USDA United States Department of Agriculture
National Agricultural Library

DIGITAL REPOSITORY

Home | About NALDR | Search | Browse - Tables of Contents | NAL Catalog | Help | Contact Us

You are here: Home / Search / Search Results / Document Display

Search

Document Display

Document 1 of 1

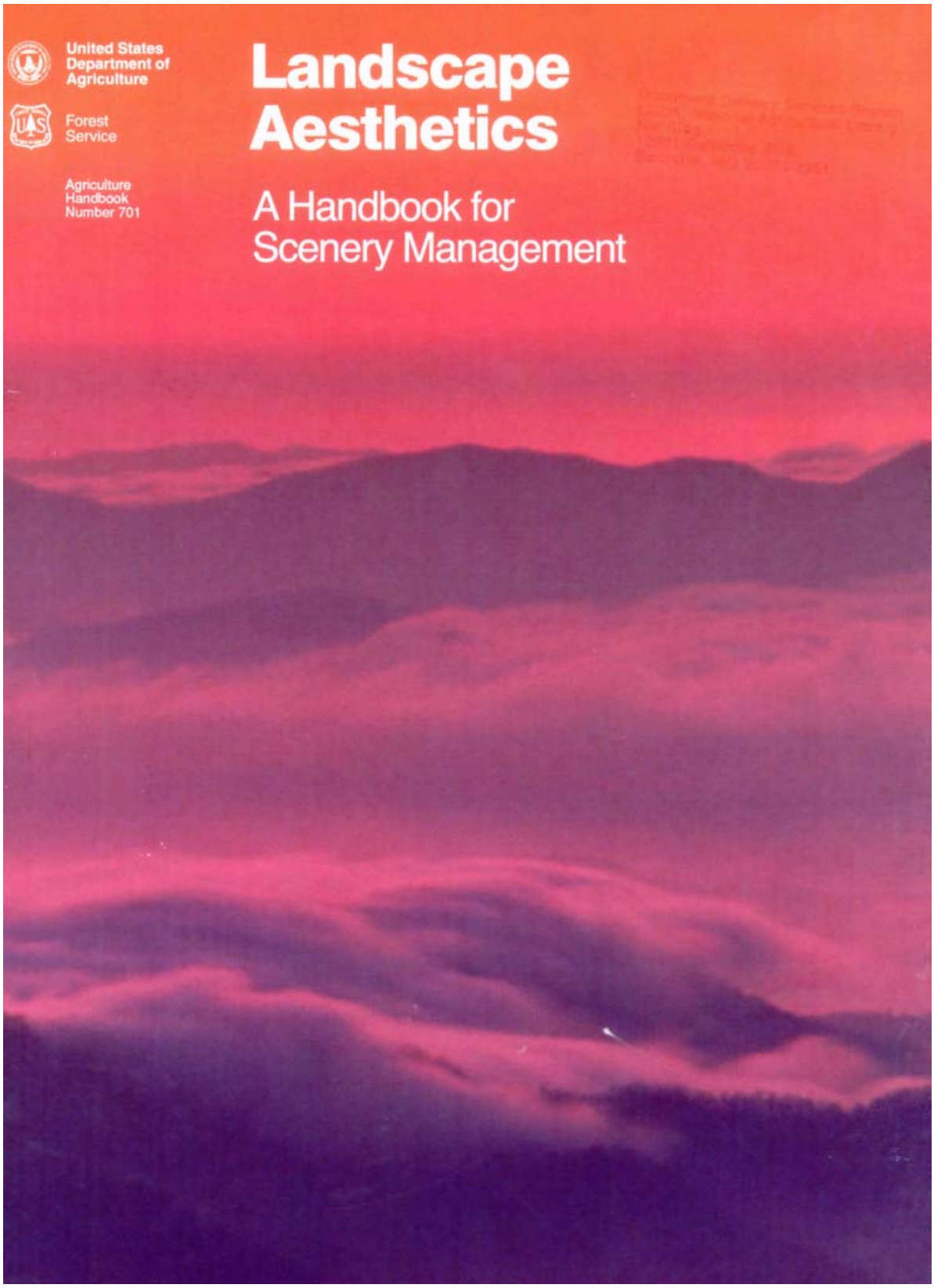
Author	
Title	Landscape aesthetics: a handbook for scenery management \ Cover; Abstract; Table of Contents; Acknowledgements; Summary
Source	Agriculture handbook
Year	1995
Volume	no. 701
Pages	p. 1-8
DocID	ah701_front
Publisher	U.S. Dept. of Agriculture, Forest Service
Subject	Landscape assessment--United States--Handbooks, manuals, etc; Forest management--United States--Handbooks, manuals, etc; Landscape protection--United States--Handbooks, manuals, etc; Landscape architecture--Handbooks, manuals, etc
Notes	This handbook has been divided. To view all parts, select the Tables of Contents button from the top menu.
Link	http://naldr.nal.usda.gov/NALWeb/Agricola_Link.asp?Accession=CAT11132970
Accession	CAT11132970

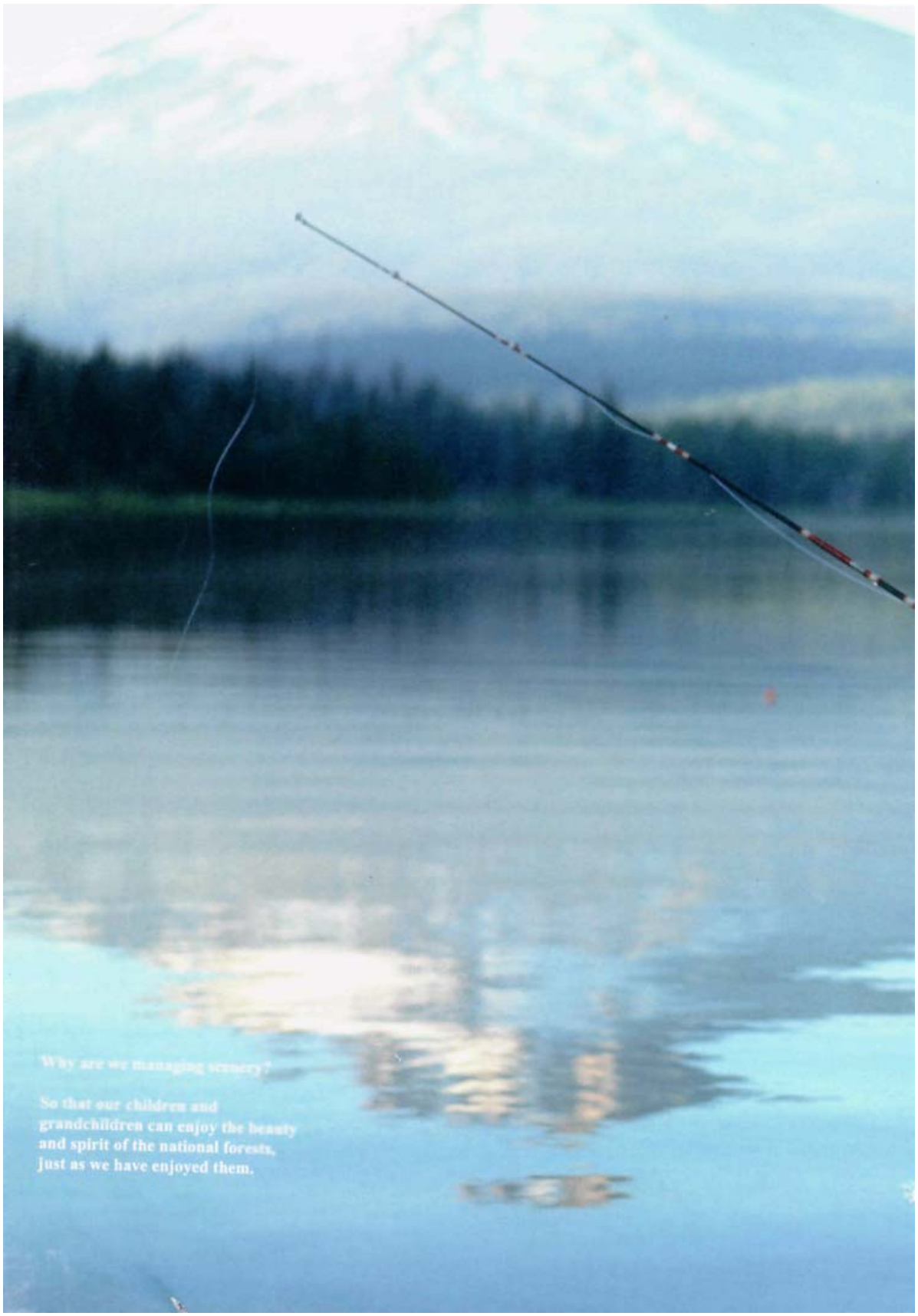
****Displaying below: All of 15 pages****

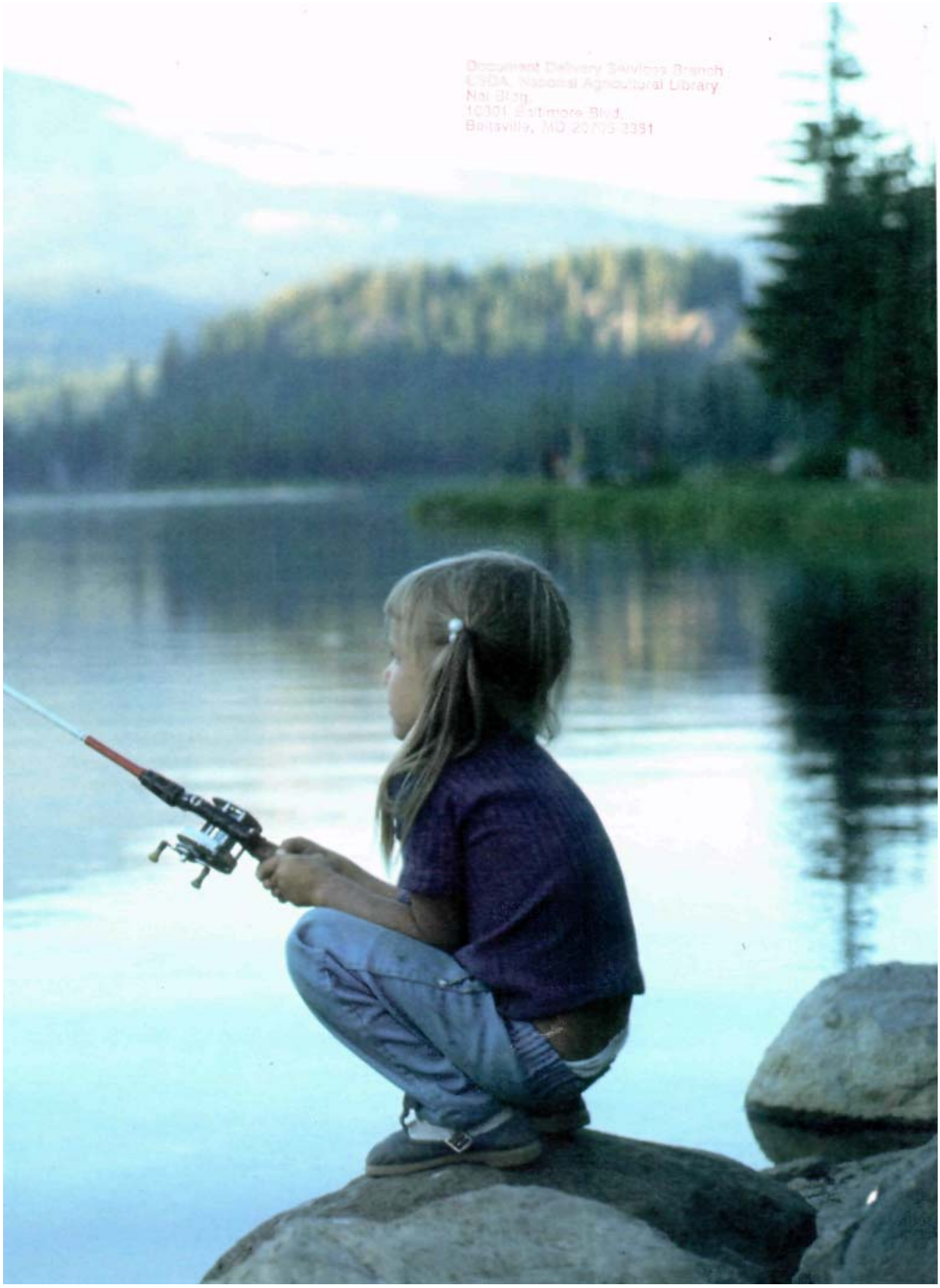
View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help

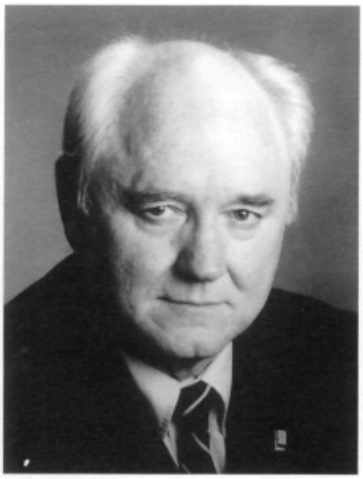

United States
Department of
Agriculture
Forest
Service
Agriculture
Handbook
Number 701
Landscape
Aesthetics
A Handbook for
Scenery Management


Why are we managing scenery?
So that our children and
grandchildren can enjoy the beauty
and spirit of the national forests,
just as we have enjoyed them.


Document Delivery Services Branch
USDA, National Agricultural Library
Nal Bldg.
10301 Baltimore Blvd.
Beltsville, MD 20705-2351

Dear Forest Service Employees,

I am very pleased to introduce the revised Landscape Aesthetics Handbook. This Handbook replaces Agriculture Handbook 462 - The Visual Management System,which has been an important tool for visual resource management for the past 25 years.



The users and owners of the national forests continue to express a strong interest in maintaining the character of forest and grassland settings. These settings provide special places for recreation and visual amenities. Alfred Runte stated in a book called The National Forest Idea (published in 1991) "There is no question...that the national forests are major contributors to an American sense of place, to an identity with landscape that transcends economics for its own sake. The founders of the national forest idea...were consistent in their advocacy for landscape aesthetics. The forests not only should be functional, they should be beautiful as well." This idea is one of the fundamental principles of the Landscape Aesthetics Handbook.

While retaining many of the basic inventory elements of the Visual Management System, the Landscape Aesthetics Handbook incorporates much of what we are learning about the management of ecosystems. The landscapes we see today are the result of both natural and human processes that have occurred over time. Understanding these processes will help us consider the effects of proposed changes in the landscape and to incorporate people's values into our decisions more effectively.

Please begin using the concepts and terms contained in this Handbook as you work on new projects or initiate forest plan revisions. I am confident that with this revised Handbook, the Forest Service will not only continue to be a national leader in visual resource management, but will also demonstrate a strong commitment to integrating human values into ecosystem management.

Jack Ward Thomas

Jack Ward Thomas

United States Department of Agriculture

Forest Service

Agriculture Handbook Number 701

Landscape Aesthetics

A Handbook for Scenery Management

Abstract

High quality scenery, especially scenery with natural-appearing landscapes, enhances people's lives and benefits society. The Scenery Management System presents a vocabulary for managing scenery and a systematic approach for determining the relative value and importance of scenery in a national forest. This handbook was written for national forest resource managers, landscape architects, and others interested in landscape aesthetics and scenery. Both students and the general public, our "constituents," will benefit from the straightforward approach of the system to a complex art and science. Ecosystems provides the environmental context for this scenery management system. The system is to be used in the context of ecosystem management to inventory and analyze scenery in a national forest, to assist in establishment of overall resource goals and objectives, to monitor the scenic resource, and to ensure high-quality scenery for future generations.

December 1995

This handbook supercedes AH-462,
National Forest Landscape Management,
Volume 2, Chapter 1,
The Visual Management System
Issued April 1974

An original draft was prepared under contract by
Lee Roger Anderson, ASLA, CA License # 1586
Environmental Consulting, Planning, and Design
P.O. Box 1191
Mt. Shasta, CA 96067
Contract #53-04H1-1-4040

CONTENTS

A Note to the Reader
Acknowledgements
Summary
Purpose, Scope, and Context
Principles and Premises

1
Landscape Character

Purpose ●
Landscape character attributes ●
Ecological unit description ●
Process ●
Scenic attractiveness ●

2
Scenic Integrity

Purpose and discussion ●
Scenic integrity levels ●

3

Constituent Information

Purpose & discussion ●
Preparing constituent inventory ●
Information sources ●
Sample constituent survey ●

4

Landscape Visibility

Purpose & discussion ●
Travelways use areas ●
Concern levels ●
Seen area ●
Distance zones ●
Scenic classes ●

5

Scenery Management System Application

Ecosystem analysis, planning and implementation ●
Alternative development ●
Alternative evaluation ●
Alternative selection ●
Achievement of landscape character goals ●
Monitoring ●

Appendix

Terminology and component changes - *A*
Legislation and directives - *B*
Visual absorption capability - C
Viewer platform design - D
Existing scenic integrity inventory - E
Recreation opportunity spectrum - F
Background and history - G
Examples of scenic integrity levels - H
Case study - I

Glossary
Bibliography

A Note to the Reader

I mean not, with
unphilosophic weakness,
to bemoan the perishable
condition of sublunary things;
but to lament only,
that, sublunary things,
the wood-land-scene,
which is among
the ***most beautiful***,
should be among
the ***most perishable***.
Willaim Gilpin, A.M. 1791.

Why is a handbook on landscape aesthetics needed? There are many reasons. Let's think about it.

On your next visit to a national forest, what awaits you as you explore nature? You have driven from your home, leaving behind the bustling traffic of modern life. You see the national forest entrance sign and know that a treasure chest of experiences awaits you. What is at the end of the road, at the end of the trail?

Hiking along a trail, your vehicle left far behind at the trailhead, you discover that tension is leaving your body, and you are tuning in to your new surroundings. You hear the sound of your boots scuffing fallen leaves on the earthen trail, and your breathing deepens.

When hiking with friends, conversations cease, and you focus on the forest environment. Walking quietly now, you inhale the clean, clear air and smell the unique fresh scents of the woods. Splashes of red and coral wildflowers dot the forest floor. You look around and see that bark on one grove of trees is different from its neighbor, and wonder why. The wind rustles through the tree tops and you are startled by the call of a hawk as it floats high overhead on a powerful thermal updraft.

The trail curves out of sight ahead, and you hear the first unmistakable sound of falling water. You know your destination, that favorite waterfall, where you will stop a while and feel the cool mist billowing up into your face. You remember from your last visit here the verdant ferns spilling down along the cliffs behind the falls and splashes of bright reds and subtle deep blues from flowers clinging tenaciously to the rock cliffs as if planted by a master gardener.

Sooner than you had expected, you are there once again. You round the bend and see the glistening water as it cascades over its stone precipice, contrasting against the darkness of the forest. Sitting on a rock ledge, you wonder who it was who first followed a deer trail and came upon this place with its exceptional combination of rocks and water and ferns and forest. You enjoy this landscape, reflecting on how unique it is, and how different from your daily surroundings. This is a special place.

The landscapes of your national forests are distinctive and unique. Some would say they have a **character** all their own.

Acknowledgments

Several hundred individuals and many organizations and agencies have made important contributions in various ways to the development of this handbook.

Ever since *The Visual Management System* was published in 1974, there have been helpful comments and critiques from within the Forest Service, other agencies, academic institutions, organizations, and private practitioners. Along the way there have been many innovators who have helped develop appropriate subsystems to complement the basic system. Dozens of researchers in the fields of landscape architecture, psychology, sociology, economics, ecology, and so on, have since added to the evolving knowledge and understanding of scenic quality, attributes, and values. Throughout the development of this handbook, there was a concerted effort to analyze and utilize new knowledge developed by researchers.

Among the pioneers in scenery management research was Professor R. Burton Litton of the University of California-Berkeley. Litton developed many of the concepts and vocabulary still used today. Regional Landscape Architect Warren Bacon of the Pacific Northwest Region of the Forest Service, far more than anyone else, is the primary contributor to this handbook. He spearheaded the development and publication of *The Visual Management System* in 1974, served as a watchdog over the system for almost 20 years, and then played a major role in updating the system by publication of this handbook. He served as contracting officer's representative on its production, guiding the contracting team through the maze of possible approaches. Without the backing and perseverance of Bob Ross, Chief Landscape Architect in the Washington Office, the high standards of quality and priority for funding for this handbook would not have been possible. Regional Landscape Architect Steve Galliano of the Southern Region rounded out this core team of contract administrators, working side-by-side with Bacon as an associate contracting officer's representative in guiding and reviewing the development of the handbook over a 2-year period. Galliano guided the steering committee and technical advisory group through a very difficult and key technical review session in May 1992 in Denver, CO. He provided in-depth editing and organized a field testing workshop on the Jefferson National Forest in March 1993.

A steering committee of regional landscape architects and representatives provided invaluable reviews and recommendations from the time of development of the request for proposals through the development of the handbook. In addition to Bacon and Galliano, steering committee members included:

Meeting of steering committee and technical advisory group in May 1992 in Denver, CO.

