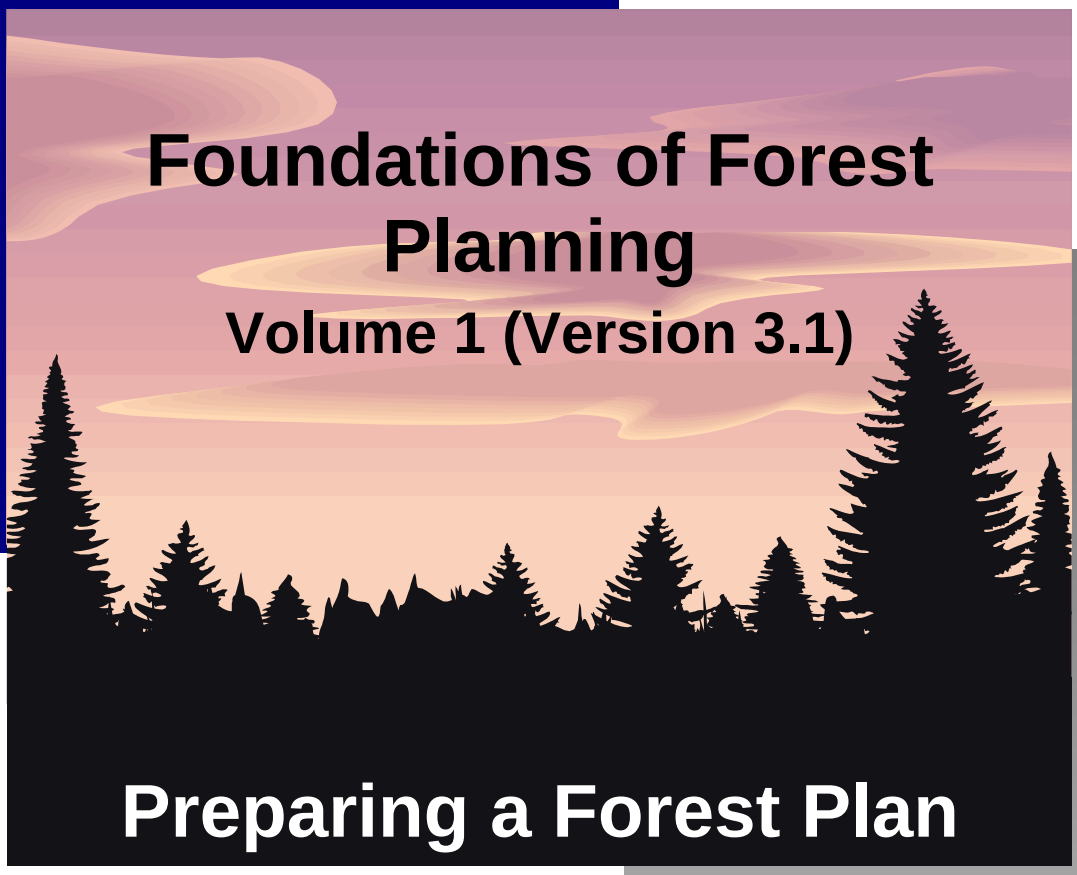
Foundations of Forest Planning

Volume 1 (Version 3.1)



Preparing a Forest Plan

USDA Forest Service
October 2008

Preparing a Forest Plan

This is a concept book and a work in progress. This document provides a tool for forest planning. The ideas contained in this document are based on the experiences of folks who have created forest plans under the National Forest Management Act (NFMA). It reflects what has worked in the past and may work well in the future.

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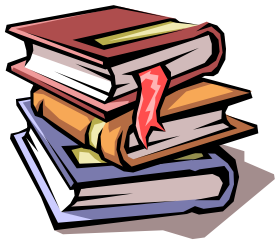
Forest Planning

- **Part One—Vision.** Provides framework for projects and activities and describes the roles and contributions to set the context for National Forest System lands. Describes the *desired conditions* of the landscape, disturbance processes, and the benefits and experiences these lands can supply. Progress toward desired conditions is monitored.
- **Part Two—Strategy**. Describes expected measurable outcomes (*objectives*) in the next 15 years as the unit moves toward the desired conditions. Identifies *suitability of areas*. Optionally, strategy may include management approaches for key plan *objectives* and can include *special areas*. Outcomes are monitored.
- **Part Three—Design Criteria**. Bounds the strategy and subsequent projects. Includes *guidelines, standards,* as well as a reference to *other applicable guidance.* Effectiveness of guidelines is monitored.



