - c. Treating wood for self-weathering;
 - d. Using natural stone surfaces;
 - e. Burying all or part of the structure; and,
 - f. Selecting paint finishes with low levels of reflectivity (i.e., flat or semi-gloss).
3. Redesign Structures that do not Blend/Fit. Consider:
 - a. Using rustic designs and native building materials;
 - b. Using natural appearing forms to complement landscape character (use special designs only as a last resort); and,
 - c. Relocating structure.
4. Minimize Impact of Utility Crossings. Consider:
 - a. Making crossings at right angles;
 - b. Setting back structures at a maximum distance from the crossing;
 - c. Leaving vegetation along the roadside;
 - d. Minimizing viewing time; and,
 - e. Utilizing natural screening.
5. Recognize the Value and Limitations of Color. Consider:
 - a. That color (hue) is most effective within 1,000 feet. Beyond that point color becomes more difficult to distinguish and tone or value determines visibility and resulting visual contrast;
 - b. That using color has limited effectiveness (in the background distance zone) in reducing visual impacts on structures that are silhouetted against the sky;
 - c. Painting structures somewhat darker than the adjacent landscape to compensate for the effects of shade and shadow; and,
 - d. Selecting color to blend with the land and not the sky.

Source: BLM Manual H-8410-1 - Visual Resource Inventory

PART V--VISUAL AESTHETIC IMPACT CHECKLIST

The analysis of Visual Aesthetic impacts should begin with the following project-specific questions:

1. What is the visual/aesthetic character of the project site/study area?
2. What sensitive receptors might have views of the existing and proposed facilities?
3. From what locations could the existing and proposed facilities potentially be seen?
4. What will the proposed facilities look like, as compared to the existing facilities?
5. What is the potential visual impact of the project?

To characterize the potential impact, consider the extent to which the project would:

1. Have a substantial adverse effect on a scenic vista?
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

3. Substantially degrade the existing visual character or quality of the site and its surroundings?
4. Create a new source of substantial light or glare?

PAGE INTENTIONALLY LEFT BLANK