- Larry Blocker—Northern Region.
- Herb Mittmann—Rocky Mountain Region.
- Bill Larsen—Southwest Region.
- Tom Hagan- Intermountain Region.
- Gary Brogan—Pacific Southwest Region.
- Dennis Parker—Eastern Region.
- Nora Laughlin—Alaska Region.

A technical advisory group of forest landscape architects and educators provided multiple reviews and critiques of the expanded process developed in this handbook. They helped test how concepts would actually work in field practice. This group included:

- Pat Thomas, Flathead National Forest
- "Corky" Sanborn, Idaho Panhandle National Forests
- Stan Specht, Rocky Mountain Region
- Erik Martin, White River National Forest
- Terry Reetz, Black Hills National Forest
- Doug Schleusner, Santa Fe National Forest
- Ron Wilson, Tonto National Forest
- Terry Fletcher, Sawtooth National Forest
- Ken Sonksen, Sierra National Forest
- Jerry Mosier, Klamath National Forest
- Philip Horning, Tahoe National Forest
- Al Grapel, Siuslaw National Forest
- Jennifer Burns, Sisters Ranger District, Deschutes National Forest
- Steve Hendricks, Cherokee National Forest
- Melinda McWilliams, National Forests in North Carolina
- Sherri Schwenke, Ottawa National Forest
- Gary Kell, Allegheny National Forest
- David Johnson, Shawnee National Forest
- Carol Jensen, Petersburg Ranger District, Tongass National Forest
- John Short, Tongass National Forest, Ketchikan Area
- Dom Monaco, Tongass National Forest, Chatham Area
- Deirdre Buschmann, Tongass National Forest, Stikine Area
- Professor Wayne Tlusty, University of Wisconsin-Madison

Professor Tlusty is singled out from the above group for commendation, not only because he is a nationally recognized expert on this subject, but because he unselfishly committed far more time to this project than his university activities would normally allow.

Environmental Consulting, Planning and Design (ECPD) developed a high quality preliminary draft document which provided an excellent basis for refinement of this final document. ECPD, led by Lee Anderson, Principal, utilized the expertise of the following members: Wayne Iverson, Dr. Perry Brown, Bennie Blake, Roy Maloney, Robin Velte, Patrick Neff, and Janie Gustafson.

A revision team led by Larry Blocker, Northern Region Landscape Architect, refined, reorganized, and completed the Landscape Aesthetics Handbook. Other members of the revision team included:

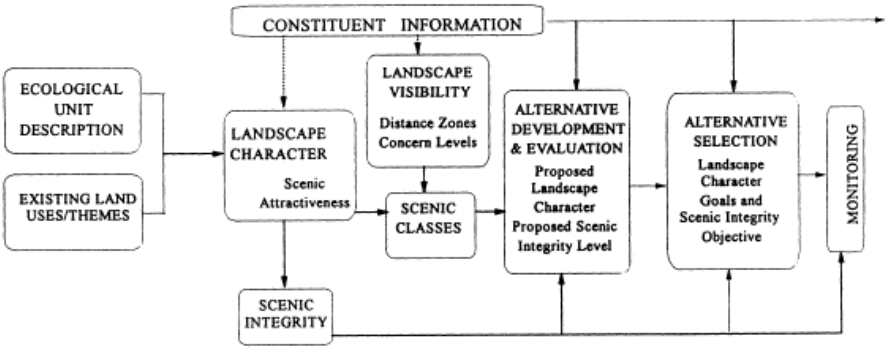
- Terry Slider. Deschutes National Forest
- Jane Ruchman. Gallatin National Forest
- Jerry Mosier. Klamath National Forest
- Larry Kolk. National Forests in Florida
- Janet Silbernagle. Hiawatha National Forest
- Jim Beard. Coconino National Forest
- Dave Wagner. Jefferson National Forest
- Gary Brogan. Pacific Southwest Region
- Dennis Jones. Hiawatha National Forest
- Nora Laughlin. Alaska Region

Summary

Purpose and Scope

This handbook defines a system, referred to hereafter as the Scenery Management System (SMS), for the inventory and analysis of the aesthetic values of National Forest lands. The Scenery Management System evolved from and replaces the Visual Management System (VMS) defined in Agricultural Handbook #462. While the essence of the system remains essentially intact, still supported by current research, terminology has changed and the system has been expanded to incorporate updated research findings. Conceptually, the SMS differs from the VMS in that: it increases the role of constituents throughout the inventory and planning process; and it borrows from and is integrated with the basic concepts and terminology of Ecosystem Management. The Scenery Management System provides for improved integration of aesthetics with other biological, physical, and social/cultural resources in the planning process.

The flow chart below outlines the Scenery Management System process. This process involves identifying scenery components as they relate to people, mapping these components, and developing a value unit for aesthetics from the data gathered. This value unit provides information to planning teams and leads to rational decisions relative to scenery as a part of ecosystems.



Process

An **Ecological Unit Description** (EUD), sometimes called a mapping unit description, represents the common starting point for SMS and for Ecosystem Planning. An objective description of the biological and physical elements is drawn from the EUD and combined with identified landscape character attributes to develop the Landscape Character Description. It is a combination of the scenic attributes that make each landscape identifiable or unique. Landscape Character creates a "Sense of Place," and describes the image of an area. The Landscape Character Description provides the frame of reference for defining the Scenic Attractiveness classes.

Scenic Attractiveness (ISA) classes are developed to determine the relative scenic value of lands within a particular Landscape Character. The three ISA classes are: Class A, Distinctive; Class B, Typical; Class C, Indistinctive. The landscape elements of landform, vegetation, rocks, cultural features, and water features are described in terms of their line, form, color, texture, and composition for each of these classes. The classes and their breakdown are generally displayed in a chart format. A map delineating the ISA classes is prepared.

The Landscape Character description is used as a reference for the **Scenic Integrity** of all lands. Scenic Integrity indicates the degree of intactness and wholeness of the Landscape Character; conversely, Scenic Integrity is a measure of the degree of visible disruption of the Landscape Character. A landscape with very minimal visual disruption is considered to have high Scenic Integrity. Those landscapes having increasingly discordant relationships among scenic attributes are viewed as having diminished Scenic Integrity. Scenic Integrity is expressed and mapped in terms of Very High, High, Moderate, Low, Very Low, and Unacceptably Low.

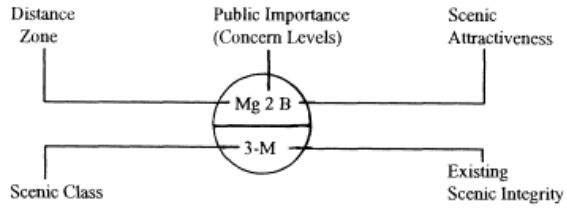
Landscape Visibility is composed of two parts: human values as they relate to the relative importance to the public of various scenes and the relative sensitivity of scenes based on distance from an observer. Human values that affect perceptions of landscapes are derived from constituent analysis. This information may be derived from many sources including, but not limited to: independent research; other facets of ecosystem assessments; local, regional, and national studies.

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

Seen Areas and Distance Zones are mapped from these 1, 2, or 3 areas to determine the relative sensitivity of scenes based on their distance from an observer; these zones are identified as Foreground (up to 1/2 mile from the viewer), Middleground (up to 4 miles from the foreground), and Background (4 miles from the viewer to the horizon).

Using the data gathered and mapped for Scenic Attractiveness and Landscape Visibility, a numerical **Scenic Class** rating is assigned to all lands. These ratings, 1-7, indicate the relative scenic importance, or value, of discrete landscape areas. Mapped Scenic Classes are used during forest planning to compare the value of scenery with other resources, such as timber, wildlife, old-growth, or minerals.

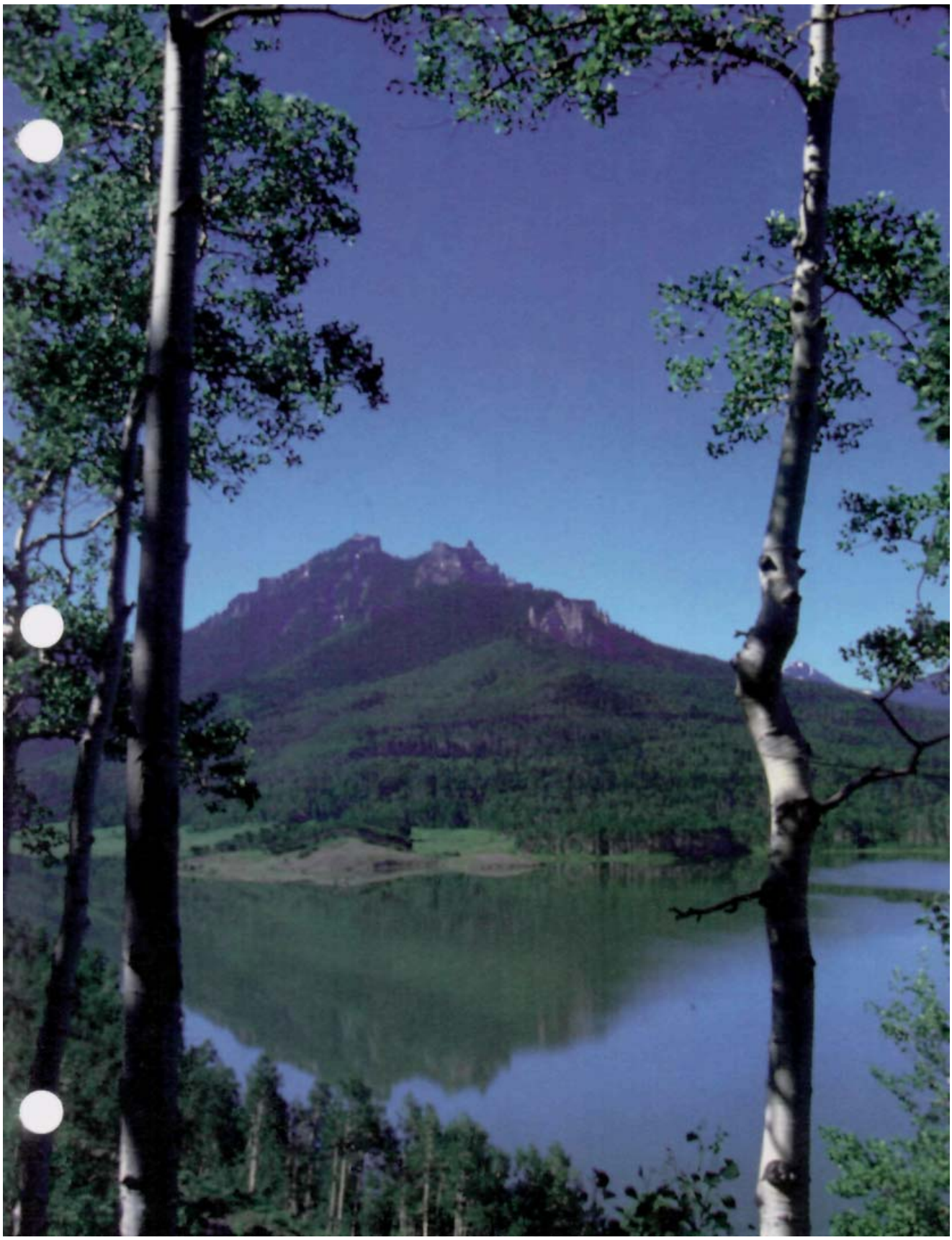
At this point in the planning process, a Landscape Value map is prepared using overlays of all the data gathered. The Landscape Value is expressed as an icon, a sample of which is shown below:



This icon represents the inventory of scenic attributes and their related social values. The map provides information to planning teams concerning the relative scenic values of a subject area and the extent to which those values are intact.

During the alternative development portion of the planning process, the potential and historical aspects of the Landscape Character Description are used to develop achievable Landscape Character Options in concert with other resource and social demands. Landscape Character Descriptions and associated Scenic Integrity levels, long- and short-term, are identified for each option and alternative. Upon adoption of a plan, the Landscape Character Description becomes a goal and the Scenic Integrity levels become Scenic Integrity Objectives. Subsequent plan implementation will include monitoring of both long- and short-term goals and objectives for scenery management.

Scenery Management is not static. It is as dynamic as the world in which we live. This handbook is provided in a loose leaf format to facilitate the refinement of this system in time and the incorporation of future knowledge and research findings.



View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help

Last Modified: October 6, 2009

NALDR Home | NAL Home | USDA | Agricultural Research Service | GPO Access | Web Policies and Important Links | Site Map
FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | USA.gov | White House

USDA United States Department of Agriculture
National Agricultural Library

DIGITAL REPOSITORY

Home | About NALDR | Search | Browse - Tables of Contents | NAL Catalog | Help | Contact Us

You are here: Home / Search / Search Results / Document Display

Search

Document Display

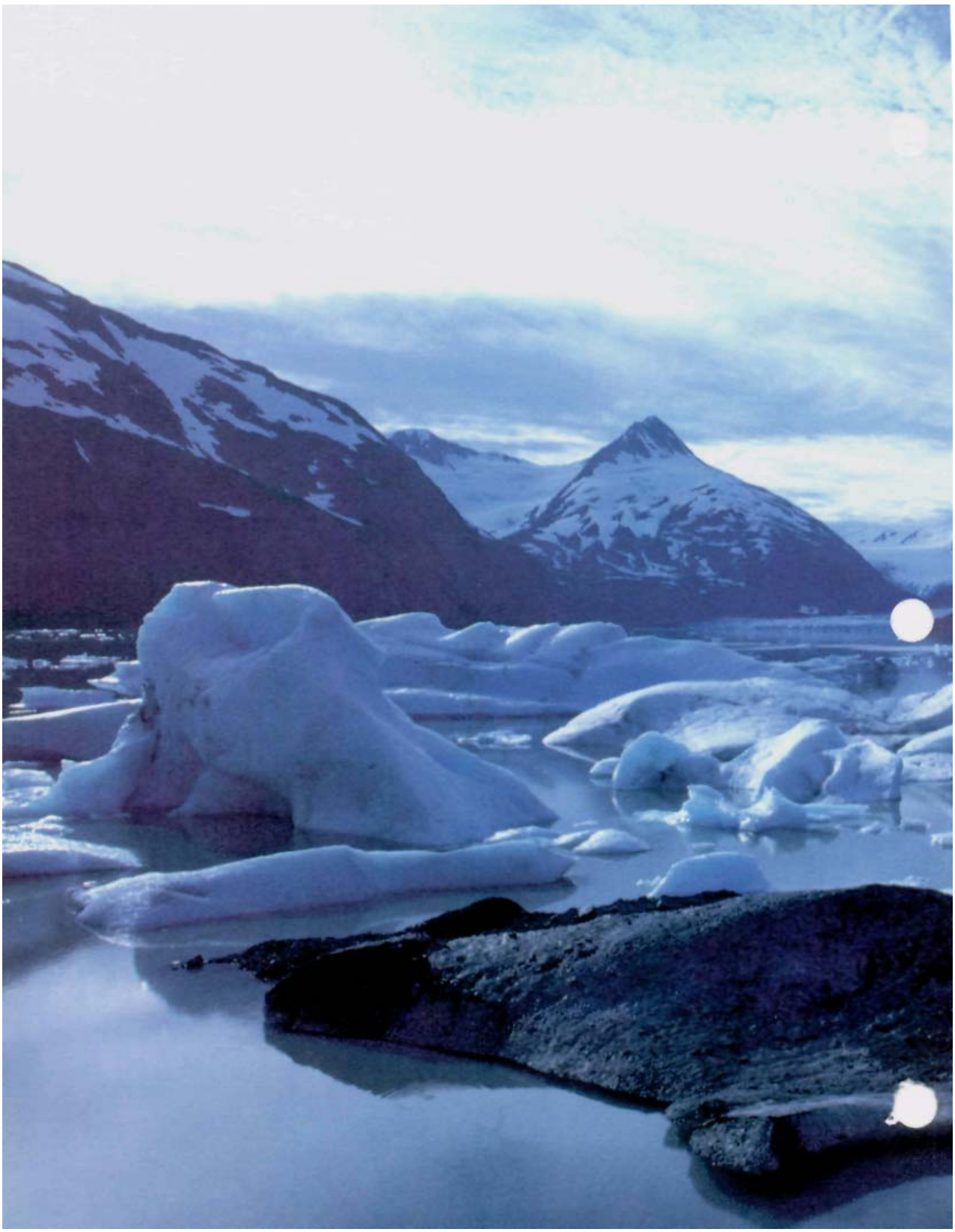
Author	
Title	Landscape aesthetics: a handbook for scenery management \ Chapter 1
Source	Agriculture handbook
Year	1995
Volume	no. 701
Pages	p. 1-1 to1-18
DocID	ah701_chap1
Accession	ah701_chap1
Publisher	U.S. Dept. of Agriculture, Forest Service
Subject	Landscape assessment--United States--Handbooks, manuals, etc; Forest management--United States--Handbooks, manuals, etc; Landscape protection--United States--Handbooks, manuals, etc; Landscape architecture--Handbooks, manuals, etc
Notes	This handbook has been divided. To view all parts, select the Tables of Contents button from the top menu.
Link	http://naldr.nal.usda.gov/NALWeb/Agricola_Link.asp?Accession=ah701_chap1

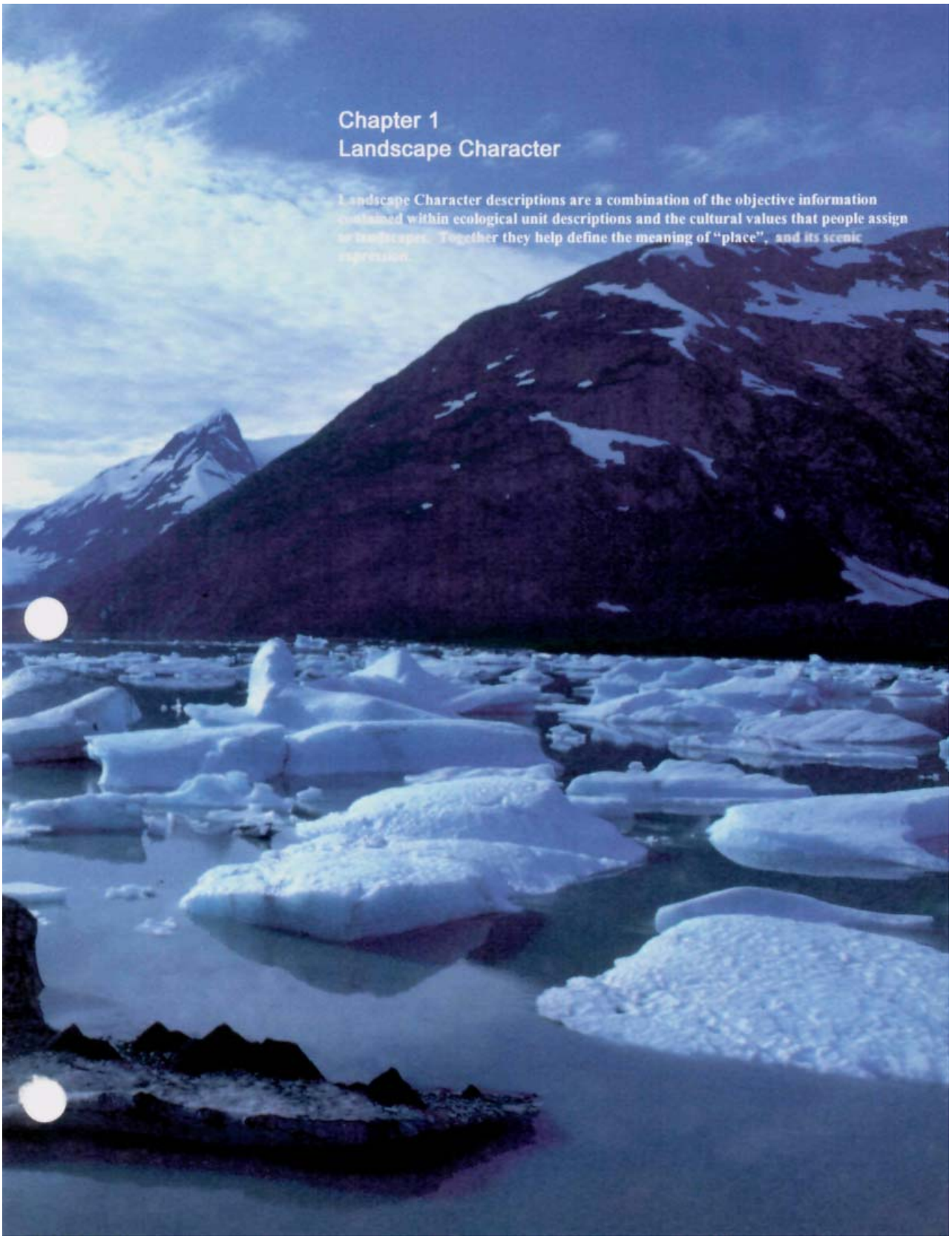
****Displaying below: All of 20 pages****

View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help





Chapter 1
Landscape Character

Landscape Character descriptions are 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.

Landscape Character

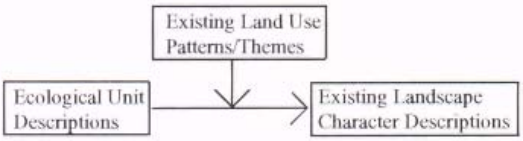
Landscape character is an overall visual and cultural impression of landscape attributes—the physical appearance and cultural context of a landscape that gives it an identity and "sense of place."