Stages of Planning

Forest planning consists of three interrelated steps developing the vision, the strategy, and the design criteria. When a forest plan is provided on the web, the parts are hyperlinked to each other along with reference material. When a forest plan is provided on paper, the three parts may be bound together or may be in separate volumes.

The components of a forest plan described in the planning rule, and the way they fit are shown in boldface type below.

Part One—Vision

I. Introduction
II. Forest Roles and Contributions
III. **Desired Conditions**
IV. Monitoring of the Vision

Part Two—Strategy

I. Introduction
II. **Suitability of Areas**
III. **Special Areas**
IV. **Objectives**
V. Monitoring of the Strategy

Part Three—Design Criteria

I. Introduction
II. **Guidelines and Standards**
III. Other Sources of Design Criteria
IV. Monitoring of the Design Criteria

Why Three Parts?

Each part of planning is often treated differently based on scale, public participation, analysis, relationship to other parts, update cycle, and order of development. Nevertheless, the three parts integrate into one forest plan.

	Vision	Strategy	Design Criteria
Scale	• Planning Unit	• Planning Unit	• Regional, Sub-Regional, or Planning Unit
Public Participation	• Collaborative • NFMA Requirements • 90-day comment period • Objection process	• Cooperative/Consultative • NFMA Requirements • 90-day comment period • Objection process	• Administrative • NFMA Requirements • 90-day comment period • Objection process
Analysis	• Assessment of current versus desired conditions • Demand assessment • Scenario building	• Trade-off analysis • Prioritization • Trend analysis • Risk assessment	• Science and cause-effect relationships as applied to potential projects
Relationship to Other Parts	• Can be developed independent of other parts, but logically builds on previous Strategy or plan	• Depends on Vision for context and Design Criteriato provide information for future projects	• Can be developed independently from other parts, but logically builds on achieving the Vision
Update Cycle (Shelf Life)	• Long (10-20 years)	• Short (3-5 years)	• Medium (5-10 years)

How is a Forest Plan Used?

The plan is a general framework to guide forest staff when they propose, analyze, and decide upon projects and activities. A project might be needed because of a discrepancy between current conditions and desired conditions (Part One—Vision). Projects may be proposed in response to demands by the public or to respond to plan objectives (Part Two—Strategy).

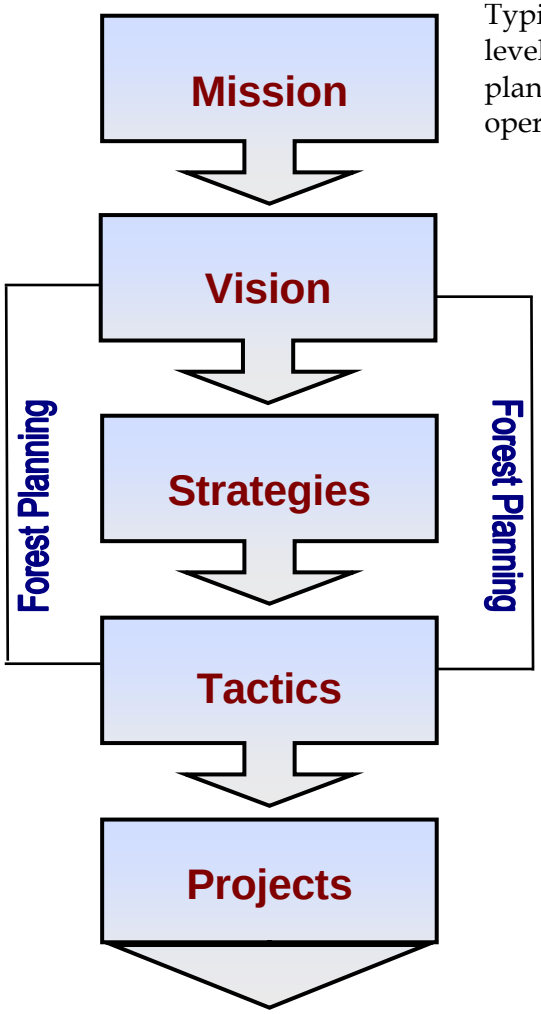
When a project is proposed, it is first checked against the suitability of areas (Part Two—Strategy). If the project is an appropriate use, then relevant design criteria (Part Three) are used. The proposed action is then analyzed using appropriate NEPA procedures. If the project is not consistent with the plan, the project may be redesigned. Rejected, or a plan amendment may be considered.

A project is designed and carried out with appropriate monitoring measures. After the project is completed, it should be evaluated against desired conditions (Part One) and the objectives (Part Two).

A Business Model for Planning

This document was developed by looking at how strategic planning is done in businesses and other large organizations. The model was refined by reviewing planning processes used by other government agencies and for county planning.

"Strategic" plans provide overall guidance to an organization. They are necessarily broad and general, focus on goals and outcomes, and are flexible and easily updated and changed. Strategic plans typically guide the organization for three to five years and build on core strengths of the organization. They describe a vision on which internal and external stakeholders can rally around and reflect the uniqueness of the institution. In multilevel organizations like the Forest Service, strategic plans involve two-way communications between the levels.



Typically, strategic planning involves a series of levels. Each level is a prerequisite for the following levels. Strategic plans follow other plans that contain the tactical and operational details (e.g. projects and activities).

Mission

The mission is the reason the organization exists. The Forest Service mission is "caring for the land and serving people." The overall USDA Forest Service Strategic Plan (FY 2004-2008) describes the mission "to sustain the health, diversity, and productivity of the Nation's forest and grasslands to meet the needs of present and future generations."

Vision

The ***vision*** is the direction of the organization. It indicates the Forest's uniqueness in a regional area and among affected communities. The ***vision*** is collaboratively developed and considers the values of local, regional, and national forest users. The ***vision*** is long-term.

The Forest Service Strategic Plan establishes a national vision, but each unit also has its own ***vision***, including what is unique about the forest (or parts of a forest) and what are the desired conditions. Monitoring questions and measures are developed to track achievement of desired conditions. The ***vision*** identifies a national forest's role in the National Forest System.

Strategies

Strategies are how the organization intends to follow the vision, which further narrows the field of choices. A strategy sets measurable objectives. The strategy maintains or moves toward the appropriate parts of the forest's vision; and therefore, contributes to the agency's mission. The strategy also builds on achievements and lessons learned.

Each forest describes requirements to reach the desired conditions. The related plan components are: (1) the identification of areas as generally suitable for various uses, (2) special areas, and (3) the time-specific objectives necessary to move toward desired conditions. Since the attainment of objectives is dependent upon budget, policies, environmental changes, and the like, objectives are aspirations.

Projects

At the site-specific ***project*** planning level, future projects are proposed as part of tactical plans. Projects are designed under the vision, strategy, and design criteria.

Tactics

Below the strategic planning level is a ***tactical*** planning level describing the intended tools and how resources are allocated. Generally, forest plans should not be tactical plans. They should answer why, what, when and maybe where, but should not generally describe how.

There should be a limited set of sideboards or guidelines to ensure that projects and activities are consistent with the vision and strategy. Design criteria, the third part of a forest plan, are developed to include NFMA requirements, references to handbooks, and other information to guide project and activity decisionmaking.

Tactical plans may be developed outside the land management planning process to further define the "how" of forest management.

Part One—Vision

- A description of the forest, including its distinctive roles and contributions to the surrounding area, and as appropriate, to the Nation
- A description of desired conditions (either forestwide or in specific localities)

"Collaborative planning begins by finding agreement in a common vision for the future conditions of the national forests and grasslands and their unique contributions to different regions of the country."
—Committee of Scientists, 1999 Report

A vision driven planning process

"Instead of beginning the planning process with a listing of issues and concerns, communities, through the use of a visioning exercise, craft a picture or image of what the locality intends to make of itself, what it wishes to achieve or become.

Once developed and adopted the preferred vision becomes the rallying point or goal to be achieved. The resulting planning process outlines the sequence of events and actions the community will need to take if the preferred vision is to be realized."

—Michael Chandler, Virginia Tech, The 21st Century Comprehensive Plan, Planning Commissioners Journal, Summer 1998

"A well-designed, emphasis driven document forces every reader to come away with the same message."