Purpose

Landscape character gives a geographic area its visual and cultural image, and consists of the combination of physical, biological and cultural attributes that make each landscape identifiable or unique. Landscape character embodies distinct landscape attributes that exist throughout an area.

Discussion

Develop landscape character descriptions using base information from ecological unit descriptions supplemented with existing land use patterns or themes as illustrated in the diagram below.



Existing landscape character may range from predominantly natural landscapes to those that are heavily culturally influenced. The Existing Landscape Character description includes the natural scenic attributes of the landscape in combination with the existing land use pattern (or landscape character theme). Identifying some negative features such as mines or powerlines may help define the positive attributes valued by people.

The term Landscape Character Theme refers to images of the landscape that can be defined with a list of scenic attributes. For instance, naturally evolving, natural appearing, pastoral, agricultural, or even urban landscapes all can have scenic attributes that can be described within the context of a general theme. This image or theme becomes a key component in combination with the natural scenic attributes of land form, rock form, water form, and vegetation to describe landscape character.

At very broad scale planning (i.e. Province or River Basin scales) a spectrum of existing land use patterns or themes can be used to assess human use on the landscape as illustrated in the two examples below:

Columbia River Basin Assessment	Southern Appalachian Assessment
Natural Evolving Forest and Shrub/Grassland	Natural Evolving
Natural Appearing Forest Lands	Natural Appearing
Natural Appearing Shrub/Grassland	Rural - Forested
Agricultural Lands	Rural - Pastoral/Agricultural
Developed Lands	Transitional - Mixed Use
	Suburban
	Urban

A description of landscape character normally will include:

- How the landscape has developed over time using information from archeologists, historians, ecologists, and others familiar with the landscape being studied.
- Potential landscape character... i.e. information from potential vegetation inventories.
- The existing landscape attributes such as landform, vegetative pattern, water characteristics, and cultural features.
- Existing landscape attributes which affect the senses of the aesthetic experience other than sight i.e.: sound, smell, taste, touch include:
  - Habitat of native wildlife that has particularly colorful sounds
  - Native vegetation that has a uniquely fragrant spring flower
  - Mix of vegetative species that have both course and fine textures adding a tactile dimension
  - Vegetative species that add both sound and sight (i.e., quaking aspens)

The purposes of existing landscape character descriptions are:

- to establish the current overall visual impression of a landscape, the physical appearance of the landscape that contributes to an identity and a "sense of place."
- to provide a reference from which to compare existing landscape character to desired landscape character.
- to provide a reference for changes in landscape character as the landscape progressed toward the character goal.
- to establish a baseline from which to measure scenic integrity.

Attributes

Following are examples of landscape character attributes in national forests.

Groves and clumps of trees and shrubs intermixed with natural-appearing openings.

A uniform closed canopy of overstory vegetation.

Openings in the canopy of overstory vegetation.

Drifts of hardwoods and shrubs in drainages in predominantly coniferous forests that further define topography.

Unique rock formations.

Bluffs, rock outcrops, or other unique landforms.

Balds.

Bodies of water

Structures that have positive cultural connotations and are recognized as scenic attributes.

Scattered groups of conifers in a hardwood forest to accentuate color and texture in all seasons.

Variations in depth of view and spatial character.

Body of water.

Mixture of open forest and dense undergrowth beneath tall trees, and multistory forests.

- **Existing landscape character** may be identical in a number of widely scattered areas if those areas have similar attributes.

Wetland in Huron-Manistee National Forest
State of Michigan

Wetland in Wenatchee National Forest
State of Washington

State of Alaska
Coastal Hill Landscape Province

State of Washington
Northeast Cascades Landscape Province

- As stated previously, **natural landscape character** originates from natural disturbances, succession of plants, or indirect activities of humans (see p. 1 - 3). The existing landscape character continues to change gradually over time by natural processes unless affected by drastic natural forces or indirect human activities. An example of a drastic natural force is a volcanic eruption.

Mt. St. Helens, Gifford-Pinchot National Forest
Volcanic eruption, May 1981

- In a **natural-appearing landscape**, the existing landscape character has resulted from both direct and indirect human activities. Landscape character may have changed gradually over decades or centuries by plant succession unless a concerted effort was made to preserve and maintain cultural elements through processes such as prescribed fires or cultural activities such as farming.

- The following examples of **existing landscape character** in National Forest System lands differ widely from each other, yet fall within the context of **natural** or **natural-appearing landscape character**. View each landscape in terms of landform, rockform, waterform, vegetation, or positive cultural elements—log cabins, split rail fences, or orchards.

Oregon Dunes, Siuslaw National Forest

Broad Valley Rockies

Sonoran Desert

Green River, Bridger-Teton National Forest

San Juan Mountains, Colorado

Bighorn National Forest, Wyoming

Superior Uplands

Superior National Forest

East Mexican Highlands

Malheur National Forest

Sawtooth National Forest

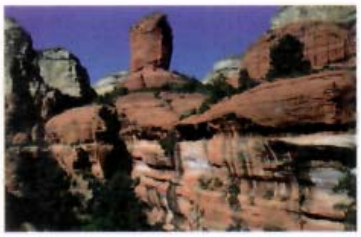
Hood River, Oregon

Glacier Bay, Alaska

Caribbean National Forest

Pisgah National Forest

Strawberry Wilderness
Malheur National Forest



The Pillar, Coconino National Forest

Sierra National Forest

Punchbowl Lake, Tongass National Forest

Bitterroot National Forest

Middle Missouri River

Byron Glacier, Chugach National Forest

Rita Blanca High Plains, New Mexico

Mt. Adams, Gifford Pinchot National Forest

Paulina Lake, Deschutes National Forest

Ecosystem Framework

The landscape character description should be developed within an ecological framework similar to the one described below.

Ecosystems

The concept of ecosystems brings the physical, biological, and human dimensions together into a holistic framework within which ecological systems can be described, evaluated, and managed (Rowe 1992). In order to provide a scientific basis for evaluating ecosystems and implementing ecosystem management at national, regional, and forest planning levels, the National Hierarchical Framework of Ecological Units (Framework) was developed in 1994 (ECOMAP 1993). It is a "classification and mapping system for stratifying the Earth into progressively smaller areas of increasingly uniform ecological potentials for use in ecosystem management."(Ibid : 1).

Ecosystems exist at many spatial scales. They can be conceptualized as occurring in a nested geographic arrangement with many smaller ecosystems embedded in larger ones (Allen and Starr 1982, O'Neill et al. 1986, Alvert et al. 1986 as cited in ECOMAP 1993). This nested arrangement forms a hierarchy of ecological units that are organized in decreasing order of scale and increasing amount of detail.

Ecological Units

Ecological units are the mapped landscape analysis units used for ecosystem planning and management. They enable planners to assess resource conditions at multiple scales and time periods. Ecological units are delineated by the spatial distribution of natural associations of dominant ecological (abiotic and biotic) factors that affect the structural and functional attributes of ecosystems. In addition ecological unit descriptions also include pertinent social and cultural factors. Ecological factors used in ecological unit descriptions include the following:

- Geomorphology
- Lithology and Stratigraphy
- Soil Types
- Vegetation Associations (Communities)
- Habitat Types
- Fauna
- Climate
- Slope/Aspect/Elevation
- Surface Water Characteristics
- Disturbance Regimes
- Land Use
- Cultural Ecology

The visual image created by the physical, biological, and cultural factors included in the unit descriptions helps define the landscape character of an ecological unit or geographic area. This includes past, existing, and future landscape character.

When the Framework was established, it was recognized that as the system was applied and new information was incorporated, adjustments would be necessary. New hierarchies have been developed as the Framework has been used in an ever-widening variety of planning and resource analysis applications, but they all use the same concept of hierarchical size and scale. They differ in the combinations of ecological factors and objectives used to delineate and describe the ecological units.

The most common hierarchies are shown in the chart on the following page. The planning team on a Forest will choose which hierarchy to use. This information is presented here to help you understand the relationships between the many terms used in ecosystem management.

Hierarchical Levels	Planning & Analysis Ecological Units	Terrestrial Ecological Units	Aquatic Units
Regional	Domain ---------- Division ---------- Province	Domain ---------- Division ---------- Province	River Basin
Subregional	Section ---------- Subsection	Section ---------- Subsection	Subbasin
Landscape	Physiographic Area	Landtype Association	Watershed
Site	Ecological Land Unit (ELU) ---------- Community ---------- Stand	Landtype ---------- Landtype Phase ---------- Site	Valley Section ---------- Stream Reach ---------- Channel Unit

Most ecosystem management projects focus their analysis on two or three scales of ecological units rather than an entire hierarchy. Forest-level projects generally use the Landscape and Subregional scales, with finer Site scales included where greater detail is needed. The Landscape scale consists of ecological units generally between 100's to 1000's of acres. The Subregional scale includes units which range in size from 10's up to 1,000's of square miles.

In general, the Scenery Management System uses the same ecological units for visual analysis. On some projects, however, it may be necessary to develop analysis area boundaries which differ from ecological unit boundaries. Ecological units can be aggregated or divided in order to focus on relevant issues and concerns. In these cases it is especially important to refer to the ecological unit descriptions for the scales both above and below that of the analysis area.

Mapping Process

Landscape character is described for an identifiable area of a national forest or a region.

For broad-scale planning, landscape character is described for sections or subsections in the National Hierarchy of Ecological Units. For forest planning, and landscape analysis purposes, it may be beneficial to describe landscape character for a smaller unit such as a Land Type Association (LTA) or an Ecological Land Unit (ELU), or aggregations of units that might form a larger geographic area such as a watershed, a viewshed, or other administrative units.

Each description focuses on key attributes found consistently throughout the mapped unit. The description succinctly conveys "word-pictures" to the reader to create an image of the landscape. The narrative includes a concise description of landscape character for landform patterns, water characteristics, vegetation patterns, and cultural elements. Greater emphasis is usually placed on description of vegetation than on description of other attributes, because vegetation is more easily changed than other attributes in a national forest setting.

The existing landscape character may be a result of a major natural disturbance such as a large-scale, high-intensity wild fire. It should be described exactly how it appears including a fire created vegetative mosaic at the large scale and blackened trees at the small scale.

The narrative may be brief, as in the first example below, or may contain more detail, as in the second. The amount of detail depends on landscape complexity, level of planning, and management needs.

In both examples the emphasis is on a description of the existing vegetation, landforms, and water characteristics. Information on appropriate ecological units might come from Ecological Subregions of the United States by McNab and Avers. How landscape character has developed over time may come from personal interview and publications from ecologists, archaeologists, historians and others. Potential character may be taken, in part, from potential vegetation inventories.

Brief Example:

Existing Landscape Character
Northern Hardwoods on Flat Terrain

The flat to gently rolling landform of the landscape is blanketed by an almost continuous canopy of soft-textured, rounded treeforms, creating a natural-appearing landscape character. The tree canopy is broken only slightly by stream courses, small lakes, wetland vegetation, and scattered patches of coniferous evergreen trees. There are no major rockforms visible from aerial views or from on-the-ground views. Scattered glacial boulders are visible amidst understory shrubs in immediate foreground views. Although there is a diversity of deciduous tree and shrub species, they are intermixed to the point that there is an overall similarity of scenic effect from aerial and on-the-ground views. Vegetation density prevents most views beyond immediate foreground. Just out of this view, occasional pine plantations break up some of the sameness of the vegetation. However, the highly contrasting geometric forms of the plantations visually clash with the patterns of the natural-appearing landscape character.

Detailed Example:

Existing Landscape Character
Coastal Flats in Florida

The existing landscape character of "Coastal Flats" is scattered throughout several different areas of various sizes in Florida. In general, the landform surface is a young marine plain with sand hills and swamps. The terrain is nearly level to gently rolling, a tilting plain, ranging in elevation from sea level to 150 feet, having a few isolated hills up to 250 feet high. About one-fourth of a typical coastal plain is forest; the remainder is saw-palmetto, gallberry, Southern wax myrtle, and fetterbush. Longleaf pine, slash pine, and wiregrass are the dominant vegetative species.

The viewer perceives a predominantly natural landscape having some evidence of human disturbance. Natural disturbances (including fires, storms, insects, and diseases) and recovery processes have the greatest influence on vegetation patterns. Yet, here and there, the observer notices small openings in the forest where vegetation has been modified to enhance recreation pursuits, such as hiking, nature photography, and wildlife viewing. In addition, the landscape may occasionally be interrupted by a narrow road corridor, plowed fireline, or a small campground having rustic facilities.

Pine forests are relatively open. The openness is interrupted by dense vegetation in wetlands, small hardwood patches, and patches of pine saplings. While trees occur in various sizes, the majority are very large—with heights of 85-to-95 feet respectively for longleaf and slash pine, diameters of 29-to-32 inches, and ages reaching 175-to-275 years. Some very old longleaf pine trees having distinctive flat tops are dispersed throughout the coastal plains. Generally, at least two distinct age-classes of trees are found growing together. Proximity of trees ranges from 10-to-40 feet. Dead trees, both standing and fallen, are present, as are old pine stumps. Most of the tree trunks are blackened to various degrees. Plowed firelines around some recent wildfires may be seen, but there is no evidence of firelines elsewhere.

In most of the pine forests, understory is low—only 3 feet tall. Some areas are dominated by shrubs such as gallberry and palmetto, while others are dominated by a mixture of grasses and herbs. In drier areas, a small number of plant species are found in the understory. Moister forests may have understories where more than 150 plant species grow.

Wetland forest inclusions may be dominated by a mixture of hardwood and pond cypress or by a mixture of hardwood and pine. Canopy trees are generally evergreen species, and the understory may be densely covered with saplings of canopy species and a mixture of evergreen shrubs and vines. Few herbs grow in these areas.

Naturally treeless or nearly treeless areas are present. Most often, these are dominated by a herbaceous community of mixed grasses and other flowering plants. In some areas, the herbaceous community may contain only a few species; in other areas, over 150 different kinds of herbs may be found. Hardwood forests adjacent to the rivers have a continuous canopy of trees of mixed species. There are saplings in the understory, small trees in the subcanopy, and large trees in the canopy. They grow in height to 87 feet, in diameter to 29 inches, and in age to 200 years. The distance between trees can exceed 50 feet or more. Within these forests, the understory is somewhat open and consists of shrubs, forbs, and saplings.

While walking in coastal flats, a visitor often experiences isolation from the sights and sounds of other people. Coastal flats are usually relatively large areas, encompassing at least 2,500 acres. (Other areas, including the scenic free-flowing rivers, are smaller because of particular physical features that enhance the feeling of isolation.) A visitor encounters few other people while passing through a typical coastal flats area. Rivers, streams, and a small number of primitive trails and roads provide the only access into the area. People using these travelways are most likely to be canoeists, hikers, equestrians, and hunters. No facilities exist except for limited signing, sanitary and safety needs, and boat pull-ups along rivers. On-site controls are not often present. In rare instances, artificial features, such as power lines, may be seen connecting private lands within the area.

Roads are seldom seen. On the few roads that exist, traffic is seldom encountered and consists of administrative and timber-harvesting vehicles. Roads have native-earth surfaces and conform in height to surrounding terrain. The roads on uplands generally do not have ditches, while those in low areas do. A few low drainage points—bay crossings and streams—have low-water rock crossings. Road closures exist at entrances to coastal flats. Roads are rough and irregular; travel using a low-clearance vehicle is very difficult. A few remnants of roads, which lead from permanent roads to occasional small openings, are visible.

Scenic Attractiveness

Scenic attractiveness measures the scenic importance of a landscape based on human perceptions of the intrinsic beauty of landform, water characteristics, vegetation pattern, and cultural land use.

Purpose

Scenic attractiveness is the primary indicator of the intrinsic scenic beauty of a landscape and of the positive responses it evokes in people. It helps determine landscapes that are important for scenic beauty, based on commonly held perceptions of the beauty of landform, vegetation pattern, composition, surface water characteristics, and land use patterns and cultural features.

Discussion

- The existing landscape character description, generally at the Section scale, is the frame of reference for scenic attractiveness.
- Each landscape expresses unique scenic qualities. Scenic attractiveness indicates the potential of a landscape to produce varying degrees of satisfaction, of positive physiological responses; such as reduced stress; positive psychological responses; and a general feeling of well-being.
- Cognizant of commonly held perceptions of intrinsic beauty and constituent preferences, classes of scenic attractiveness are mapped for all national forest landscapes.
- Scenic attractiveness, in its purest definition, exhibits the combined effects of the natural and cultural forces in the landscape. People value all landscapes, but they regard those having the most positive combinations of variety, vividness, mystery, intactness, coherence, harmony, uniqueness, pattern, and balance as having the greatest potential for high scenic attractiveness.
- Scenic attractiveness indicates varying levels of long-term beauty of the **landscape character**. Scenic attractiveness is ordinarily very stable.
- However, *in rare instances*, scenic attractiveness may change because of natural disasters or because of extreme human alteration of the landscape. Changes may increase the potential for a "typical or common" landscape to become "distinctive." An example of changed scenic attractiveness is a landscape having a new recreational reservoir that has provided improved scenic quality and recreational opportunities.

1• **Variety** in the landscape creates added interest when present in moderation.

5• **Intactness** is related to unity and also indicates wholeness—few or no missing parts in a landscape.

2• **Unity** in a landscape provides a sense of order that translates into a feeling of well-being.

6• **Coherence** describes the ability of a landscape to be seen as intelligible, rather than chaotic.

9• **Pattern** includes pleasing repetitions and configurations of line, form, color, or texture, as well as harmony.

3• **Vividness** is related to variety as well as contrast, adding clearly defined visual interest and memorability.

7• **Harmony** is related to unity. It exhibits a pleasant arrangement of landscape attributes.

4• **Mystery** arouses curiosity and adds interest to a landscape.

8• **Uniqueness** of a landscape also arouses curiosity and often signifies scarcity, rarity, and greater value.

10• **Balance** in some ways reflects unity and harmony, but even more it displays a state of equilibrium that creates a sense of well-being and permanence.

1 - 15 - Landscape Character

The combination of valued landscape elements such as landform, water characteristics, vegetation, and cultural features, are used in determining the measure of Scenic Attractiveness.

1. Landform Patterns and Features:
   Includes characteristic landforms, rock features, and their juxtaposition to one another.

2. Surface Water Characteristics:
   The relative occurrence and distinguishing characteristics of rivers, streams, lakes, and wetlands. Includes features such as waterfalls and coastal areas.

3. Vegetation Patterns:
   Relative occurrence and distinguishing characteristics of potential vegetative communities and the patterns formed by them.

4. Land Use Patterns and Cultural Features:
   Visible elements of historic and present land use which contribute to the image and sense of place.

In many landscapes temporal, variable, cultural, and other visual elements that may change in appearance over time are scenic attributes that often contribute significantly to, or even dominate the scenic quality and character of the landscape. Though the visual character and scenic value of these elements may vary through time, the change is usually slow and not detectable for several planning cycles or even human life spans, unless manipulated. It is often places that possess high quality temporal or culturally influenced scenic attributes, that visitors consider "Special Places". It is primarily through influence on the management and manipulation of these elements that SMS attempts to protect, conserve and enhance the scenic resource. These elements may be rated at various levels of scenic value or attractiveness.

Scenic attractiveness classifications are:

Class A—Distinctive.
Class B—Typical.
Class C—Indistinctive.

Class A—Distinctive
Areas where landform, vegetation patterns, water characteristics, and cultural features combine to provide unusual, unique, or outstanding scenic quality. These landscapes have strong positive attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance.

Class B—Typical
Areas where landform, vegetation patterns, water characteristics, and cultural features use combine to provide ordinary or common scenic quality. These landscapes have generally positive, yet common, attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance. Normally they would form the basic matrix within the ecological unit.

Class C—Indistinctive
Areas where landform, vegetation patterns, water characteristics, and cultural land use have low scenic quality. Often water and rockform of any consequence are missing in class C landscapes. These landscapes have weak or missing attributes of variety, unity, vividness, mystery, intactness, order, harmony, uniqueness, pattern, and balance.

Mapping Process

Scenic Attractiveness does not necessarily fall into three distinct classes, but ranges from Distinctive to Indistinctive. In some situations it may be desirable to create sub-classes. Map scenic attractiveness **class A** lands first. The areas of outstanding scenic quality are generally well-known and are easiest to identify. If not completely familiar with the area being inventoried, learn more about such distinctive areas from longtime residents of the area and other resource specialists.

Verify potential class A areas using aerial reconnaissance, ground reconnaissance, and aerial photographs.

To ensure continuity when preparing a draft map of class A landscapes, include both National Forest System lands and other ownerships.

Next, map scenic attractiveness **class C** landscapes. Ordinarily, class C landscapes are not as well-known as class A landscapes. For the most part, they consist of large areas of undifferentiated landscapes that are discernible on aerial photographs and topographic maps. .