— L. H. Freeman and The Shipley Group, Inc. 2004. Documentation Strategies for Environmental Writers: Entries Reprinted from the Franklin Covey Style Guide (1997). The Shipley Group, Woods Cross, UT. 126 pp., spiral bound

A Description of Forest Roles and Contributions

Defining the vision for any forest begins with a description of the forest, including its distinctive roles and contributions to the local area, State, region, and Nation. Through a visioning exercise, the roles and contributions provided by National Forest System lands are identified. This discussion may also address the management challenges that may exist.

Examples

Distinctive Roles and Contributions

- Some of the most popular downhill skiing in the country
- Recharge areas for water supplies for large communities
- Major source of supply for local timber industry
- Primary conservation area for grizzly bear

Management Challenges

- Proximity to three million people
- High recreational usage
- Legal mandates for providing multiple uses

This discussion is important because it provides the motivation or the reasons behind desired conditions that are described later.

Questions to Ask the Collaboration Group

- What is nationally unique about your forest?
- What one feature is your forest best known for?
- How far do people travel to visit your forest, and **why** do they come?
- What is a great point about your forest that hardly anyone knows?
- Why is your forest different from neighboring lands?

Maps

Maps are helpful in this section of the document to orient the user to where the forest is and what it is about.

Examples

- Vicinity map
- Landownership pattern
- Adjacent population densities
- County and state boundaries
- Elevation differences, terrain, location of high peaks above snowline, etc.
- 3-D terrain views, displaying slope, aspect, and relative physical terrain
- Major watersheds and drainages
- Vegetation cover type zones
- Important soils
- Key geological formations
- Groundwater
- Travel corridors
- Utility corridors
- Historical sites

Desired Conditions: The Plan's Primary Focus

Desired conditions are descriptions of the ecological, economic, and social attributes that characterize or exemplify the desired outcome of land management.

They might include soil, water and air conditions, flora and fauna elements, processes, infrastructure, and anticipated human experiences and benefits.

Desired conditions guide the forest staff when they propose, analyze, and decide upon on-the-ground projects and activities.

Desired conditions are measurable, but attainment is likely to vary in both time and space.

It is helpful, but not mandatory, to amend a forest plan if desired conditions are altered or discovered not to be reasonably achievable.

Timeframes

- No timeframe is set to accomplish the desired conditions, although eventual accomplishment should generally be within 10 to 50 years.
- Within 15 years, progress toward achieving desired conditions is expected with the ultimate intent of complete accomplishment in 15 to 50 years.
- The rate of achievement of desired conditions may vary due to budget and other constraints outside the agency's control.
- Although a 10-to 50-year time horizon may be used, longer timeframes may be considered for analysis of our sustainability obligations under multiple-use sustained-yield.

Desired conditions do not include descriptions of future Forest Service or cooperator programs, projects, or funded activities, which may be described as management approaches. Desired conditions describe the outcomes of programs.

Relationship of Desired Conditions to Other Elements of the Plan

Fundamental purpose of a plan—A plan establishes a framework to guide on-the-ground management of projects and activities. A plan guides the Forest Service in fulfilling its responsibilities for stewardship of the National Forest System to meet the needs of the American people.

Desired conditions—A plan must describe the desired conditions toward which management of the land and resources of the plan area is to be directed. Describing desired conditions is a primary focus of a plan.

Objectives—A plan must establish objectives intended to contribute to achieving desired conditions. Objectives (concise statements of measurable, time-specific outcomes) are pursued through on-the-ground projects and activities within the plan area.

Guidelines and Standards—Guidelines provide technical and scientific specifications for the design of projects. These specifications help in achieving desired conditions while meeting legal requirements.

Identification of suitability of areas—Areas may be identified as generally suitable for uses that are compatible with desired conditions and objectives for that area.

Monitoring and Evaluation in the Vision

Plan monitoring and evaluation must be designed to answer the question of whether there is a need to change any of the plan components. Because desired conditions are the basis for other plan components, the "need for change" question hinges on the evaluation of trends toward or away from the desired conditions.

Is it affordable?

Forest staff must screen evaluation questions of the monitoring program so that the selected questions provide the most useful information while also being practical and affordable.

Collaboration on the Need for Change

The forest staff and stakeholders that work on the desired conditions should also work on the monitoring program.

How are we doing?

The plan is kept relevant through annual evaluation reports. Every five years a comprehensive evaluation of the forest is conducted.

How are the evaluation questions and measures of the monitoring program displayed?

They may be displayed:

- Throughout the vision, strategy, and design criteria parts of the plan, or
- In one part of the document, such as in the strategy, or as an appendix.

Desired Condition Structure

Desired conditions should be structured to show contribution to sustainability by describing outcomes for social, economic, and ecologic attributes. This organization may be used to structure the monitoring program. In addition, the structure should consider regional and national reporting needs. One suggested method is listed below.

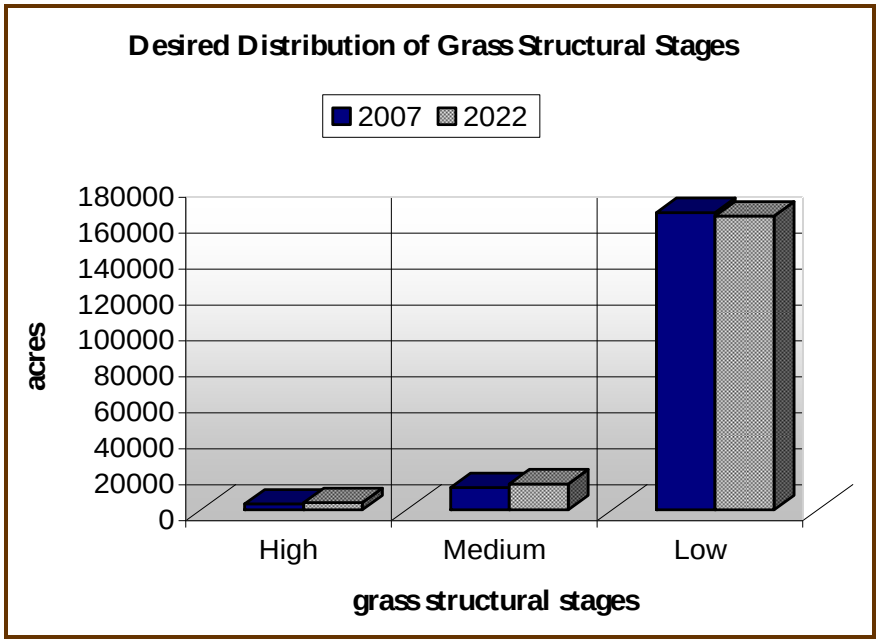
Ecological attributes may include:	For example:
1. Conservation of biological diversity	• Ecosystem diversity and species diversity
2. Maintenance of land health and vitality	• Invasive species, resilience to fire disturbance, native insects and pathogens
3. Conservation and maintenance of soil, water, and air resources	• Watershed health, air and soil resources, aquatic and riparian ecosystems

Social and economic attributes may include:	For example:
1. Maintenance and enhancement of social benefits	• Diversity of opportunities and settings, that is niche; • Recreation settings, opportunities and experiences; • Scenic resources, and wilderness characteristics; such as, natural, solitude, or primitive
2. Maintenance and enhancement of economic benefits	• Provision of goods and services
3. Infrastructure capacity	• Roads, trails, and land ownership pattern

Example of a Desired Condition and Related Monitoring and Evaluation

Forestwide Desired Condition

The following graph shows the desired acres of grass structural stages in 2022 to provide habitat for associated species.



High

Medium

Low

Evaluation Question

- Has progress been made toward achieving the desired distribution of structural stages across the forest or landscapes?
- How has this been done?
- Which species are using the habitat?