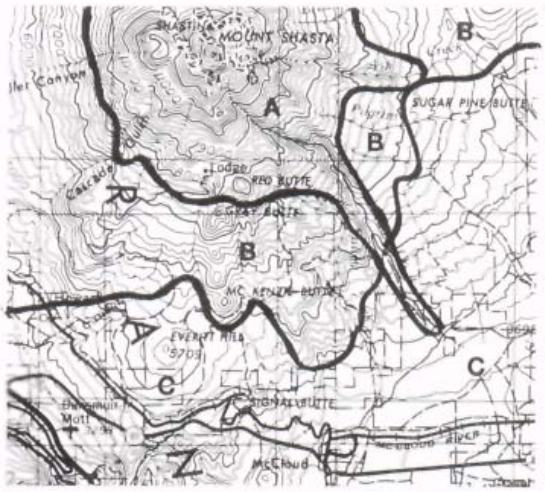
Prepare detailed maps on orthophoto quadrangles, when available, or on U.S. Geological Survey (USGS) 7-1/2 minute or 15 topographic maps using stereo pairs of color resource aerial photographs and ground observations for verification. On the final maps, avoid delineating classes of scenic attractiveness for other ownerships. However, remember that information on scenic attractiveness for other ownerships, retained on work maps, is often valuable for future needs, such as land acquisitions, land-exchange evaluations, or local agency planning coordination.

Upon completion of detailed mapping of class A and class C landscapes, the remaining landscape matrix is initially assumed to be **class B**. As a final check, scan class B areas using aerial-photo stereo pairs. Field check to ascertain whether any less definitive islands of class A or C exist within.

As directed by the Visual Management System inventory process, **variety classes** A, B, and C were mapped. Because three classes worked quite well, the Scenery Management System continues to use these classes for **scenic attractiveness**. There is no need to map scenic attractiveness a second time if variety classes are mapped correctly.

The landscape below illustrates the three classes of inherent scenic attractiveness.

Mt. Shasta, California
Class A / B / C



Topographic map of same area
Class A / B / C

Inherent scenic attractiveness must also consider seasonal effects, such as spring color, fall color, and winter snow.

North Carolina

Oregon

Colorado

View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help

Last Modified: October 6, 2009

NALDR Home | NAL Home | USDA | Agricultural Research Service | GPO Access | Web Policies and Important Links | Site Map
FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | USA.gov | White House

USDA United States Department of Agriculture
National Agricultural Library

DIGITAL REPOSITORY

Home | About NALDR | Search | Browse - Tables of Contents | NAL Catalog | Help | Contact Us

You are here: Home / Search / Search Results / Document Display

Search

Document Display

Author	
Title	Landscape aesthetics: a handbook for scenery management \ Chapter 2
Source	Agriculture handbook
Year	1995
Volume	no. 701
Pages	p. 2-1 to 2-7
DocID	ah701_chap2
Accession	ah701_chap2
Publisher	U.S. Dept. of Agriculture, Forest Service
Subject	Landscape assessment--United States--Handbooks, manuals, etc; Forest management--United States--Handbooks, manuals, etc; Landscape protection--United States--Handbooks, manuals, etc; Landscape architecture--Handbooks, manuals, etc
Notes	This handbook has been divided. To view all parts, select the Tables of Contents button from the top menu.
Link	http://naldr.nal.usda.gov/NALWeb/Agricola_Link.asp?Accession=ah701_chap2

****Displaying below: All of 8 pages****

View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help

Scenic Integrity
Scenic Integrity is a measure of the degree to which a landscape is visually perceived to be "complete." The highest scenic integrity ratings are given to those landscapes which have little or no deviation from the character valued by constituents for its aesthetic appeal. Scenic Integrity is used to describe an existing situation, standard for management, or desired future conditions.

Scenic Integrity

Scenic Integrity indicates the degree of intactness and wholeness of the landscape character. Human alterations can sometimes raise or maintain integrity. More often it is lowered depending on the degree of deviation from the character valued for its aesthetic appeal.

Definition

Most dictionaries have three definitions of integrity of which two are applied to managing scenery (1) the state of being whole, complete, entire or unbroken and (2) a sound unimpaired or perfect "condition." Landscape character with a high degree of integrity has a sense of wholeness, intactness, or being complete. Its scenic condition is near-perfect with no evident discordant elements or deviation from the existing character valued for its aesthetic appeal. For example, the landscape character in this photo is a natural-appearing continuous textured landform with no evident timber harvest, power line, roads, or other human alterations.

In the photo on the left, landscape character includes a positive cultural element of a historical cabin. Its structural form, color, texture, pattern, and scale of materials, supporting rock walls and steps are in concert with architectural style of the period and meets the publics psychological expectations for such elements. Most constituents accept the cabin as having a high degree of integrity.

Scenic integrity as used in ecosystem assessment and planning may include:

1. A historic or past state of integrity.
2. An existing or current state of integrity. The existing integrity is the baseline from which to develop number three.
3. An interim or short-term minimum level necessary to reach a long-term character goal.
4. A long-term level of integrity achievable when the long-term goal is reached. The character goal must be an integral part of a sustainable "Desired Condition."

Discussion

In its purest definition, "integrity" means perfect condition. However, in managing scenery degrees of integrity are defined as very high to very low.

Integrity in this handbook is limited to the deviations from or alterations of the existing landscape character that is valued for its aesthetic appeal.

Integrity could also be used to define the wholeness or condition of the ecosystem but it is assumed that will take place as part of the overall integrated ecosystem management process. However, a landscape character goal of high scenic integrity should also be one of high ecosystem integrity. One does not necessarily ensure the other.

In some situations, preferred scenic conditions such as absence of downed woody debris from timber harvest may run counter to the need for woody debris to provide wildlife food and cover, nutrient recycling, etc. Providing a high level of scenic integrity may in some cases have to be achieved through establishing an "ecological aesthetic," over time through knowledge and appreciation of how a healthy ecosystem functions and how we as humans fit into it.

Integrity could also be used to manage the attributes of landscape character: i.e. vegetative, pattern, form, line, color, texture, and scale; and other senses of aesthetic, such as sound, tough, smell, and taste. It is recommended these be handled through development of a landscape character goal.

Integrity levels as a measurement tool is highly dependent on a complete and accurate description of the positive attributes of the existing landscape character. This is the baseline from which to judge deviations. It should be drawn from credible research, i.e., Floyd Newby's findings that "people expect to see natural or natural-appearing scenery," or from Stanley White...architecture must be... "becoming to the (landscape) form as well as the completion of the meadows, woods, and slopes we presume to compliment...Landscape character should be intensified (by the architecture) not obliterated." Constituent preferences and expectations can also be drawn from professionally designed constituent surveys, interviews, observation of behavior, etc. See chapter on constituent information.

A complete and accurate description of character is also essential when a cultural element such as a historic structure is involved. Structures are usually valued by constituents when they have been accepted and valued over time i.e., covered bridges, split rail fences, old barns, and farmhouses. We recommend soliciting the help of professional historians and cultural ecologists in developing character statements for cultural features. Values to be considered should include traditional (community, family, individual), spiritual (visual quest), historic, experiential (i.e., Recreation), religious, cultural, etc.

Scenic integrity is a continuum ranging over five levels of integrity from very high to very low. Corresponding levels of existing scenic conditions and visual quality levels from the original Visual Management System are shown to the right of each level.

Scenic Integrity Levels

Frame of Reference

The frame of reference for measuring achievement of scenic integrity levels is the valued attributes of the "EXISTING" landscape character "BEING VIEWED". In Natural or Natural appearing character this is limited to natural or natural appearing vegetative patterns and features, water, rock and landforms. Direct human alterations may be included if they have become accepted over time as positive landscape character attributes.

The scenic integrity levels are shown below.

VERY HIGH (Unaltered)..... preservation

VERY HIGH scenic integrity refers to landscapes where the valued landscape character "is" intact with only minute if any deviations. The existing landscape character and sense of place is expressed at the highest possible level.

HIGH (Appears Unaltered)..... retention

HIGH scenic integrity refers to landscapes where the valued landscape character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.

MODERATE (Slightly Altered)..... partial retention

MODERATE scenic integrity refers to landscapes where the valued landscape character "appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed. See section below on meeting integrity levels.

LOW (Moderately Altered)..... modification

LOW scenic integrity refers to landscapes where the valued landscape character "appears moderately altered." Deviations begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed but compatible or complimentary to the character within.

VERY LOW (Heavily Altered)..... maximum modification

VERY LOW scenic integrity refers to landscapes where the valued landscape character "appears heavily altered." Deviations may strongly dominate the valued landscape character. They may not borrow from valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles within or outside the landscape being viewed. However deviations must be shaped and blended with the natural terrain (landforms) so that elements such as unnatural edges, roads, landings, and structures do not dominate the composition.

UNACCEPTABLY LOW scenic integrity refers to landscapes where the valued landscape character being viewed appears extremely altered. Deviations are extremely dominant and borrow little if any form, line, color, texture, pattern or scale from the landscape character. Landscapes at this level of integrity need rehabilitation. This level should only be used to inventory existing integrity. It must not be used as a management objective.

Meeting Integrity Levels

In general a specific integrity level can be achieved by decreasing the visual contrast of the deviation being viewed. Several approaches may meet integrity levels:

1. Usually the most effective way is to repeat form, line, color, texture, pattern and scale common to the valued landscape character being viewed. For example, in natural or natural appearing landscapes such deviations as created openings can sometimes be added by repeating size, shape, edge effect, surface color and pattern from natural openings common to the landscape character. Adding structures or structure additions to cultural landscapes can sometimes be done by repeating architectural form, line, color, texture, pattern, and scale. If repetition is accurate and well designed the deviation may blend so well the change is not evident (HIGH). It may only borrow well enough to be noticeable but visually subordinate (MODERATE).

2. Another approach is to borrow form, line, color, texture, pattern and scale from similar but different valued landscapes outside that being viewed. For example, it may be possible to borrow the size, shape, edge effect, surface color, and pattern of natural openings and repeat them in continuous textured landscapes where they do not presently exist. For structures in cultural landscapes it may be effective to borrow the dominance elements of different but compatible architectural styles from outside the landscape being viewed. Because these are introduced elements from landscape character outside the one being viewed these are usually evident (MODERATE) if not dominant (LOW).

3. An approach used for the VERY LOW level is to shape and blend only with the land forms. Harvest unit boundaries, for example, would follow draws where low branched trees and brush exist over ridge or hill tops to avoid dominance of unnatural appearing edges. Roads and landings would conform to folds and ridge lines in the landscape to avoid dominance. Harvest boundaries would normally utilize all breaks in topography to avoid excessive unit size.

4. The most difficult situation is where proposed deviations are in direct opposition to the dominance elements of valued landscape character being viewed. Examples include a horizontal road (line) in an otherwise vertical landscape above tree line or... a metal lattice work utility tower in the middle of a highly valued historic village. The first approach should be to relocate such deviations so they are not evident or can be subdued to be visually subordinate. Utility structures are often geometric, forceful, and large. In addition to careful location they can often be designed in simpler form to blend better with the setting or be more compatible with architectural styles of a cultural landscape. See USDA Handbook 478 Utilities; inside cover and pages 26, 34, and 85.

5. The evaluations of deviations in the Very High Scenic Integrity Level is based on a viewer wandering through any part of the area. The evaluation of deviations in the other scenic integrity categories is based on views from identified viewing locations.

The following matrix provides a quick summary of these integrity level descriptions. The first line, labeled DOMINANCE, indicates which element has the strongest visual weight (or stands out visually over the other); the landscape character or the deviation from it. The second line describes the DEGREE OF DEVIATION from the Landscape character in terms of dominance. The third line describes the degree of INTACTNESS of the Landscape character. Reading down each column gives a summary word picture of each level of integrity.

Scenic Integrity Summary

Criteria for Scenic Integrity of the L.C. Image/Sense of Place	(VH) Very High	(H) High	(M) Moderate	(L) Low	(VL) Very Low	(UL) Unacceptably Low
Dominance Landscape Character vs. Deviation	Landscape Character	Landscape Character	Landscape Character	Deviation	Deviation	Deviation
Degree of Deviation From the Landscape Character	None	Not Evident	Evident but not dominant	Dominant	Very Dominant	Extremely Dominant
Intactness of the Landscape Character	Landscape Character Fully Expressed	Landscape Character Largely Expressed	Slightly Altered and Character Expression Moderate	Altered and Low Expression of Character	Heavily Altered and Very Low Expression of Character	Extremely Altered

Scenic Integrity: Past, Present, and Future

As stated earlier, the concept of scenic integrity can be used to describe varying degrees of wholeness or completeness and levels of scenic condition from very high to unacceptably low...and it can be used to describe the level integrity in landscapes in the past, present, and predicted for the future. Past integrity can be drawn from existing books on historical landscapes. A general description may be written for each ecological unit from these photos and captions. For those ecological or landscape units that are missing in the literature, interpolations can often be made from photos of surrounding units. Past integrity may trends and help identify alternative character options within the range of variability. Existing integrity of the landscape being viewed may be described using one or a combination of two of the methods below:

1. As viewed from the air, which is most revealing

2. As viewed from existing travelways and use areas, using typical on-the-ground observer positions

3. As viewed from unusual and more unpredictable on-the-ground observer positions, while the observer wanders through the National Forest.

These examples are described in more detail in Appendix E . An inventory of existing scenic integrity serves multiple purposes of forest planning, project implementation, and monitoring, as follows:

- It provides important benchmarks.
- It serves as a historical record of the degree, location, and extent of physical alteration of the landscape at given points in time.
- When Combined with past integrity levels, it is used to develop scenic integrity trends during Forest Planning.
- It helps determine the location, cost, and extent of rehabilitation required to achieve the desired scenic integrity levels.
- Once the Forest Plan is adopted, an inventory of existing scenic integrity is used to determine prioritization, location, and extent of rehabilitation required during plan implementation.
- Combined with visual absorption capability, type, and intensity of planned activities anticipated during the planning period, existing scenic integrity will assist in predicting future scenic integrity levels for alternatives.
- Existing scenic integrity and its trends assist managers in monitoring progress toward meeting predicted future scenic integrity levels in a Forest Plan.

The existing scenic integrity inventory will result in a map that may be stored in a GIS format.

View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help

Last Modified: October 6, 2009

NALDR Home | NAL Home | USDA | Agricultural Research Service | GPO Access | Web Policies and Important Links | Site Map
FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | USA.gov | White House

USDA United States Department of Agriculture
National Agricultural Library

DIGITAL REPOSITORY

Home | About NALDR | Search | Browse - Tables of Contents | NAL Catalog | Help | Contact Us

You are here: Home / Search / Search Results / Document Display

Search

Document Display

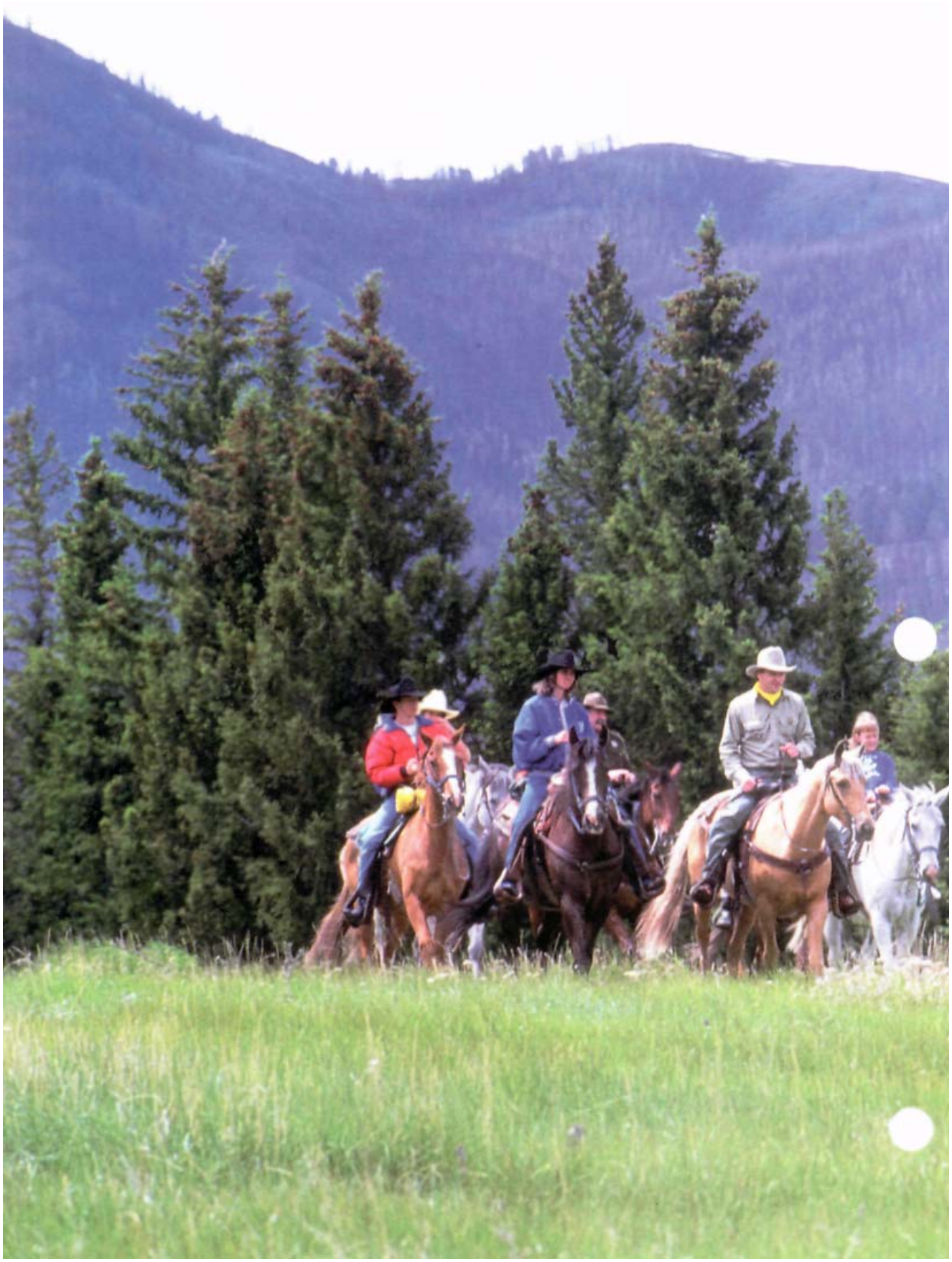
Author	
Title	Landscape aesthetics: a handbook for scenery management \ Chapter 3
Source	Agriculture handbook
Year	1995
Volume	no. 701
Pages	p. 3-1 to 3-18
DocID	ah701_chap3
Accession	ah701_chap3
Publisher	U.S. Dept. of Agriculture, Forest Service
Subject	Landscape assessment--United States--Handbooks, manuals, etc; Forest management--United States--Handbooks, manuals, etc; Landscape protection--United States--Handbooks, manuals, etc; Landscape architecture--Handbooks, manuals, etc
Notes	This handbook has been divided. To view all parts, select the Tables of Contents button from the top menu.
Link	http://naldr.nal.usda.gov/NALWeb/Agricola_Link.asp?Accession=ah701_chap3

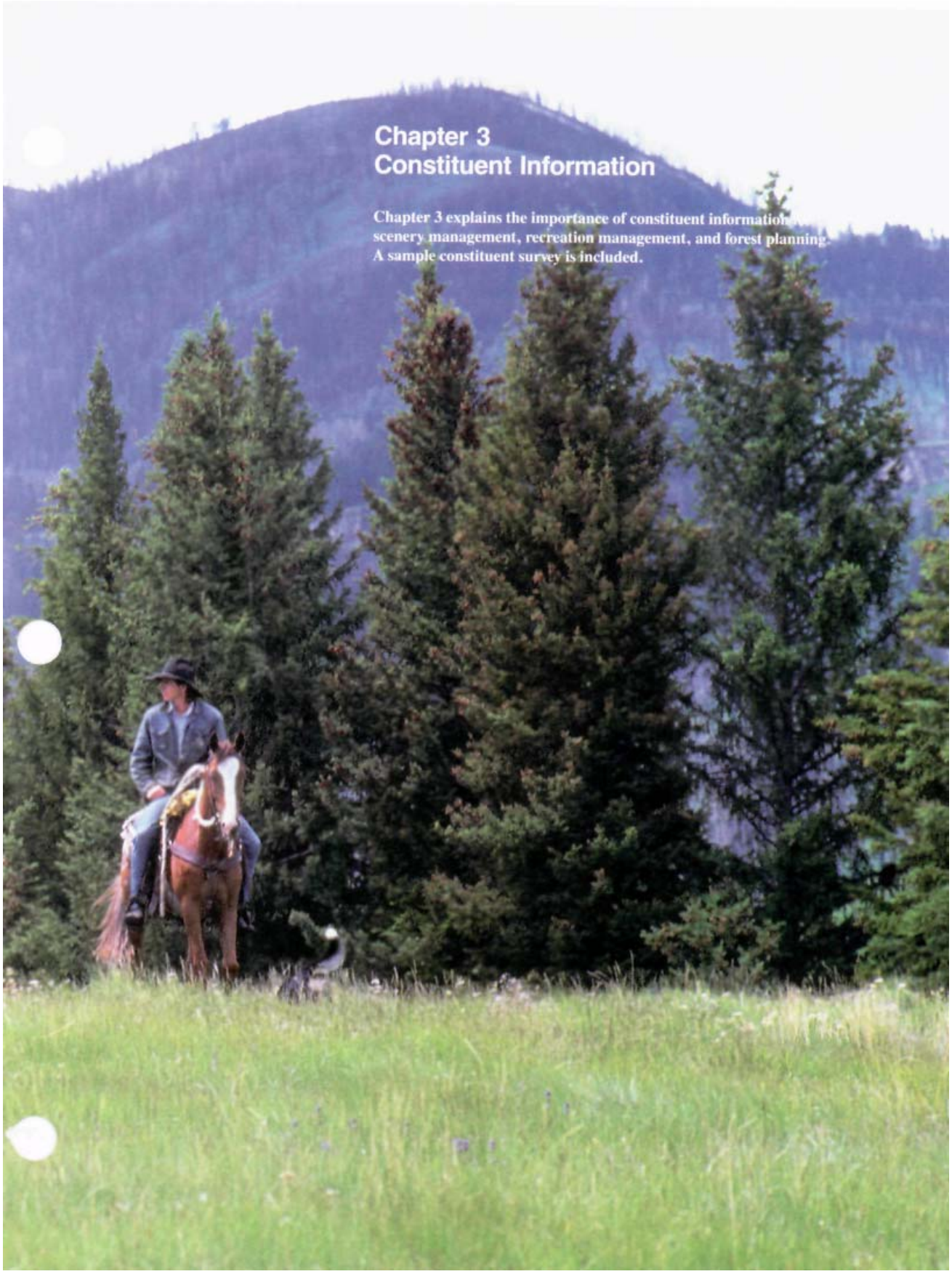
****Displaying below: All of 20 pages****

View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help





Chapter 3
Constituent Information

Chapter 3 explains the importance of constituent information in scenery management, recreation management, and forest planning. A sample constituent survey is included.