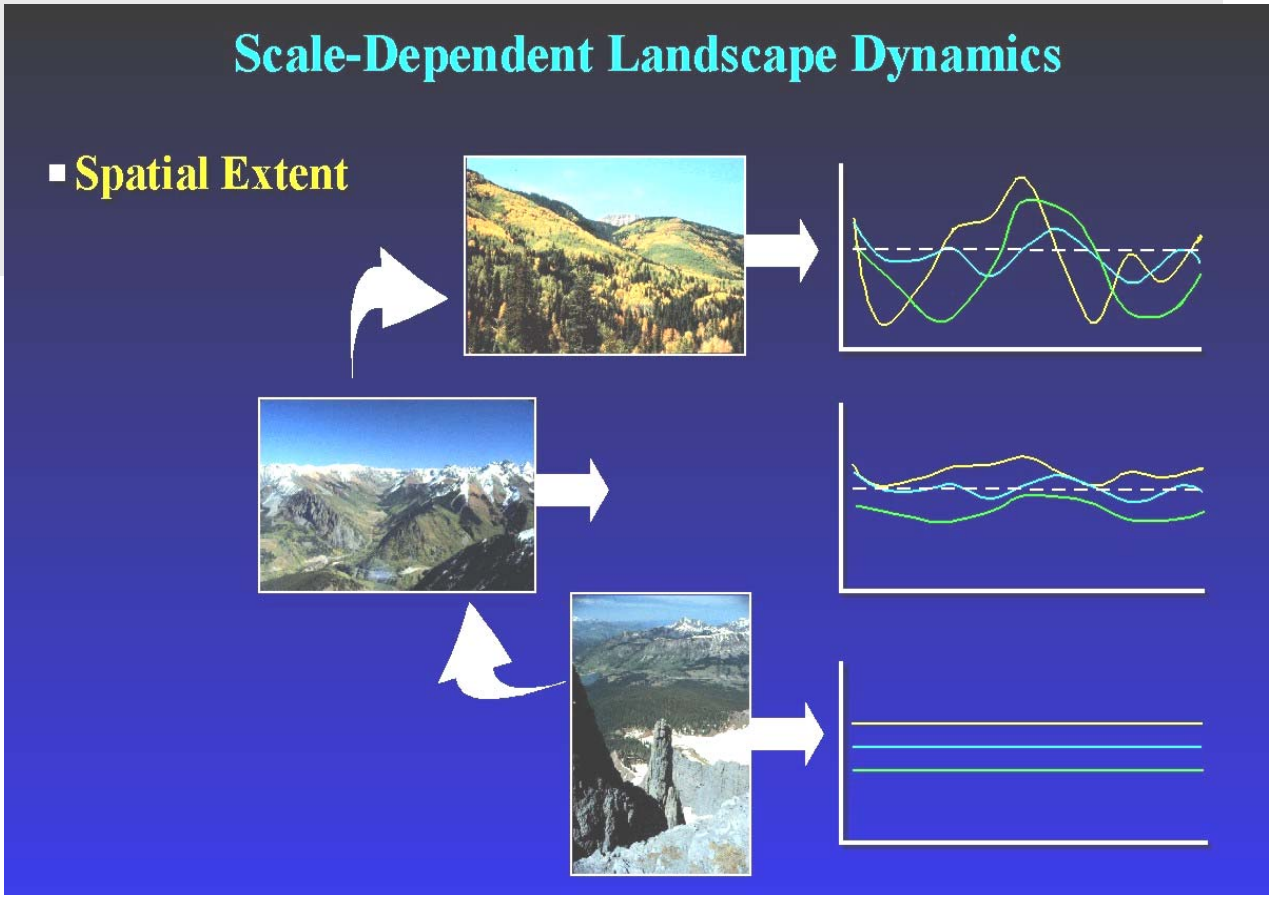
Monitoring Measures

- Acres as shown for grass structural stages.

Scale Questions

Generally, the forest plan should not specify desired vegetation conditions for small geographic areas that are prone to natural disturbances. The smaller the geographic scale the greater the range of possible conditions over time.

The diagram below shows how conditions are more variable at smaller scale (the top picture and graph) than larger scales (the bottom picture and graph). At larger scales, the percentage of an area in a particular condition will tend to vary less over time. At these larger scales, desired conditions can be described with more confidence. However, larger scales also result in desired condition descriptions that are more generic and qualitative.



Graphics from Kevin McGarigal, RMLANDS model development for the San Juan National Forest

Geographically Based Desired Conditions

- Desired conditions can be expressed for the entire forest or for geographic areas.
- The geographic areas used to identify a unique desired condition can vary by topic.
- During the collaboration process, people identify "place based" areas that make sense to them.
- In describing a particular condition, there should generally be no more than a dozen or so geographic areas delineated across a forest. However, the area boundaries may change by topic as necessary using multiple overlays of maps.

Geographic areas link the forest plan to the places people identify with at the landscape or watershed scale and provide a tool for better communication with the public.

Example of a geographically based desired condition statement:

The following geographic areas have ecological conditions (watershed and in-stream habitats and in-stream flows) for greenback cutthroat.

- Boulder Creeks
- Caribou
- James Peak Special Interest Area
- Mammoth
- Niwot Ridge Biosphere Reserve

Evaluation Questions

- Have habitat-improvement projects resulted in suitable habitat for greenback cutthroat?
- What management practices have been most effective?