Constituent Information

Constituent information—expectations, desires, preferences, acceptable levels of quality, behaviors, and values—is essential to Forest Service managers.

CONSTITUENT INFORMATION: examines the significance of scenic quality and aesthetic experience to people:

- to visitors of a National Forest;
- to people as part of the local setting in which they live;
- to people living a far distance from the Forest;

Purpose

It is important to understand how aesthetic, specifically scenic qualities of a National Forest are significant to people whether they are visitors to the Forest, residents of the local area or nearby communities, or part of a broader constituency who may either occasionally visit the Forest or simply have an interest in the aesthetic qualities of National Forests.

Context:
The importance of constituent information as a foundation for understanding and identifying valued landscape attributes, landscape character, and scenic integrity can not be over emphasized especially from a "cultural" landscape perspective. Constituent information is an essential ingredient in all phases of the Scenery Management System. See Chapter 5, Application of the Scenery Management System and the SMS Process Flow Diagram for additional information.

Technical Involvement:
Sociologists, cultural anthropologist, social psychologists, landscape architects, public information officers, and other professionals need to assess the ways in which such significance is expressed through attitudes, values, desires and preferences of individuals; and how it reflects in peoples' behavior both as visitors to the Forest and as participants in other social activities and processes which may impinge on the demands for scenic management and the ability to design and implement scenery management practices.

Constituency Composition

The scenic qualities of National Forests, other public lands and surrounding private lands are important to people in a variety of ways and social contexts. As individuals, people value landscapes in connection to sensory response, and culturally who they are and how they perceive their relationship to the world.

The aesthetic characteristics of landscapes are also an integral part of community life, forming the "sense of place" in which people live and interact with one another. Even those who live at great distances from that landscape (and may have never visited the forest) may take an active interest in scenic management activities from a natural and cultural landscape perspective. In this light, the constituency of scenery management includes:

- ***individual visitor constituent***:- Individuals who visit the Forest to experience its "natural appearing" and/or "cultural" landscape qualities. Visitors may be of local, regional, national or international in origin.

- ***local constituency***:- People living in the local area and/or surrounding communities who interpret the significance of the Forest and its scenic amenities in terms of defining the "sense of place" where they live and interact with others; these people may include 'average' residents and members of groups to whom the Forest is important in different ways.

- ***broader constituency***:- People living a far distance from the Forest who may visit or who may have never visited the Forest but, value the knowledge that it is being managed for scenic and aesthetic qualities as part of their National Forest System. Again such people may include 'average' citizens, members of groups with different orientations to National Forests and public land management, opinion leaders, etc.

Although the scope of the constituency of scenery management varies significantly, for practical purposes constituent assessments will likely have to focus most closely on visitors to the National Forest.

Although, information on the significance of aesthetic experience and scenic management both to people living in the local area and to broader regional, national, international constituencies, as well as information on the broader social processes can not be ignored. Much information on these broader levels of constituency will have to be acquired from existing data sources or by incorporating questions concerned with scenery management within broader social survey instruments.

Content and Form

Two important initial concerns with respect to constituent information include what is the information about -- its *content* -- and how is it expressed or conveyed -- its *form*.

Content- some of the most useful information for scenery management concerns 1) how constituents use an area and 2) what visitors and other constituents feel, value, desire, prefer, and expect to encounter in terms of landscape character and scenic integrity. These latter concerns extend beyond those who actually visit the Forest to include how it and its scenic and other aesthetic attributes are interpreted by those living in the local area and surrounding communities as part of the fabric of social

life in the area. Also, how are the aesthetic experiences interpreted by people living far away from the area who may be more concerned with the provision of scenery and other amenities as part of the mission of the National Forest System.

Form- in which constituent information is obtained, two basic kinds of information are important for understanding each level of constituency for scenery management:

1) *Verbal expressions* of the significance or importance of scenic and other aesthetic qualities of the Forest and/or special places within the Forest. These may include:

- *Feelings* -- Sensory responses such as sight, sound, touch, taste and smell;
- *Values* -- The importance or worth of aesthetic and other outputs of the Forest;
- *Expectations* -- What constituents anticipate encountering in National Forests;
- *Desires* -- What constituents would like to have if they were unconstrained;
- *Preferences* -- What constituents would choose from among a set of available options;
- *Acceptable levels of quality* -- The lowest constituent standards permissible

2) *Actions or behaviors* of people, either as part of directly experiencing the scenic quality of the Forest landscape or as patterns of social behavior which may directly or indirectly affect the provision of opportunities for such experiences via scenic management activities.

Given the diverse constituency for scenery management, it will be necessary to use various strategies and/or techniques for collecting the relevant information, or to seek different kinds of information from various constituent groups. Thus, for example, the kind of information likely to be most immediately applicable to scenic management activities will be that pertaining to the smallest geographic area feasible. Visitors would be the prime source of such information -- both verbal and behavioral -- although some information might also be obtained from studies focusing primarily on the significance of the Forest's scenic and aesthetic resources to the lives of people such as members of their local communities, or elements defining the nature of "sense of place" in which they live.

A great deal of this latter information would pertain more to the overall pattern of scenery management for the Forest as part of a broader scheme in which other resource uses and their management are included. This is also true of much information obtained from broader regional or national constituencies. The latter, in particular, may well have little or no experience or perhaps even knowledge, for example, particular viewsheds, landscape units, and so on; but would rather be concerned with whether the overall emphasis and pattern of scenic management on the Forest contributes to or hinders achieving the appropriate emphasis on the provision of these outputs within the National Forest System as part of an overall management program for which they and all Americans are constituents.

Constituent Assessment

A constituent assessment is a compilation of information about individuals and groups and how they experience the aesthetic and scenic dimensions of the Forest, whether visiting or merely contemplating from afar. Since visitors actively demonstrate their interest via their actions, and are also the most accessible group within the constituency for scenery management, their behaviors and verbal expressions comprise a central focus of a constituent assessment.

As noted above, other important elements of the constituency for scenery management include residents of the local area and surrounding communities, as well as those living a far distance from the Forest to whom it is significant either as a potential place to visit or as part of the nation's natural heritage. Both verbal expressions of how these groups interpret the significance of the Forest and its aesthetic qualities, as well as manifestations of behavior as reflected in broader social processes with implications for scenery management, would form part of the ideal constituent assessment.

A constituent assessment should involve a cooperative effort among social scientists, landscape architects, forest planners, and land managers in determining the kinds of scenery management information to be obtained from or about constituents. Such a partnership also serves to insure that issues perceived important to each cooperating group will be incorporated within the overall effort.

A constituent assessment should yield information useful in developing statements about desired or preferred landscape character and scenic integrity. Ideally, the constituent assessment also produces information useful for delineating important travel routes and use areas, viewsheds, and special places in the scenic inventory.

One or more social scientists should play an important role in the formulation of a plan for the constituent assessment and analysis. Such a plan should specify questions to be answered, methods of data collection, methods of analysis, and desired results from the assessment.

A constituent assessment for landscape aesthetics is a form of public participation in forest planning. As with any form of public participation, multiple methods for data collection and analysis will be most effective at acquiring the broadest range of relevant information. Questions will vary for different types of desired information. Kinds of methods and some sample questions will be considered.

Finding out how constituents envision and value landscape character, the kinds of scenic integrity they prefer, may involve studying user behavior, talking directly with users, conducting a survey or public involvement workshop, utilizing personal observations of Forest Service personnel, and the perusal of other information sources, including information from previous scenic analyses, recreation and broader forest planning activities.

Money, time, and workforce constraints may not permit a complete or ideal constituent analysis. This budgetary fact of life is taken for granted in the following discussion. For many National Forests, existing constituent information is marginal because it has been difficult for the Forest Service to obtain this kind of information in the past. It may even be the case that for some Forests constrained in the above ways, land managers might continue to use personal observations and judgments for constituent data

until the Forest Service performs a more thorough and scientific constituent assessment and analysis.

Combining a constituent assessment for scenery management with other resource inventories should be done when ever possible. At a minimum, constituent assessments for scenery management and recreation management should be combined. This chapter on constituent information is written with a joint assessment for scenery and recreation management in mind.

Assessment Components

An ideal assessment of the constituency for scenery management would involve the set of components found in the table below. As discussed above, management constraints will strongly affect the ability of a National forest to incorporate any or all of these components within an overall assessment effort. The rest of this chapter looks briefly at each component, and also includes several examples of the kinds of questions that might be included in a constituent survey for, in this case, visitors to a National Forest.

---------- Constituency for Scenery Management ----------

Assessment Components	Visitors to Forest	Local area residents	Regional and/or Constituents
1. Constituent surveys	X	X	X**
2. Visitor observations	X		
3. Constituent interviews	X*	X	
4. Public participation [1]		X	
5. Additional information sources	X	X	X

[1] Formally organized groups, events or activities -- e.g., workshops, meetings, task forces, etc.

* Interviews likely to occur post-visit, via either telephone or in-person

** Scenic management questions incorporated within surveys of broader purpose and scope

1. *Constituent Surveys*

The survey is an important tool for obtaining constituent information. Any public opinion survey conducted by an agency of the U.S. Government requires approval of the Office of Management and Budget (OMB). Many factors -- including the landscape issue being addressed, the identity of constituents, and the importance of preferences of various constituent groups -- influence the decision of which people to survey. The collaboration of social scientists, area managers, recreation and forest planners, and landscape architects usually offers the best opportunity for linking the issues and concerns at hand with the identification of survey recipients.

In constructing a survey, the population of constituents should be clearly identified. The framework depicted above suggests that, in general, surveys may be designed for visitors to a National Forest, for people living in the local area or surrounding communities, and for people living at some distance from the Forest. The above is also significant as members of a broader economic, social, cultural and political communities -- e.g., state or national residents, members of groups concerned with certain outputs and/or management activities of National Forests in general.

Visitor surveys are concerned with those who visit the Forest from whatever origin (e.g., the local area or some distance away). These surveys seek to obtain information on how visitors experience the scenic and aesthetic aspects of the Forest. When combined with information about visitor behavior, such survey information can sometimes be applied to a specific landscape unit or viewshed.

While it is desirable to obtain survey results that capture visitor experiences of individual viewsheds, in many situations it may not be possible to do so at a detailed geographic level. In these situations, the smallest geographical area that is practical should be utilized. Every effort can then be made to coordinate the survey area with viewshed boundaries. Where specific constituent information cannot be gained for a single viewsh, some assumptions about the applicability of more generalized information may have to be made.

It is also important to obtain information about scenic quality outside of travelways and use area viewsheds. Areas outside viewsheds offer opportunities for recreation experiences reflected in the primitive and semi-primitive end of the ROS. These areas are particularly important because Forest Service activities may create changes in landscape character and scenic integrity and may also affect the quality of recreation settings and peoples' experiences in such settings.

Surveys of **residents in the local area** surrounding a National Forest, including towns and communities in relative proximity to the Forest, provide a means of obtaining information about another important segment of the constituency for scenery management. Of course, many local residents will likely visit the Forest either periodically or on a regular basis; and in so doing they may be 'captured' as part of visitor surveys designed to solicit information on peoples' direct experiences of the Forest's scenic and aesthetic attributes, perhaps with respect to particular viewsheds, travel corridors, and so on.

But many local area residents may value the Forest and its aesthetic qualities as a more or less defining characteristic of "sense of place" where they live and interact with others as members of a local area or community, regardless of whether and how often they actually visit the Forest. They may value such things, not so much with reference to themselves but how such qualities contribute to the setting for community life. Local area residents may belong to various groups to which the aesthetic attributes of the Forest are more or less important -- for example, scouting groups, bird watchers societies, etc. They may spend as much or more time interacting with one another as members of these groups as they do in actually visiting the Forest. Hence the Forest -- and, of particular concern here, its aesthetic characteristics -- is significant to people not merely as a source of immediate aesthetic experience -- a key focus of visitor surveys -- but as a central element contributing to a sense of community and social solidarity of people living in a particular place or natural setting.

Thus while the individual and his/her direct aesthetic experience is the primary frame of reference for visitor surveys, it is the community of people living in an area, and the significance of the aesthetic character of the Forest as a valued setting for such a community, that is the principal focus. Questions related to this aspect of community life might also be included in surveys which address other facets of the Forest in the life of the community as well, or perhaps as part of broader social surveys conducted by academic or research organizations.

This piggyback mode of obtaining information about the constituents of scenery management is even more necessary in obtaining information about the **broader regional, and national, constituency** for scenery management. These surveys may be of specific or general populations in a region or for the nation.

A **specific population survey** could, for example, include members of a variety of regional or national interest groups with particular interests in the management of National Forests -- e.g., environmental groups, industry associations, etc. -- to whom aesthetics and scenery management would be more or less important. These are the groups most likely to have information and opinions relevant to scenery management in a National Forest.

A **general population survey** on a regional or national level may be designed to solicit information about how people in general view the importance of aesthetic qualities and/or scenery management on National Forests, thus providing a sketch of the social climate and a context for the use of more specific information gathering exercises for individual National Forests, specific landscape units, viewsheds, and so on.

Obviously a particular National Forest could not conduct efforts of so large a scope, but the Forest could be a source of specific kinds of questions that could be 'plugged in' to a more comprehensive survey instrument constructed by, for example, the Forest Service (i.e. Eastside Assessment), academic institutions, or public opinion organizations. And even if not a source of input for such surveys, the latter represent one important source of information regarding the broader social climate within which scenery management is conducted (see item 5: Additional Information Sources).

2. *Visitor Observations*

Systematic observations by social scientists, landscape architects, and resource managers of what constituents *do* when they visit a National Forest -- including the extent to which scenic or other aesthetic aspects of the Forest are part of their activities; the kinds of landscapes people especially like; whether they generally observe or also walk across or into the scenic areas; and so on -- may yield a great deal of information useful for scenery management. Such observations can enhance understanding of the context of constituent expectations, values, desires, preferences, etc., for landscape character and scenic integrity. Information from such observations may also provide a basis for inferences about how constituents might respond to changes in any of the scenic or aesthetic variables relevant to scenery management.

Observations need to be made in a systematic fashion and recorded in a uniform manner -- standard response forms are effective here -- to ensure that a true picture of behavior is obtained. Direct observation by agency personnel, participant observation methods, and soliciting evaluations of photography in lieu of (or better, in conjunction with) visitor observations of particular sites, are all useful techniques for obtaining behavioral information. The key is to ensure that observations are systematic, unrestricted, and representative so that any conscious or unconscious biases of the observer are minimized.

Observations of visitor behavior are also useful in delineating travel routes and use areas such as corridors, areas, or features. Such observations shed

light on how visitors use a viewshed, or particular land area as reflected in such variables as mode of transportation, time of use, travel frequency and pattern, and so on. Observational data is frequently acquired in recreation studies, which may be broadened (as assumed in this chapter) to encompass aesthetic qualities and scenic characteristics of the Forest. Finally, understanding how visitors use a landscape is obviously an important asset to accurate estimates of the potential consequences of alternative scenic management activities.

3. *Constituent Interviews*

The conversation is perhaps the most direct verbal means of understanding the significance -- aesthetic or otherwise -- of the Forest to an individual. While the topic of discussion is guided, the form and manner of expression are free of artificial constraints imposed by scales and categories selected not by the individual but by the data gatherer. The respondent is free to express how he or she experiences the aesthetic aspects of the Forest as it relates to that individual as a person with a life history in which senses and tastes have evolved as part of a narrative of who one is. In this light, the extended conversation or interview should be an important component of constituent assessment for scenery management.

All of the topics discussed above under constituent surveys could be explored in greater depth and within a context of much greater significance to the respondent when interviewed as part of a constituent assessment. The primary instrument here is the **semistructured interview**, in which the bulk of the conversation is guided by a protocol of written questions that are asked aloud. Such questions would be developed with the input of members of the assessment team skilled in the various specialties as described earlier. The questions would encourage paragraph-length rather than word- or sentence-length responses, and respondents would be given leeway to elaborate or even bring up new topics they consider relevant. A social scientist trained in interpretive analysis should conduct the interview.

The obvious drawback of interview techniques is that they are time consuming and impractical for large groups or samples of respondents. While visitors may indeed be willing to participate in an extended interview, it is unrealistic to expect most to do so on site. Interviews are also impractical for broader regional and national constituencies. It is likely that the greatest potential for this technique as an element of a constituent assessment for scenery management lies at the level of residents in the local area surrounding the National Forest.

The selection of residents to be interviewed may proceed along a number of lines. As with surveys, a sample of the general area population could be taken, as could a sample of members from a variety of groups encompassing a wide spectrum of forest uses. A more selective strategy might involve identifying opinion leaders from not only these groups, but also to include civic and political officials, educators, religious leaders, etc., whose views are influential within the community or local area. A set of interview respondents reflecting a combination of the above strategies is another alternative.

Such interviews could of course obtain personal information on whether and how often respondents actually visit the Forest, on how they view its aesthetic and scenic attributes.

An important additional focus would center on the group activities in which respondents are involved and in which the Forest -- and in particular its aesthetic characteristics -- plays a more or less important role. For opinion leaders in particular, another key concern would be how they perceive whether social activities in the community that are centered around the aesthetic aspects of the Forest strengthen (or weaken) bonds among people as members of their community; as well as those factors (including management practices) which they see as affecting these bonds. This will begin to tap the shared sense of the Forest as one of the defining elements of ***sense of place*** in which people live and relate to one another, and the importance of the scenic and aesthetic characteristics of the Forest to that process.

4. ***Public Participation***

In many ways, public participation lies at the heart of effective management of a Forest's aesthetic and scenic resources. If the interdisciplinary team of managers, landscape architects, and resource and social scientists represents the core of specialized expertise for scenery management, it is the public for whom such services are being provided-- a public with diverse values and expectations regarding the role of the Forest in their individual and social lives.

In this light, the team of skilled specialists doesn't just need to 'hear back' from the public as to the acceptability of a particular program for scenic and aesthetic management once it is developed, but to have the public involved throughout the entire process. If mechanisms are established whereby the public may communicate with the interdisciplinary teams, this may facilitate an interactive process in which resource specialists and the public both teach and learn from each other. By contributing to the process which produced the outcomes, the public can be expected to take an active interest in the shape of those outcomes. In this way, an interactive learning-based process may lead to a synthesis of perspectives and knowledge in which both resource professions and the public develop a sense of mutual interest and understanding regarding the nature and significance of aesthetic and other dimensions of forest management.

There are a variety of modes of public participation through which such a shared understanding may be developed. Among these are workshops, meetings, response forms, and task forces in which both the public and resource professionals participate. Although, constituents participating in workshops and meetings are often self-selected and thus not representative of an overall constituent population, they frequently represent the most interested and involved local constituents. Extensive literature exists on methods and techniques of public participation; therefore, details are not included here. Several important references: Blahna & Yonts-Shepard (1989); Utton et al. (1976); and Heberlein (1976); may be found in the following subsection.

5. *Additional Information Sources*

Information obtained for reasons other than scenery management, and by organizations other than the Forest Service, may be useful not only in identifying characteristics of constituents; but also in providing a better understanding of those social activities and processes in which constituents are involved that may have important implications for landscape aesthetics and scenery management.

The first general kind of potential information sources are those which might provide ***information about the actual constituency of scenery management for a National Forest***. As we have seen, this constituency may be viewed at three levels: visitors to the Forest; local area/community residents; and the broader regional and national constituency. Two important sources for information about these segments of a Forest's scenery management constituency include:

a) Previous or ongoing natural resource-related studies or assessments, including -- but not limited to -- those concerned with recreation and/or scenery management. Statewide Comprehensive Outdoor Recreation Plan (SCORP) surveys exemplify one external source of landscape assessment information. Moreover, information from previous scenery assessments, such as that regarding concern levels, can be used. Thus, it is not always absolutely necessary to collect new constituent information for an analysis.

b) Studies or assessments of patterns of social activities or processes which, while not directly related to scenery management, either provide additional information on its importance to different constituency groups or may have significant implications for the demand for and the ability of the Forest to provide opportunities for aesthetic and scenic experiences.

The first of the above kinds of information is particularly relevant to assessments of visitor experiences and behaviors; while the second kind of information may be especially helpful in understanding experiences and behaviors relevant to scenery management of people as members of the local area/community and of broader regional and national population(s). With respect to this latter kind of information, studies such as the ones described below may be important information sources.

Social-geographic assessments: National, regional, or local area information on patterns of social behavior with direct implications for management of a National Forest, including the demand for and provision of scenic and aesthetic experiences. Interpretations of data provided by the U.S. Census may be particularly useful here (e.g., Case 1994) For example, with respect to migration patterns: Are people moving closer to or farther away from the Forest? Why? What are they like in terms of social characteristics? In what ways is the Forest significant to them --e.g., as a source of aesthetic experience? Also, what cultural characteristics are shared by people in certain places? How is the significance of scenic aspects of place interpreted by people with such cultural characteristics? Since Census and similar kinds of information (e.g., some community, county and multi-county regional surveys done for planning or economic development) are linked to geographic locality, such data may also be incorporated within with geographic information systems for scenery management and/or additional aspects of forest and ecosystem management. This highlights the aforementioned desirability of linking scenic management

information acquisition with that for more inclusive management practices.

Social dynamics: Other kinds of information-gathering frameworks attempt to account for the dynamics of regional, local area, or community social processes and their relationship to peoples' movements across and relationships to the landscape. The demand for, and consumption (and provision) of, opportunities for aesthetic experience on a National Forest are influenced by these processes, and more specifically through the interrelationships among economic, political, associational, and cultural aspects of these activities over different geographical areas (e.g., Lewis 1994). Sorting out these influences, and looking at how they work interdependently in a regional or local setting may provide important contextual information for scenery management.

At this point in time this latter approach is closer to a second general kind of information source for scenery management -- those which provide ***models for constructing constituency assessments***. These include overall frameworks, foci for investigation, methods, types of questions, and so on. Some of these sources may also provide information on (usually) broader regional or national constituencies for scenery management. Most of these studies or assessments will have been conducted in other geographical areas from that of a particular National Forest. But many will suggest potential frameworks for structuring a constituent assessment or parts thereof.

For example, a social assessment of the significance of forest management activities to residents of the Bitterroot Valley in western Montana (Bitterroot Social Research Institute 1994) provides an excellent example of an ethnographic regional assessment -- one in which the principal mode of data collection was via the use of semistructured interviews. In this case, 51 opinion leaders from seven communities in the Bitterroot Valley served as informants. Another exemplary study, conducted by Kempton et al. (1995), used semistructured interviews to solicit peoples' understandings of a wide range of environmental values, and then extracted quotations from interview transcripts in constructing a survey to investigate how widely distributed those individual understandings were. The scope of this work was national, and several items in the survey instrument focused explicitly on aesthetic experiences of forests and natural resources. Studies and assessments of this nature frequently provide valuable information on how to go about constructing an effective constituent assessment for scenery management. They also represent the kinds of efforts to which a National Forest might want to contribute questions relevant to aesthetics and scenery management as part of a broader information-gathering effort.

In summary, information about constituents for scenery management and about how to conduct constituent assessments represent two general kinds of information from sources other than a particular National Forest that may be important for scenery management. They are also important channels for linking the collection of information relevant to scenery management to broader natural resource focused perspectives (and their information-gathering activities) such as ecosystem management.

Sample Items for a Visitor Constituent Survey

Constituent surveys come in all shapes and sizes. They may involve any of the three levels of constituency described earlier. The following focuses on visitors to a National forest and provides a very brief sample of the kinds of questions that might be included within a visitor survey. Any such instrument should have as its goal the acquisition of infomration that will lead to a better understanding of visitors' aesthetic experiences of the Forest landscape, including, of course, its visual and scenic qualities. And as we shall see, surveys may incorporate items which solicit responses not only on the significance of aesthetic qualities to visitors, but also regarding their behaviors when visiting the Forest as well.

One useful type of survey question -- designed to yield information on the ***values***, ***desires***, and/or ***expectations*** of visitors with respect to the Forest **landscape character** involves presenting respondents with a set of photographs depicting scences of different landscape character, and asking them to respond to different questions about the landscapes depicted in those photographs.

For example, visitors could be presented with a row of photographs (a-f) depicting the following types of landscape character:

a) continuous canopied forest
b) forest having a mosaic of created openings
c) farm pastures and coniferous forest intermixed
d) single species coniferous forest
e) mixed forest of conifers and hardwoods
f) (as many options as needed for the area).

A variety of questions -- some with particular kinds of scales for expressing responses -- may then be posed to visitors. Several examples are given below.

---

1. Please indicate on the scale next to each photograph of the National Forest how much you like or dislike the landscapes depicted in the photograph . A very high rating on the scale (for example, 7) means that you like the landscape very much, while a very low rating (for example, 1) means that you strongly dislike that type of landscape. A middle rating means you don't feel much either way about that particular landscape.

```
 1     2     3     4     5     6     7
-------------------------------------------------------------  [Photograph]
 Dislike                Neutral                Like
very much                                     very much
```

One scale (without the words provided in the general example) should be placed next to each photograph.

This kind of question may be modified to solicit visitor responses regarding ***acceptable levels of quality*** of aesthetic and scenic attributes of the Forest. The 'degrees of quality' --which again would be represented in the set of photographs -- might be of the following kinds:

a) natural forests with no human activities present

b) natural-appearing forests with no human alterations evident
c) managed forests with human alterations evident, but subordinate to the natural or natural-appearing landscape character
d) managed forests with human alterations evident and somewhat dominating the natural or natural-appearing landscape character
e) managed forests with human alterations strongly evident and strongly dominating the natural or natural-appearing landscape character
f) managed forests with human alterations strongly evident and obliterating the natural or natural-appearing landscape character.

A typical survey question exemplifying the above might be phrased as:

---

2. Please indicate the degree to which you would accept the following kinds of scenic quality on the _____ National Forest?

1	2	3	4	5	6	7	
Not at all acceptable			Neutral			Very acceptable	[Photograph]

Again a general example of the evaluation scale would be presented, and one scale (without the words provided in the general example) would be placed next to each photograph.

It should also be noted that a less informative, but still useful, way of obtaining the above kind of information would entail having visitors simply identify which photographs they find accepatble from a scenic-aesthetic perspective and which they do not. Ths would involve a dichotomous (yes/no) response to the following question

---

2A. Which of the following levels of scenic quality would you be willing to accept when visiting _____ National Forest?

Another important type of question for a constituent survey, which again employs photographs to represent various aesthetic characteristcis of the Forest (or a lack thereof), is one in which respondents are asked to evaluate different scenic attributes -- as reflected in separate photographs -- not individually (that is, one-at-a-time), but in relation to one another. The most common of these kinds of questions solicits visitor ***preferences*** from among a set of possible landscape characters, scenic integrity levels, and so on. Such preferences are expressed by respondents' ranking the set of photographs in order from 'most preferred' to 'least preferred.' With minor alterations, these questions could be modified to more explicitly solicit, values, desires, expectations, or acceptable levels of quality. A typical question soliciting visitor preferences regarding, in this case, landscape character, might be phrased as follows:

3. A variety of landscape characters could be seen when visiting _____ National Forest, depending on the management practices used. Among the possibilities shown in the accompanying photographs, please rank the options in order from that you most prefer to that you least prefer.

Questions similar to the above could be asked about **scenic integrity**, **travel routes**, **use areas**, **viewsheds**, **landscape units**, or other local landscape management issues.

The kinds of survey questions suggested thus far have all involved the use of photographs as aids to representing particular aspects of aesthetic and/or scenery management to be evaluated by the visitor. Another kind of question involves presenting a thought or 'picture in words' and asks visitors to evaluate it. By using words, moreover, the questions need not refer only to descriptions or concepts of the landscape that are of direct concern to scenic management (e.g., scenic integrity, use areas, travel corridors, etc.). They also may refer to broader, more genral ways in which visitors experience the aesthetic qualities of the Forest -- sights, sounds, smells, and so on. These in turn will likely affect their preferences for landscape character, scenic integrity, etc.

For this type of survey item, a statement related to aesthetic experience of the Forest is provided, and visitors are asked to indicate the intensity with which they agree or disagree with that statement. In the example below, a five-point scale encompassing a range of responses from "strongly agree" to "strongly disagree" is provided.

4. Please indicate the extent to which you agree, disagree, or are undecided or uncertain with respect to the following statements.

a) Nature is inherently beautiful. When we see ugliness in the environment, it's usually caused by humans.

1	2	3	4	5
Strongly Disagree	Somewhat Disagree	Uncertain	Somewhat Agree	Strongly Agree

b) There are actual rythms of the Forest that are more in tune with who I am than the hectic pace of day-to-day life.

1	2	3	4	5
Strongly Disagree	Somewhat Disagree	Uncertain	Somewhat Agree	Strongly Agree

Each of the above items taps subtly different aspects of aesthetic experience which, while not expressed in the form of direct evaluations of scenic (or other aesthetic) attributes of the Forest, are expressions of motivations that may strongly influence visitor preferences for different emphases of scenery management. This also highlights the aforementioned value of constituent interviews as a source of possible items for inclusion within survey instruments. Question 4a, for example, is taken from Kempton et al. (1995:105), who included this statement from one of the respondents in the interview segment of their study as part of their survey to be undertaken with reference to a much broader set of respondents.

Another kind of survey item -- one which has been used extensively in previous studies, but in recent years has come under increasing criticism -- is that in which respondents are asked to provide ***monetary estimates of value*** for different scenic attributes of the Forest (for example, various kinds of landscape character, scenic integrity, and so on). In this scenario, visitors are asked to indicate how much more or less they would be willing to pay for the availability of, for example, different kinds of landscape character. The latter, as in earlier examples, could be depicted with the aid of a series of photographs.

Questions of this sort should be used with extreme caution as part of constituent surveys. Visitors often react with puzzlement or resentment to being asked to place dollar values on 'opportunities to expereience' different aspects of aesthetic or other amenity resources of the Forest. If such questions are used, the following format is probably less intrusive than direct 'willingness-to-pay' kinds of questions.

---

5. If you had a budget of $100 which you could allocate to managing the Forest to preserve different kinds of landscapes, how would you distribute that $100 to managing for the following kinds of landscapes?

a) _____
b) _____
c) _____
d) _____
e) _____
Total: $100

[*Include photographs of a -- e, representing different kinds of landscape character, scenic integrity, etc.*]

A final focus of visitor surveys to be discussed here is that of the ***behaviors*** of visitors to a Forest, and particularly with respect to their experiences of aesthetic and scenic aspects of the Forest. Answers to questions on behavior provide information about what visitors do, where they do it, and when they do it. This information will be useful in delineating travel corridors, use areas, and special places. Including a map in the survey will assist visitors in identifying where and when they engage in particular activities.

6a. On the map, please trace the route you usually follow when passing through _____ National Forest.

6b. On the map, please outline areas that you commonly use for recreation when visiting _____ National Forest.

6c. In what season(s) of the year do you see _____ National Forest? For what activities? On the map, please show us where you usually go. Please show us any areas that you consider to be "special places."

Two final points meriting attention pertain to the ordering of items in a visitor survey and to the usefulness of different kinds of responses and response scales for such a survey. With respect to the order of survey items: to keep responses accurate, visitors should first be asked about their unconstrained ***desires*** for scenic quality and recreation opportunities. To further narrow the choices, the survey can include additional information and then ask respondents for their ***preferences*** under certain constraints. For example, in the description of each option, production costs, commodity outputs, amenity outputs, or other pertinent information could be provided int the second round of questions. This additional information could then be taken into account as respondents express their desires and then preferences.

With respect to scales, there are a number of techniques for analyzing the results produced by visitors' rating or ranking items in expressing their values, desires, expectations, etc, for aesthetic and scenery management. When scales are used, the nature of the interval between points on the scale -- as reflected in, for example, ordinal, interval, and ratio scales -- determines the degree of precision that can be expected for responses using that scale.

Questions of the nature described above, when designed and applied appropriately, need not be utilized only in visitor surveys, but may also be included in questionnaires, on workshop response forms, or posed in workshops or at public meetings. As with virtually all aspects of constituent information discussed in this chapter, an interdisciplinary team in which the social scientist is a key member, and with whom the public interacts as an informed participant throughout the entire process, will enhance the likelihood of generating results that are accurate, understandable, and accepted by the constituents of aesthetic and scenery management.

187

View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help

Last Modified: October 6, 2009

NALDR Home | NAL Home | USDA | Agricultural Research Service | GPO Access | Web Policies and Important Links | Site Map
FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | USA.gov | White House

USDA United States Department of Agriculture
National Agricultural Library

DIGITAL REPOSITORY

Home | About NALDR | Search | Browse - Tables of Contents | NAL Catalog | Help | Contact Us

You are here: Home / Search / Search Results / Document Display

Search

Document Display

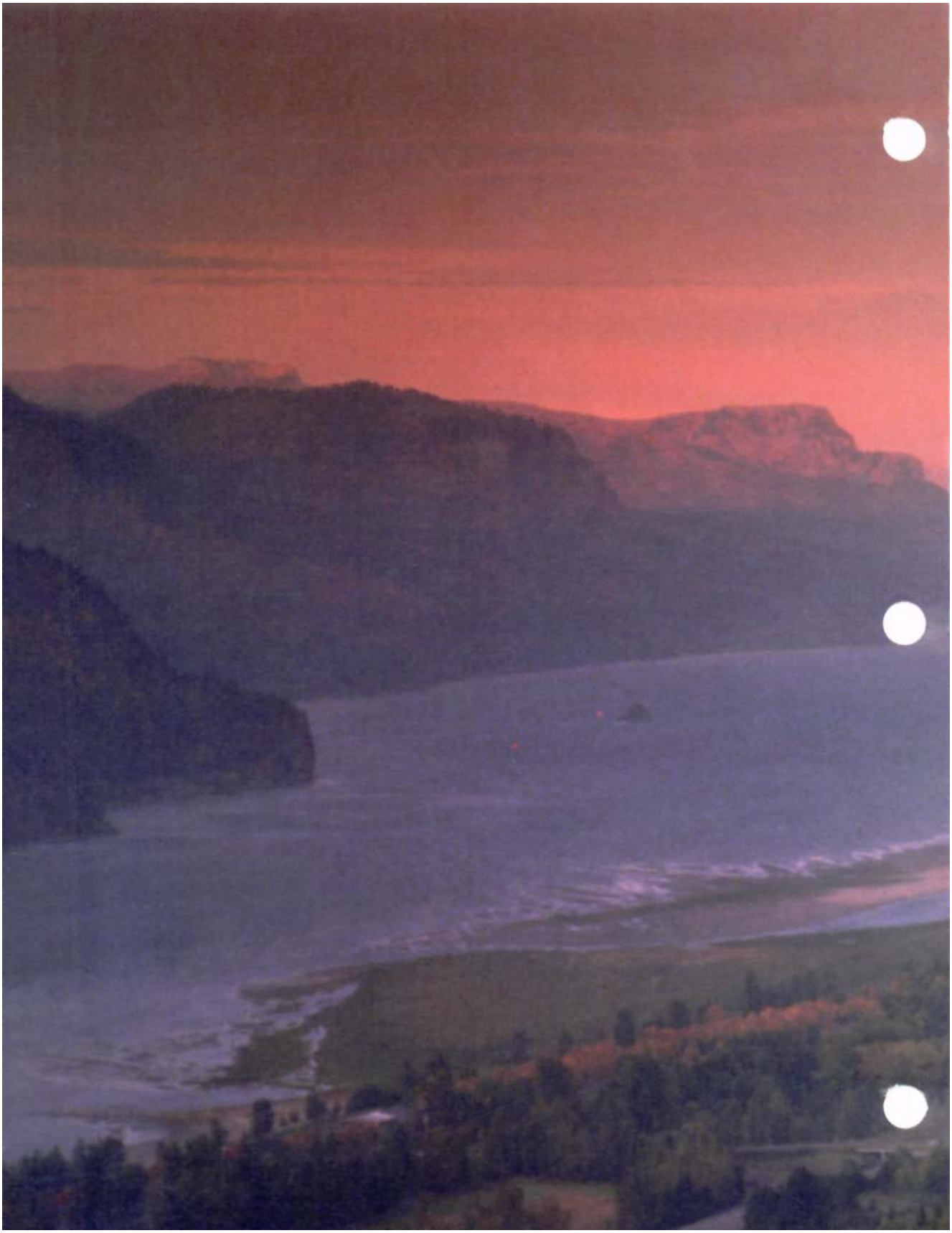
Author	
Title	Landscape aesthetics: a handbook for scenery management \ Chapter 4
Source	Agriculture handbook
Year	1995
Volume	no. 701
Pages	p. 4-1 to 4-15
DocID	ah701_chap4
Accession	ah701_chap4
Publisher	U.S. Dept. of Agriculture, Forest Service
Subject	Landscape assessment--United States--Handbooks, manuals, etc; Forest management--United States--Handbooks, manuals, etc; Landscape protection--United States--Handbooks, manuals, etc; Landscape architecture--Handbooks, manuals, etc
Notes	This handbook has been divided. To view all parts, select the Tables of Contents button from the top menu.
Link	http://naldr.nal.usda.gov/NALWeb/Agricola_Link.asp?Accession=ah701_chap4

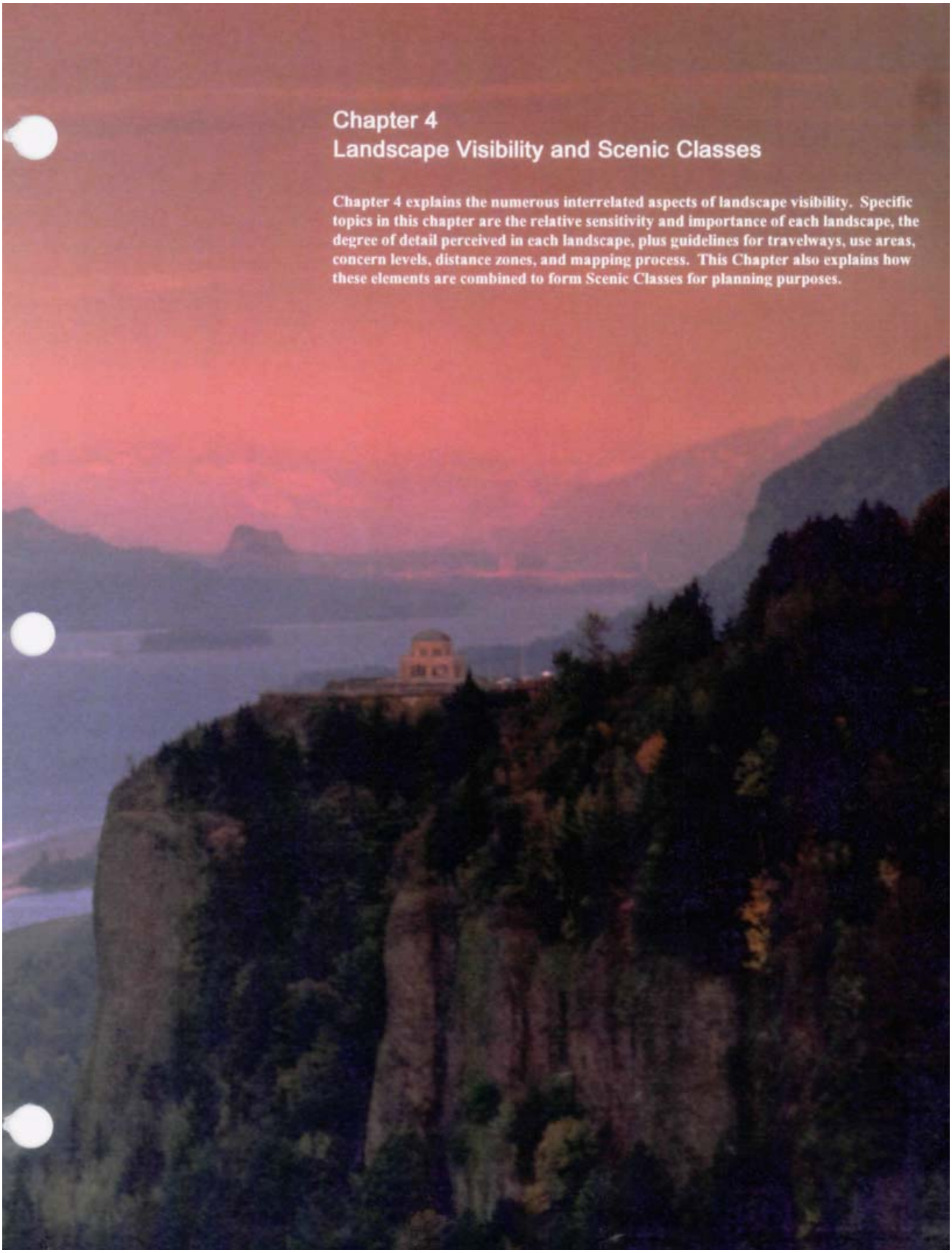
****Displaying below: All of 16 pages****

View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help





Chapter 4
Landscape Visibility and Scenic Classes

Chapter 4 explains the numerous interrelated aspects of landscape visibility. Specific topics in this chapter are the relative sensitivity and importance of each landscape, the degree of detail perceived in each landscape, plus guidelines for travelways, use areas, concern levels, distance zones, and mapping process. This Chapter also explains how these elements are combined to form Scenic Classes for planning purposes.