Measures

- Miles of streams with suitable watershed habitats, suitable in-stream habitats, and in-stream flows for greenback cutthroat trout

Optional Methods for Describing Desired Conditions

- ❒ Text
- ❒ Maps
- ❒ Pictures
- ❒ Trend Charts
- ❒ Computer Simulations
- ❒ Video (mpeg)

"Establishing long-term goals is the most constructive place to start in collaborative planning and provides an essential guide for adaptive management. Visualization of the future landscape through pictures, maps and computer simulations will be a crucial element in this work."
— Committee of Scientists, 1999 Report

Re-focusing Older Plans Developed under the 1982 Regulations

The 1982 planning regulations (36 CFR 219) included desired future conditions as part of goals and objectives. However, many existing plans include statements of desired future conditions in other plan elements.

For ease of communicating current desired conditions with the public, current plans may be scoured for desired future condition statements. These statements may be repackaged for convenient reading.

In determining what the current desired condition is, planners may review and repackage the following parts of existing plans.

- Goals and Objectives
- Management Area Prescriptions
- Existing Special Area Designations
- Standards and Guidelines
- Monitoring Measures

Using Pictures to Describe Desired Conditions

Desired Condition

- Watersheds are in Class I, functioning condition

Evaluation Questions

- Has the forest made progress toward moving sixth-level watersheds from at-risk or non-functional to functional?
- Which watersheds were improved and how was this accomplished?

Measures

- Sixth-level watersheds in functional condition

Desired Condition

Leafy spurge infestation and other non-native invasive plants would be low to non-existent in abundance and distribution.

Desired Condition

Twenty percent of the acres of the ponderosa pine type are dominated by ponderosa pine seedlings or saplings.

Possible Desired Condition Contents
(Forestwide or Geographic Areas)

- Aquatic habitat—Aquatic structure
- Condition of suitable lands
- Domestic and wildlife forage
- Environmental justice and accessibility
- Fine scale elements
- Historical and cultural resource condition
- Invasive species
- Locatable and leasable minerals
- Old growth and forest decay
- Paleontological resources
- Plant succession
- Public access and landownership pattern
- Range conditions
- Rare or unique communities
- Recreation infrastructure
- Recreational experiences (summer and winter)
- Riparian areas
- Soils
- Solitude
- Stream flow
- Subsurface environments—caves
- Terrestrial vegetation—composition, structure, pattern
- Trail conditions and use patterns
- Water quality, quantity, and timing
- Watershed health
- Wilderness experiences

Part Two—Strategy

- Identification of areas generally suitable or generally not suitable for various uses
- Special areas
- Objectives
- Management approaches
- Monitoring questions

"In preparing for battle I have always found that plans are useless, but planning is indispensable."
—Dwight D. Eisenhower

Areas Generally Suitable or Generally not Suitable for Multiple Uses

National Forest System lands are generally suitable or generally not suitable for a variety of multiple uses; such as, outdoor recreation, range, timber, watershed, wildlife, and fish purposes. Areas will be identified as generally suitable for multiple uses that are compatible with desired conditions and objectives for that area.

Identifying Areas Generally Suitable for Land Uses

The identification of areas that may be generally suitable for particular multiple uses involves interpretation of social, economic, and resource tradeoffs—not just an inventory.

The identification of general suitability does not convey any legal rights nor does the identification prohibit any activity. This may be done in a subsequent project or activity decision.

Since identification of suitable land uses is broadly descriptive and not an acre-by-acre identification, some adjustments to suitable land uses can be done at the project or activity level without a plan amendment. However, substantial changes over time would require a plan amendment.

Areas Not Suitable for Timber Production

National Forest Management Act requires plans to identify lands not suitable for timber production. The criteria for this determination are found in the planning directives (FSH 1909.12, chapter 60).

The identification of suitability is part of the long-term strategy to ensure projects and activities are consistent with the desired conditions.

As part of the strategy, the identification of areas helps to achieve the vision—the collaboratively developed role of the forest and the desired social, economic, and ecological conditions. Consult guidelines and standards to understand the conditions under which specific uses may occur.