Landscape Visibility

Landscape visibility is a function of many essential, interconnected considerations, including:
(1) context of viewers,
(2) duration of view,
(3) degree of discernible detail,
(4) seasonal variations, and
(5) number of viewers.

Purpose

Landscape visibility addresses the relative importance and sensitivity of what is seen and perceived in the landscape.

Discussion

- People see virtually all national forest lands from somewhere at some time; therefore, all national forest landscapes have value as scenery.
- People are likely to view national forest lands from travelways and use areas.
- A large number of viewers with high concern for scenery, who view a landscape in detail for a long period of time, may substantially increase scenic importance of that landscape.
- Conversely, a small number of viewers with low concern for scenery, who view a landscape fleetingly, may substantially decrease scenic importance of that landscape.
- **Landscape visibility** is a function of many essential, interconnected considerations, including the following: (1) context of viewers, (2) duration of view, (3) degree of discernible detail, (4) seasonal variations, and (5) number of viewers.
- The degree of discernible detail is determined relative to the position or location of the observer.

- Examples of **landscape visibility** considerations are:

(1) Context of viewers.

(2) Duration of view.

(3) Degree of discernible detail.

(4) Seasonal variations.

(5) Number of viewers.

A large number of viewers with high concern for scenery.

A small number of viewers with low concern for scenery.

A small number of viewers with high concern for scenery.

Seen from nearby in closer detail.

4 - 3 - Landscape Visibility and Scenic Classes

- Sometimes only a small number of people view certain landscapes, but these people have high concern for scenic quality and high expectations of outstanding scenic beauty. When associated with **other related experience-opportunities** such as spiritual quests, introspection, and so on, these landscapes have even higher scenic importance and value. The importance of these landscapes is even greater if these other related experience-opportunities are available only occasionally.

- **Other natural resource values**, such as wilderness, wildlife, or old-growth, may create needs for natural-appearing landscapes and ultimately may raise the importance of maintaining high levels of scenic quality and landscape settings. These other natural resource values relate to viewer context.

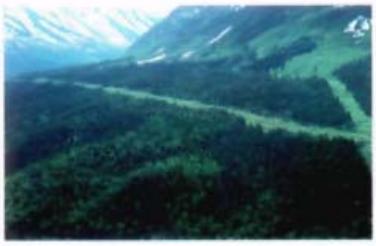
- Landscapes seen close-up are more visually sensitive than those seen in muted detail from greater distances.

- When people view landscape surfaces from angles of approximately 90 degrees, they generally subject those landscapes to more visual scrutiny than those viewed at relatively flat angles.

- When people see landscapes in the foreground of, or adjacent to, focal points, they subject that particular landscape to more visual scrutiny.

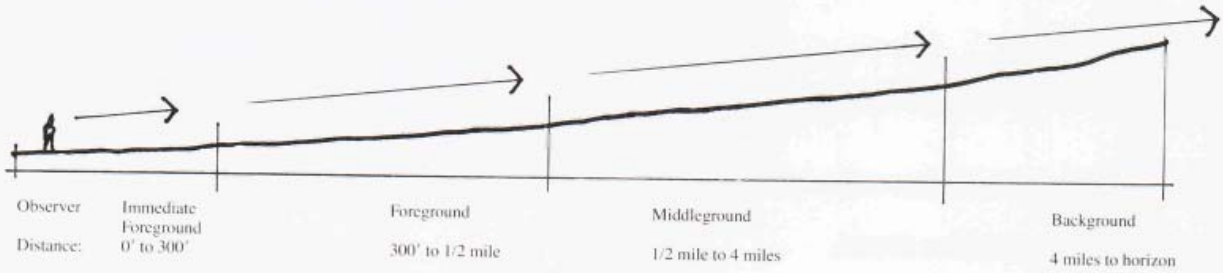
- When people view landscapes at middleground distances, they often view them more coherently and in better context with their surroundings than they do foreground landscapes.

- Many middleground national forest landscapes are evenly textured, and human activities that dominate natural form, line, or texture will contrast strongly. This may make some middleground landscapes more sensitive to visual scrutiny than some foreground landscapes.



- Scenic values increase as the terrain allows people to have longer views and as clear air allows them to observe crisp detail.

- Landscape viewing can be subdivided into distance zones for classification, analysis, and simplification of inventory data.



- Distance zone categorization can be strengthened by relating it to perceivable landscape details that people relate to universally, such as leaf texture, tree limb patterns, landform configuration, and so on.

- Seasonal differences may affect the sensitivity of landscape visibility evaluations. "Leaf-on" and "leaf-off" conditions in deciduous forests will modify landscape visibility. Likewise, persistent summer fog in some coastal locations will decrease landscape visibility. As a general rule, determine **landscape visibility** for the most sensitive situation.

- Vegetative screening, being dynamic, is important for short-term, detailed planning. Normally, vegetative screening is inappropriate to consider in long-term, broad-scale planning, such as forest planning.

Elements of Landscape Visibility

Portions of landscapes visible from travelways and use areas are important to constituents for their scenic quality, aesthetic values, and landscape merits.

Landscape Visibility consists of three elements:

1.) Travelways and Use Areas
2.) Concern Levels
3.) Distance Zones

Travelways and Use Areas

Existing travelways and use areas are identified and classified in order to determine which existing observer positions to use in the landscape visibility analysis. Inventory procedures for landscape visibility, including concern levels, and distance zones, are discussed in detail later in this chapter.

- People utilize **travelways and use areas** throughout the national forests. In addition, they utilize travelways and use areas located outside of national forest boundaries that provide views into national forests.

- **Travelways** represent linear concentrations of public-viewing, including freeways, highways, roads, railroads, trails, commercial flight paths, rivers, canals, and other waterways.

- **Use areas** are spots that receive concentrated public-viewing use. They include national forest visitor centers, vista points, trailheads, campgrounds, picnic grounds, swim beaches, marinas, resorts, ski areas, and other recreation sites. Use areas also include urban and suburban areas, towns and villages, subdivisions, parks and golf courses on private lands, or other public lands within or adjacent to national forests.

- Portions of landscapes visible from travelways and use areas are important to constituents for their scenic quality, aesthetic values, and landscape merits.

- Portions of landscapes seldom seen from travelways and use areas are also important to constituents for their aesthetic and scenic values. They may be of even greater importance as special recreation settings and as opportunities for people seeking solitude.

On-the-ground view of Mt. Hood shows careful scenery management.

- Travelways that lead to important scenic features, residential areas, resorts, recreation areas, unique natural phenomena, wilderness trailheads, national parks, State and county parks, and other areas attract a higher percentage of users having high concern for scenic quality, thus increasing the importance of those travelways.

Aerial view of Mt. Hood reveals an overview with a different scenic effect.

- The public is becoming more concerned about aerial views of National Forest System lands from commercial and private aircraft. Foregrounds and middlegrounds of travelways and use areas have historically been protected. Outside of these viewsheds, the General Forest Zone has often been neglected from a scenery management standpoint.

Concern Levels

Landscape are viewed to varying degrees from different locations and subsequently differ in their importance. To assist scenic inventory and analysis, this importance can be ranked by concern levels.

Concern levels are a measure of the degree of public importance placed on landscapes viewed from travelways and use areas. Divide concern levels into three categories: levels 1, 2, and 3. At the inventory stage, the type of area and its level of use is an adequate indicator of the level of interest that people are likely to have in the surrounding landscape. Base concern levels on past experience and existing planning data. Supplement this data as new constituent information becomes available.

The following matrix is a guide for determining concern levels. It can be tailored to fit local conditions.

HIERARCHY OF CONCERN LEVELS

	Interest in Scenery		
	High	Moderate	Low
Primary Travelway/Use Area High Use	1	2	2
Primary Travelway/Use Area Moderate Use	1	2	2
Primary Travelway/Use Area Low Use	1	2	3
Secondary Travelway/Use Area High Use	1	2	2
Secondary Travelway/Use Area Moderate Use	1	2	3
Secondary Travelway/Use Area Low Use	1	2	3

Primary Travelways and Use Areas

National and/or regionally important locations largely associated with recreation and tourism use. Examples include:

- Primary roads, trails, areas used by motorists, hikers, bicyclists, and equestrians within national forests, national parks, national recreation areas, wildernesses, wild and scenic rivers, scenic highways, Forest Service scenic byways, and other special designation areas.
- All public transportation systems of national importance, including interstate highways, waterways, and railways.
- Primary areas of fishing, swimming, boating, and other active or passive water recreation.
- Primary recreation areas (vista points, campgrounds, picnic grounds, beaches, visitor centers, trail camps, and others).

- Primary resorts and winter sports areas.
- Highly sensitive communities.
- Primary summer home tracts.
- Primary geological areas.
- Designated scenic areas.
- Primary botanical or forest demonstration areas.
- Primary historical sites and areas.
- Areas of primary importance for wildlife observation.
- Special places of local or regional importance.
- Areas of primitive, semi-primitive non-motorized and semi-primitive motorized recreation opportunities, identified as important by constituents.

Secondary Travelways and Use Areas

Locally important locations associated with all types of use including recreation and tourism.

- All Federal, State, and primary county or forest system roads and highways not listed under primary areas.
- Communities not listed primary areas.
- Other primary uses not included under primary areas.
- Areas of semi-primitive non-motorized and semi-primitive motorized recreation opportunities identified as important by constituents and not listed under primary areas
- Secondary county and forest system roads that fit the above definition.
- Secondary trail systems.
- All roads leading directly to secondary areas of interest and recreation composites.
- Secondary recreation areas (vista points, campgrounds, picnic grounds, etc.).
- Secondary uses of fishing, swimming, boating, and other active or passive recreation o or adjacent to water bodies, such as streams or lakes.
- Secondary geological areas.
- Secondary botanical or forest demonstration areas.
- Secondary summer home tracts.
- Secondary historic sites.

- Areas of secondary importance for wildlife observation.

Visibility analysis is a continuous process. The scenery analysis may need to be refined as new information is received from constituents, as new travelways and use areas are developed, or as public use patterns and travel patterns change.

Process

The first step in mapping is to determine which travelways and use areas will be inventoried for landscape visibility. The selection will vary for broad-scale or project level inventory.

The second step is to map distance zones for these travelways and use areas.

The third step is to assign a concern level to the distance zones.

The order of these steps may be altered to accommodate local needs.

For broad-scale inventory all of the national forest is inventoried and may be categorized as seen frequently (seen areas) or infrequently (seldom-seen) by the typical forest visitor.

Use topographic screening to map seen areas for long-term, broad-scale planning, such as forest planning.

Use both topographic and vegetative screening for project planning. Use the most sensitive situation for the landscape visibility inventory, for example, any "leaf-off" condition, clear air period, or season of high color contrast.

On flat land, for foregrounds, map a corridor extending a minimum of 1,320 feet (1/4 mile) from each side of a travelway or from a use area. The area beyond this foreground zone is mapped as middleground for topographic features that protrude above the surrounding terrain. For scenic quality to be managed in an absolutely flat landscape, the seldom-seen middleground is normally mapped as middleground one concern level lower than the travelway in question.

For project-level planning, map seen areas from numerous observer positions. Normally, these observer positions are determined from existing travelways and use areas, but may also include planned travelways and use areas.

There are two methods of seen area mapping: manual and computerized.

Manual Seen Area Mapping

Utilize **manual seen area mapping** where computerized systems or useable digital terrain data are not available. Manual methods can be cumbersome and time-consuming, and lack the accuracy of computerized methods.

A coarse map of seen areas can be developed by driving, walking, or boating the selected travelways with a topographic base map or, preferably, an orthophoto quadrangle. Similarly, seen areas of separate viewpoints and occupancy sites can be mapped on-the-ground. Viewshed limits can be estimated and delineated on the base map.

Computerized Seen Area Mapping

Computer software developers and landscape architects have worked together to develop computerized seen area mapping techniques. Software programs now exist that accurately develop seen area maps based on topographic screening. There may be a further proliferation of these programs in future years. Most comprehensive GIS software packages include similar visibility analysis programs.

In order to utilize a **computerized seen area mapping** process, suitable digital terrain data must be available. The relative degree of accuracy for seen area maps produced by computer will be determined by the degree of detail in, and accuracy of, the digital terrain data.

Distance Zones

Generally three distance zones for forest planning and four distance zones are needed for project level planning. The fourth zone is **immediate foreground**. Because of its limited depth, immediate foreground should never be used as a separate zone in forest planning but rather combined with the balance of the foreground area. All four distance zones are defined and described in the following section.

Immediate foreground: 0 to 300 feet

At an immediate foreground distance, people can distinguish individual leaves, flowers, twigs, bark texture, small animals (chipmunks and songbirds), and can notice movement of leaves and grasses in light winds.

They can also receive other sensory messages at an immediate foreground distance, such as sounds of small animals, birdcalls, wind whispering through leaves and grasses, and pungent odors or sweet smells. Texture is made up of individual leaves, needle clusters, bark patterns, and twig patterns. Details are important.

Foreground: 0 - ½ mile

At a foreground distance, people can distinguish small boughs of leaf clusters, tree trunks and large branches, individual shrubs, clumps of wildflowers, medium-sized animals (squirrels and rabbits), and medium-to-large birds (hawks, geese, and ducks). At this distance, people can also distinguish movement of tree boughs and treetops in moderate winds.

At a foreground distance, people receive other sensory messages, such as sounds of medium-sized animals, birdcalls, a moderate wind whistling through branches, and smells of the forest. Texture is largely made up of boughs, large branches, and visible portions of trunks. Individual forms are dominant.

Middleground: ½ to 4 miles

Middleground is usually the predominant distance zone at which national forest landscapes are seen, except for regions of flat lands or tall, dense vegetation. At this distance, people can distinguish individual treeforms, large boulders, flower fields, small openings in the forest, and small rock outcrops. Treeforms typically stand out vividly in silhouetted situations. Form, texture, and color remain dominant, and pattern is important. Texture is often made up of repetitive treeforms.

In steeper topography, a middleground landscape perspective is similar to an aerial one. Because the viewer is able to see human activities from this perspective in context with the overall landscape, a **middleground** landscape having steep topography is often the most critical of all distance zones for scenery management.

Background: 4 miles to horizon

At a background distance, people can distinguish groves or stands of trees, large openings in the forest, and large rock outcrops. Texture has disappeared and color has flattened, but large patterns of vegetation or rock are still distinguishable, and landform ridgelines and horizon lines are the dominant visual characteristic. As a result, the landscape has been simplified. The role of background in providing scenic quality lies mainly in its capacity as

a contrastingly softened backdrop, a pleasantly distant vista, or a strikingly beautiful focal point.

Distance zones are mapped for travelways and use areas.

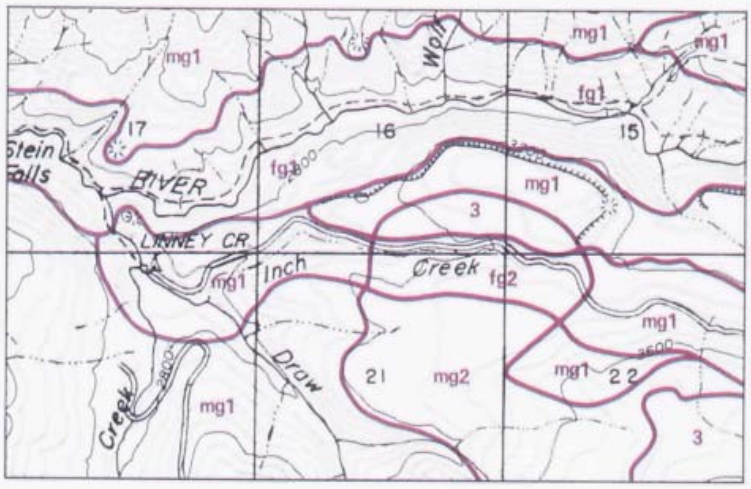
Areas most likely seen by the occasional viewer wandering through the forest may be mapped as foreground if not also seen as middleground from another viewpoint with a higher concern level.

Distance zone and concern level combinations are determined through the use of the matrix below, and illustrated in the map at the bottom of this page.

Figure 4 - 1

	fg1	mg1	bg1	fg2	mg2	bg2	fg3	mg3	bg3
bg3	fg1	mg1	bg1	fg2	mg2	bg2	fg3	mg3	bg3
mg3	fg1	mg1	bg1	fg2	mg2	mg3	fg3	mg3	
fg3	fg1	mg1	bg1	fg2	mg2	fg3	fg3		
bg2	fg1	mg1	bg1	fg2	mg2	bg2			
mg2	fg1	mg1	mg2	fg2	mg2				
fg2	fg1	mg1	fg2	fg2					
bg1	fg1	mg1	bg1						
mg1	fg1	mg1							
fg1	fg1								

The most restrictive concern level can be easily determined by use of this matrix. If an area has been identified as both middlegound-concern level 2 (mg2) and foreground-concern level2 (fg2), these can be compared-- mg2 in the left column versus fg2 in the top row to determine that fg2 is usually the proper concern level for that area. In some cases, a middleground landscape may be more sensitive to visual scrutiny than a foreground.



4 - 13 - Landscape Visibility and Scenic Classes

Scenic Classes

Scenic classes measure the relative importance, or value, of discrete landscape areas having similar characteristics of scenic attractiveness and landscape visibility.

Purpose

All national forest landscapes have **value** as scenery—some more than others. **Scenic classes** are used as a measure of the value of scenery in a national forest.

Scenic classes measure the relative importance, or value, of discrete landscape areas having similar characteristics of scenic attractiveness and landscape visibility. Scenic classes are used during forest planning to compare the **value of scenery** with the **value of other resources**, such as timber, wildlife, old-growth, or minerals. The higher the scenic class, the more important it is to maintain the highest scenic value.

Discussion

The components of Scenic Classes are **Scenic Attractiveness** and **Landscape Visibility.** As discussed in Chapter 1, Scenic Attractiveness measures the scenic importance of a landscape based on human perceptions of the intrinsic beauty of landform, water characteristics, vegetation pattern, and cultural land use. It is the primary indicator of the scenic beauty of a forest or wildland landscape and of the positive responses scenic beauty evokes in humans. Scenic Attractiveness is divided into three classes: A—distinctive, B—typical or common, and C—indistinctive. As discussed earlier in this chapter. Landscape Visibility uses three distance zones (foreground, middleground, and background), abbreviated "fg," "mg," and "bg", and three concern levels for scenery (1—high, 2—moderate, and 3—low).

- **Scenic classes** are determined and mapped by combining the three classes of scenic attractiveness with the distance zones and concern levels of landscape visibility. (See Table 4 - 1 and Figure 4 - 2.) They are a product of the inventory process that is used for analysis and planning purposes.
- As discussed earlier, scenic classes are used during the forest planning process to compare the value of scenery to other resource values. Generally Scenic Classes 1-2 have high public value, Classes 3-5 have moderate value, and Classes 6 and 7 have low value

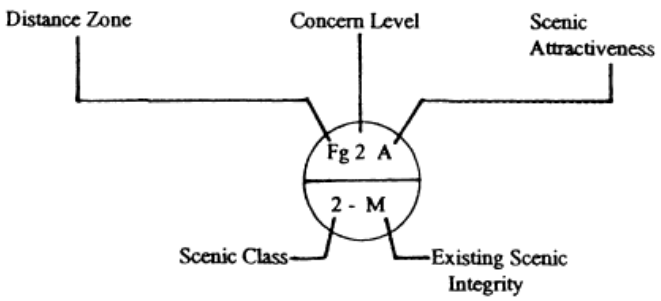
Table 4 - 1

SCENIC CLASSES

Distance Zones & Concern Levels

		Fg1	Mg1	Bg1	Fg2	Mg2	Bg2	Fg3	Mg3	Bg3
Scenic	A	1	1	1	2	2	2	2	3	3
Attractiveness	B	1	2	2	2	3	4	3	5	5
	C	1	2	3	2	4	5	5	6	7

Figure 4 - 2



Existing scenic integrity is **not** used to determine scenic classes. Although existing scenic integrity does affect the **current value of scenery**, heavily altered landscapes can be reclaimed through future management activities and natural regeneration of vegetation. Because of this, it is suggested that existing scenic integrity be included in the icon for scenic classes.

Scenic Integrity Levels are assigned to each scenic class through the forest planning process. The assignment of the integrity levels is dependent on the theme (desired condition) of each alternative. This is discussed in more detail in Chapter 5.

View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help

Last Modified: October 6, 2009

NALDR Home | NAL Home | USDA | Agricultural Research Service | GPO Access | Web Policies and Important Links | Site Map
FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | USA.gov | White House

USDA United States Department of Agriculture
National Agricultural Library

DIGITAL REPOSITORY

Home | About NALDR | Search | Browse - Tables of Contents | NAL Catalog | Help | Contact Us

You are here: Home / Search / Search Results / Document Display

Search

Document Display

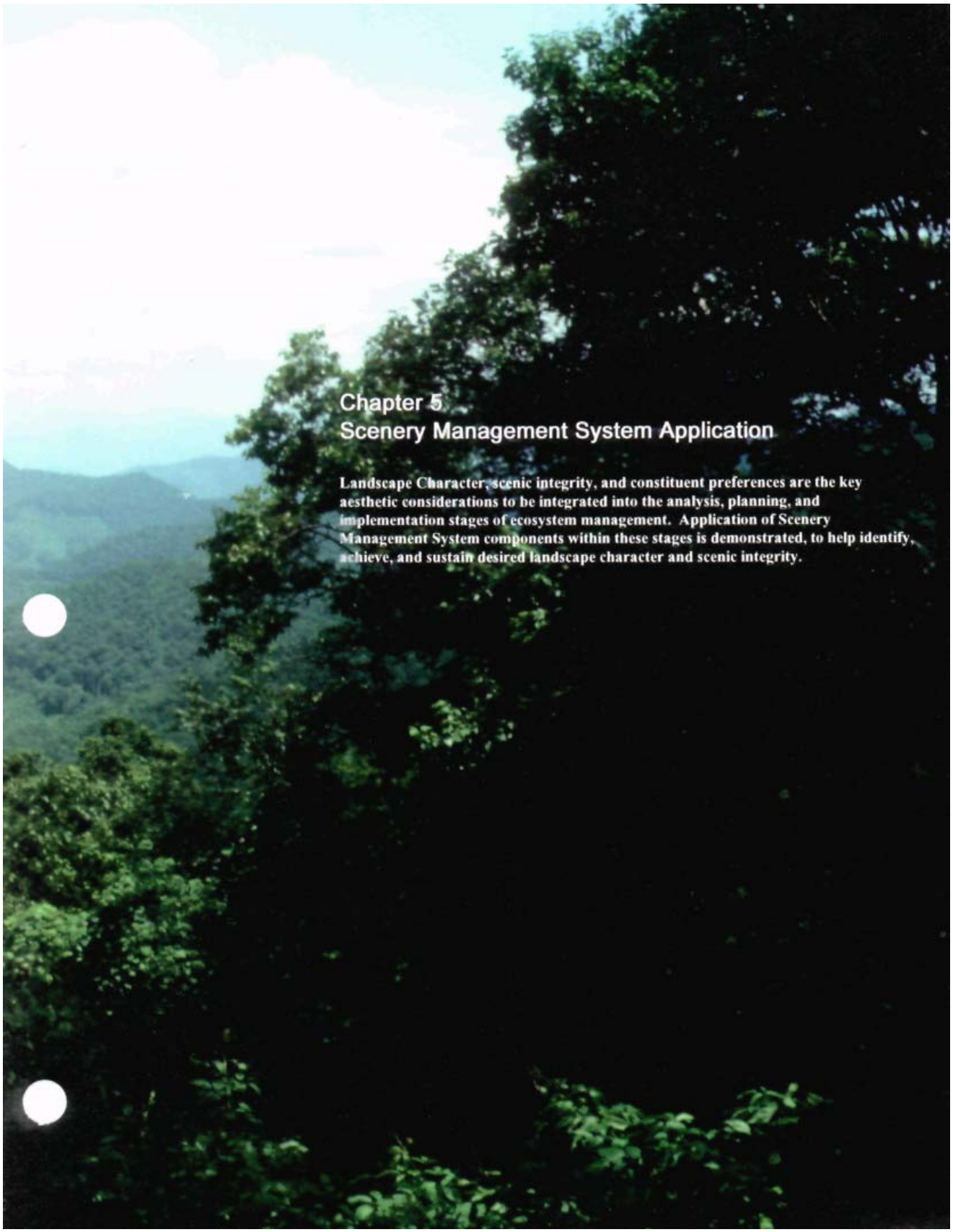
Author	
Title	Landscape aesthetics: a handbook for scenery management \ Chapter 5
Source	Agriculture handbook
Year	1995
Volume	no. 701
Pages	p. 5-1 to 5-11
DocID	ah701_chap5
Accession	ah701_chap5
Publisher	U.S. Dept. of Agriculture, Forest Service
Subject	Landscape assessment--United States--Handbooks, manuals, etc; Forest management--United States--Handbooks, manuals, etc; Landscape protection--United States--Handbooks, manuals, etc; Landscape architecture--Handbooks, manuals, etc
Notes	This handbook has been divided. To view all parts, select the Tables of Contents button from the top menu.
Link	http://naldr.nal.usda.gov/NALWeb/Agricola_Link.asp?Accession=ah701_chap5

****Displaying below: All of 12 pages****

View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help



Chapter 5
Scenery Management System Application

Landscape Character, scenic integrity, and constituent preferences are the key aesthetic considerations to be integrated into the analysis, planning, and implementation stages of ecosystem management. Application of Scenery Management System components within these stages is demonstrated, to help identify, achieve, and sustain desired landscape character and scenic integrity.

Purpose

This Chapter demonstrates the integration of the Scenery Management System with ecological concepts and resource planning processes.

Discussion

Basic understanding of landscape ecology establishes the environmental context for aesthetics and scenery. Ecological systems contain three everchanging and interrelated dimensions: physical, biological and social. All three relate to the aesthetics of ecosystems.

Land and resource planning, along with the resulting administrative actions on the land, determine how ecosystems and their aesthetics are evaluated and managed. While these processes vary greatly, their form is controlled by public laws such as the National Environmental Policy Act (NEPA) or the National Forest Management Act (NFMA).

The application of the Scenery Management System to the forest planning process is identified below.

Forest Planning Process	Scenery Management System
Inventory	Ecological Unit Description - GIS Map Existing Land Uses Landscape Character Description
Inventory	Landscape Visibility (Distance Zones, Concern Levels) - GIS Map Existing Scenic Integrity (Conditions) - GIS Map Scenic Attractiveness - GIS Map Scenic Classes - GIS Map
Analysis and Planning	Alternative Development and Evaluation • Proposed Landscape Character Description • Proposed Scenic Integrity Levels Alternative Selection • Landscape Character Goals • Scenic Integrity Objectives - GIS Map
Implementation	Standards and Guidelines for S.I. Objectives Mitigation Implementation Techniques
Monitoring and Evaluation	Monitor accomplishment of Landscape Character goals and scenic integrity objectives

Ecosystems: The Environmental Context for Aesthetics

An ecosystem is a place where life and environment interact. They function and evolve through time, and include people, either directly or indirectly. Ecosystems can be described within a wide range of scales that potentially link global issues to site specific conditions, allowing considerations at multiple ecosystem scales as necessary.

Ecosystem management broadens understandings of environments by its holistic consideration of the physical, biological and social dimensions of ecosystems. The social dimension can be further subdivided for analysis purposes into cultural, community, economics, and politics. Interactions among the physical, biological, and social dimensions, with their many parts, patterns, and processes, result in their collective function as integrated systems. Within each dimension, key ecosystem elements can be measured, tracked, and managed by use of environmental indicators which help achieve desired conditions for the landscape.

The social dimension has many aspects, but one of importance for public lands is recreation. Ecosystems as recreational settings greatly affect the quality and effectiveness of the recreation experience. A key attribute of recreation settings is the quality of aesthetics. Direct contact with natural appearing settings and attractive cultural features that offer a sense diversity, order, and wholeness are highly valued for their ability to stimulate the senses and nurture the mind.

The following planning discussion will include ecosystem inventory and analysis, alternative development and evaluation, alternative selection, and monitoring the results. Landscape character goals and scenic integrity objectives should normally be within the limits of a sustainable ecosystem; but, not all sustainable conditions will achieve desired levels of aesthetics. It will be important to examine the full range of sustainable conditions, use the landscape design arts to mitigate negative effects, and shape and blend management activities with the natural patterns of the land. As people gain more knowledge and appreciation of how ecosystems function and their role in them, there may be greater acceptance of certain conditions such as down woody debris, etc..

Ecosystem Inventory and Analysis

The physical, biological, and social components of ecosystems are inventoried and analyzed. This information provides an understanding of the existing condition of the ecosystem and its inherent potential.

When ecosystems are analyzed, a common structure or process for organizing information about their parts, patterns and processes is useful. Since no single nationally recognized ecosystem analysis structure exists, use or adaptation of existing regional or local structures is recommended. A basic ecosystem analysis approach is presented in this section along with a discussion of the integration of scenery components. Application of the components may vary by scope, complexity, and sensitivity of the analysis undertaken.

Interdisciplinary Collaborative Learning

Identify and discuss issues with the public. Through dialogue with an interdisciplinary team, form questions or scenarios about the issues. Discuss ecosystem components, relationships, and processes. Preliminary information about the natural range of key ecosystem elements is also discussed.

A complete scenery inventory, as described in previous chapters of this Handbook, would make the following information available for discussion with the interdisciplinary team:

Constituent Input

- Scenery related attitudes, beliefs, meaning, associations, and values for landscapes expressed in terms of expectations and preferences

Landscape Character

- existing landscape character that people relate to as a significant element in "sense of place", including positive cultural features

- landscape character evolution, trends and possibilities

Scenic Attractiveness
- A - Distinctive, B - Common, C - Indistinctive

Existing Scenic Integrity
- Very High, High, Moderate, Low, and Very Low

Place Attachment
- location, meaning, and importance of specific areas largely derived from constituent input

Concern Levels
- 1 - High, 2 - Moderate, 3 - Low, representing degree of scenery importance for specific viewing locations such as communities, recreation areas, roads, and trails

Distance Zones
- Immediate Foreground, Foreground, Middleground, and Background for locations assigned Concern Levels

Scenic Classes
- Represents relative landscape value by combining Distance Zone, Concern Level, and Scenic Attractiveness. The Scenic Class is supplemented with Existing Scenic Integrity information, and documented in map form with scenic class icon descriptors.

An analysis of ecosystem components, structures, processes, and functions provides a working understanding of the ecosystem necessary to test its ability to retain, achieve, and sustain desired conditions. Ecosystem analysis generally includes the following exercises:

- Identification of relationships and interactions among ecosystem elements, including their influences relative to location in the ecosystem

- Description of trends and ranges of variability for ecosystem elements

- Determination of sustainability for key ecosystem elements and their combinations

Landscape Aesthetics factors of key importance to ecosystem analyses are:

- Landscape Character evolution, its dynamics, potential options and variations, both biophysical and social (landscape meanings, values, preferences, thresholds, and benefits)

- Landscape Value (concern level, scenic attractiveness, distance zone, scenic class, plus existing scenic integrity)

- Potential for improving Scenic Integrity and Scenic Attractiveness

Alternative Development and Evaluation

This stage of planning establishes alternatives that contribute to the resolution of key issues. Development of alternative ways to achieve desired conditions generally occurs in the following manner:

- Relationships of key ecosystem components and processes identified in the ecosystem analysis phase are further tested for their compatibility within a particular scenario or alternative.
- Combinations of these ecosystem components and processes that achieve some desirable conditions are then expanded to comprehensively describe complete, functional ecosystems that can achieve and sustain more desired conditions organized around a specific theme or scenario. Such "preliminary alternatives" or opportunities include management area descriptions. The desired Landscape Character and Scenic Integrity are included within the management area desired condition and standards and guidelines. Scenic classes and constituent information about landscape values are used here to determine the extent, quality, and location of desired scenery conditions. Generally a Very High or High Scenic Integrity level is assigned to Wilderness and other congressionally designated areas. Other management areas will be assigned a scenic integrity level that is consistent with the desired condition.
- Adjustments to alternatives are made to achieve desired values and benefits, while sustaining ecosystems. This develops into a formal "Alternative" way to achieve desired conditions.

Desired Landscape Character

Selection of a desired landscape character for an alternative must take into consideration ecosystem dynamics and trends. Due to the wide variety of ecosystems and possible alternative themes, there are many possibilities for changing landscape character.. These possibilities should be directed towards a more complete, attractive, and sustainable expression of landscape character.

Changes from existing landscape character should normally be within historic ranges, for which ecosystem sustainability has been demonstrated. The following examples describe possibilities for desired landscape character and long range scenic integrity objectives.

- "Naturally Evolving" landscape character expressing the natural evolution of biophysical features and processes, with very limited human intervention
- "Natural Appearing" landscape character that expresses predominantly natural evolution, but also human intervention including cultural features and processes
- "Cultural" landscape character expressing built structures and landscape features that display the dominant attitudes and beliefs of specific human cultures
- "Pastoral" landscape character expressing dominant human created pastures, "meadows", and associated structures, reflecting valued historic land uses and lifestyles
- "Agricultural" landscape character expressing dominant human agricultural land uses producing food crops and domestic products
- "Historic" landscape character expressing valued historic features that represent events and period of human activity in the landscape

- "Urban" landscape character expressing concentrations of human activity, primarily in the form of commercial, cultural, education, residential, transportation structures, and supporting infrastructure

For most National Forest System lands, decision makers will usually select some form of Natural, or Natural Appearing landscape character, because the majority of these lands have purposely been conserved in such conditions as a function of the National Forest character and mission. The cultural themes may be most useful to conserve expressions of valued human associations with landscapes of mixed ownership. Generally these areas are within a context of surrounding lands that express natural or predominantly natural appearing landscape character. The attractiveness of these landscapes may be highly dependent on each other particularly when the contrast between them is great.

Variations within Landscape Character

Within each general landscape character, there are infinite possibilities for specific landscape character variations, such as changes in vegetative species mixtures or their patterns, that can also create significant departures from existing landscape character. Landscape character variations are often expressed in terms of creating, or maintaining by design, specific plant-successional stages, large tree character, diversity of age classes, or natural-appearing open spaces.

Variations must be consciously designed and must be an integral part of any desired future condition of an ecosystem The economic and technological feasibility of the transition from existing landscape character to a desired landscape character must also be considered. Interdisciplinary teams must determine whether sufficient budgets and technology exist to achieve and maintain a desired landscape character.

Variations for a **natural-appearing landscape character** could include the three combinations shown below. Ideally, a highway corridor would contain several different variations of each landscape character present.

Emphasis on maintaining character of large trees with distinctive bark texture, having adequate replacement trees of different ages to maintain this character over time.

Emphasis on smaller tree character with replacement trees of adequate stocking levels to maintain rapid growth. The saplings and poles in this photo need to be thinned to meet the objective.

Emphasis on increasing diversity of vegetation species with openings emphasizing natural meadows.

- When resource managers move plant communities from one successional stage to another, variations may also include a change in species mixture as shown in the two photographs below. In *National Forest Landscape Management, Volume 2, Chapter 5—Timber,* landscape architects, siviculturists, and other professionals illustrate how an existing plant community of lodgepole pine and larch can be moved to climax subalpine fir, Engleman spruce, Douglas-fir, larch, and lodgepole pine. The landscape character variation on the right has considerably more scenic quality than the one on the left.

- In the first scene below, left, the trees could be thinned to move the stand toward a park-like setting of large trees throughout the highway corridor. However, the new stand of thinned trees would lack desirable horizontal diversity and would lack replacement trees as described under concepts for ponderosa pine in *Chapter 5—Timber.* The two scenes, left and middle, on the bottom of the previous page illustrate two of these variations from the Timber Chapter. The scene below, right, on this page illustrates still another variation. The number of large trees has been reduced in density to 12-to-15 trees per acre, allowing younger trees to regenerate and grow. Still another variation would have the number of large trees reduced to 4-to-5 trees per acre, allowing saplings to grow to black bark poles. These same concepts could be applied over time to the pole stand on the left.

Alternative Evaluation

Alternative evaluation includes a description of predicted changes to key ecosystem elements. These predictions and outcomes are developed in relation to key issues and desired conditions, and is then communicated to decision makers and constituents.

Evaluation of an alternative generally includes the following information:

- Direct, indirect, and cumulative effects.
- Magnitude, duration, and significance of effects.
- Mitigation measures for reducing unavoidable effects
- Irreversible or irretrievable commitment of resources

Scenery effects are focussed upon changes determined by the following indicators:

Landscape Character changes:

- Determine if existing Landscape Character will be sustained or changed.
- Determine if changes to Landscape Character exceed the limits of its historic range, as well as what influences that may have upon its sustainability.
- Determine if opportunities for enhancement of existing Landscape Character and Scenic Attractiveness were achieved, and to what degree they were achieved.

Scenic Integrity effects:

- Determine if areas of Very High and High Existing scenic integrity would be significantly or irreversibly altered.
- Determine if areas of high Scenic Class are altered.
- Determine if opportunities for restoration of Scenic Integrity were achieved, and to what degree they were achieved.
- Determine changes relative to cumulative effects thresholds for scenery.

Scenic Benefits:

- Conservation of Scenic Heritage
- Quality of Life
- Identity and Self Image of Communities and Individuals
- Recreation and Tourism settings

Alternative Selection

This stage of planning focuses upon the development and formalization of an alternative "selected" as the desired condition for management of the ecosystem.

The "desired condition" of a national forest is described in a forest plan and an accompanying environmental impact statement. More specific project plans apply similar planning and documentation processes. Desired condition statements for both types of plans are the result of preceding planning stages. Landscape character information, scenic classes, and constituent preferences all help determine desired condition for scenic quality. For scenery management, desired condition has two components: landscape character goals and scenic integrity objectives.

Landscape Character goals and Scenic Integrity objectives are described for each forest plan management area. Scenic integrity objectives are defined by minimally acceptable levels and the direct intent to achieve the highest scenic integrity possible.

Achievement of Landscape Character Goals

Maintaining an Existing Landscape Character

When existing landscape character is the same as a landscape character goal, interdisciplinary teams should develop management strategies to perpetuate the desired attributes of the existing character. Every landscape changes over time. Even those that evolve through natural processes change in landscape character. Specific locations of scenic attributes may also change over time.

The overall landscape character goal is maintained through time by proper management of scenic attributes. For example, a scenic view from a specific location on a highway to a stand of colorful aspen tress may disappear over time as pine trees grow and block the view. The landscape character goal may indicate the need to create similar scenic viewing opportunities elsewhere along that same read, within the same landscape unit, when vegetation grows and the current vista disappears.

Transition from Existing to Desired Landscape Character

When there are considerable differences between existing and desired landscape character, it may be necessary to design a transition strategy. The design should include a reasonable time line for reaching the goal. It should exclude excessive increments of change. Scenic integrity objectives define the degrees of deviation in form, line, color, scale and texture that may occur at any given time, thus defining a transition strategy.

Monitoring

Monitoring and evaluation efforts provide information to:

- detect magnitude and duration of changes in conditions including scenic integrity and landscape character.
- formulate and test hypotheses as to cause of the changes.
- help better understand these causes and predict impacts.

Monitoring Types

There are three types of monitoring: implementation, effectiveness, and validation.

Implementation monitoring determines whether the standards and guidelines were followed. Some agencies call it "compliance" monitoring . . . or said another way "Did we do what we said we would do?"

Effectiveness monitoring determines if the application of the management plan achieved or is headed in the right direction to achieve the desired future condition (DFC) . . . in other words did the management practice or activity do what was intended. Did the standards and guides function as intended or were they not effective?

Validation monitoring determines if new information exists which alters the validity of the assumptions upon which the plan was based. Such considerations might include changes in resource conditions, changes in constituent values and expectations or changes in legal requirements.

Monitoring Landscape Character

The objective of Landscape Character **Implementation and Effectiveness monitoring** is to determine if the landscape character goal is being met or is moving toward the desired character over time. For example, the goal may be to maintain open, park-like stands of large ponderosa pine with yellow-plated bark with 20% in seedling/saplings, 40% in a black bark stage, and 20% in small saw timber.

Objective: To determine if the landscape character is moving in the direction of the landscape character goal.

Method: Identify through field review the percentage of vegetation (or other elements in the landscape character) that is moving towards the landscape character goal.

Unit of Measure: Percent of acres.

Landscape Character **Validation** is addressed through a continual constituent analysis process determining such things as the landscape character preferred by people.

Monitoring Scenic Integrity

Implementation monitoring is usually done through spot checking the scenic integrity level of activities one year after completion to see if they are in compliance with the Forest Plan.

Objective: To determine if the scenic integrity levels for projects adopted in the Forest Plan by Management Area are being achieved.

Method: Identify through field review a stratified sample of projects in high, moderate, and low integrity levels. Sampling intensity should increase with the level of scenic integrity objective.

Unit of Measure Identify total projects within each viewshed or geographic area, including how many and what percent were monitored. Of those monitored, how many and what percent met the scenic integrity standard for the area.

Effectiveness can be checked by summarizing the existing scenic integrity levels for each viewshed or geographic area.

Objective: Are the cumulative effects of all resource activities within a viewshed meeting the integrity level standards.

Method: Determine the percentages of each integrity level being met within each viewshed. Determine if the percentages are consistent with the Forest Plan.

Unit of Measure: Total acres in each viewshed that are consistent with Forest Plan standards.

Validation is addressed through a continual constituent analysis process, determining such things as the lowest level of scenic quality acceptable to people.

View all Pages in Browser | Previous Page | Next Page | Zoom In | Zoom Out

Previous Page with Match | Next Page with Match | Previous Doc. | Next Doc.

View as PDF | Print Help

Last Modified: October 6, 2009

NALDR Home | NAL Home | USDA | Agricultural Research Service | GPO Access | Web Policies and Important Links | Site Map
FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | USA.gov | White House