Possible Approaches for Identifying Areas

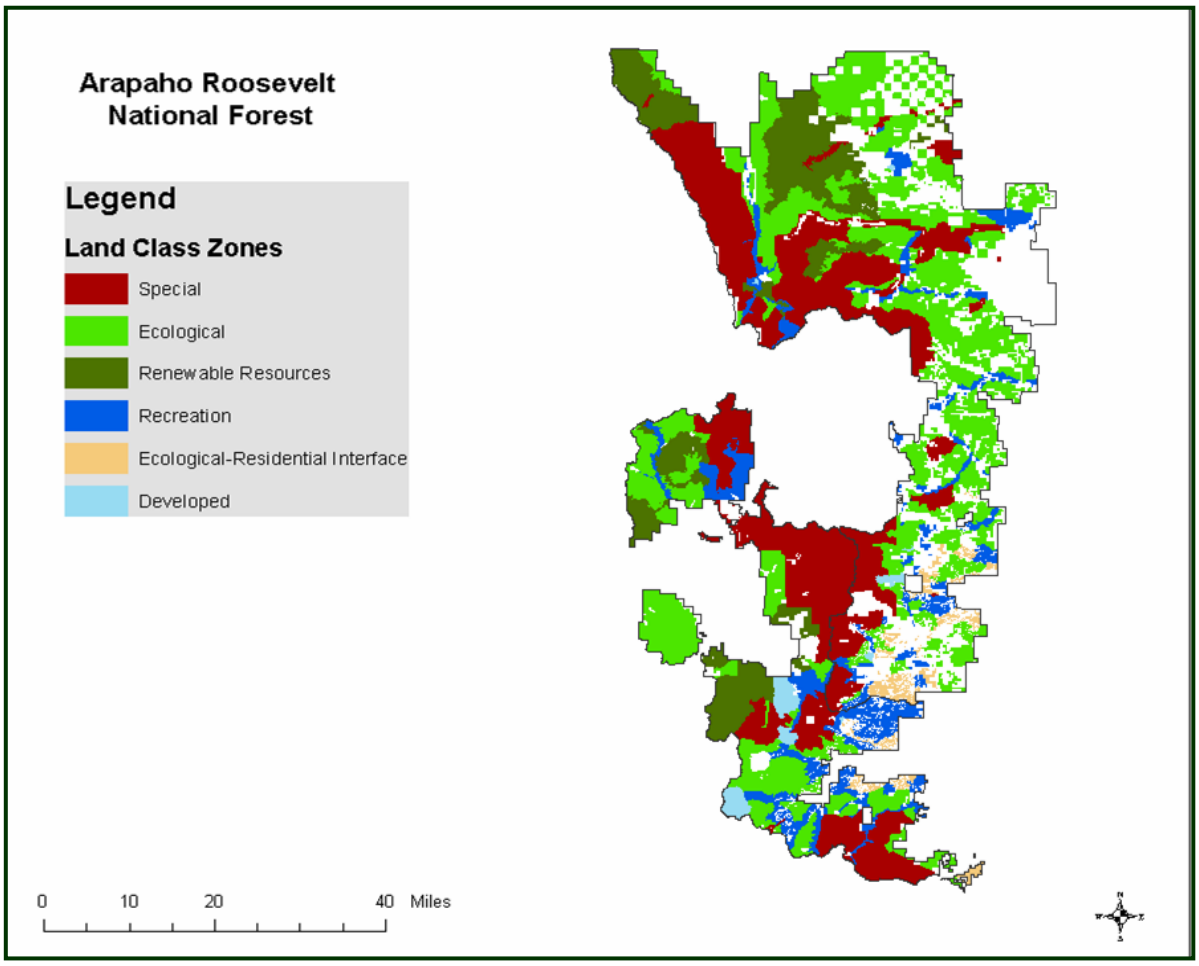
- Mapped broadly mapped zones
- Layers of maps, each showing a different use
- Narrative descriptions of types of physical, ecological, or economic conditions
- Photos showing types of conditions
- Specific areas tied to general suitability tables or narratives (for example, management areas or land class zones)

Since some people will read for graphics and others for narrative, consider describing generally suitable lands in different ways.

Examples of Narrative Descriptions of Areas

- Motorized vehicle use for dispersed camping is generally suitable within 100 feet of designated National Forest System roads on the motor vehicle use map.
- Timber production is generally suitable in the Blue River watershed.
- Timber production is not suitable on soil types B-2 and C-5 as defined in the Forest Soil Handbook.
- Livestock grazing is generally suitable in aspen stands greater than 10-years-old.
- Firewood collection is generally suitable west of U.S. Highway 17.

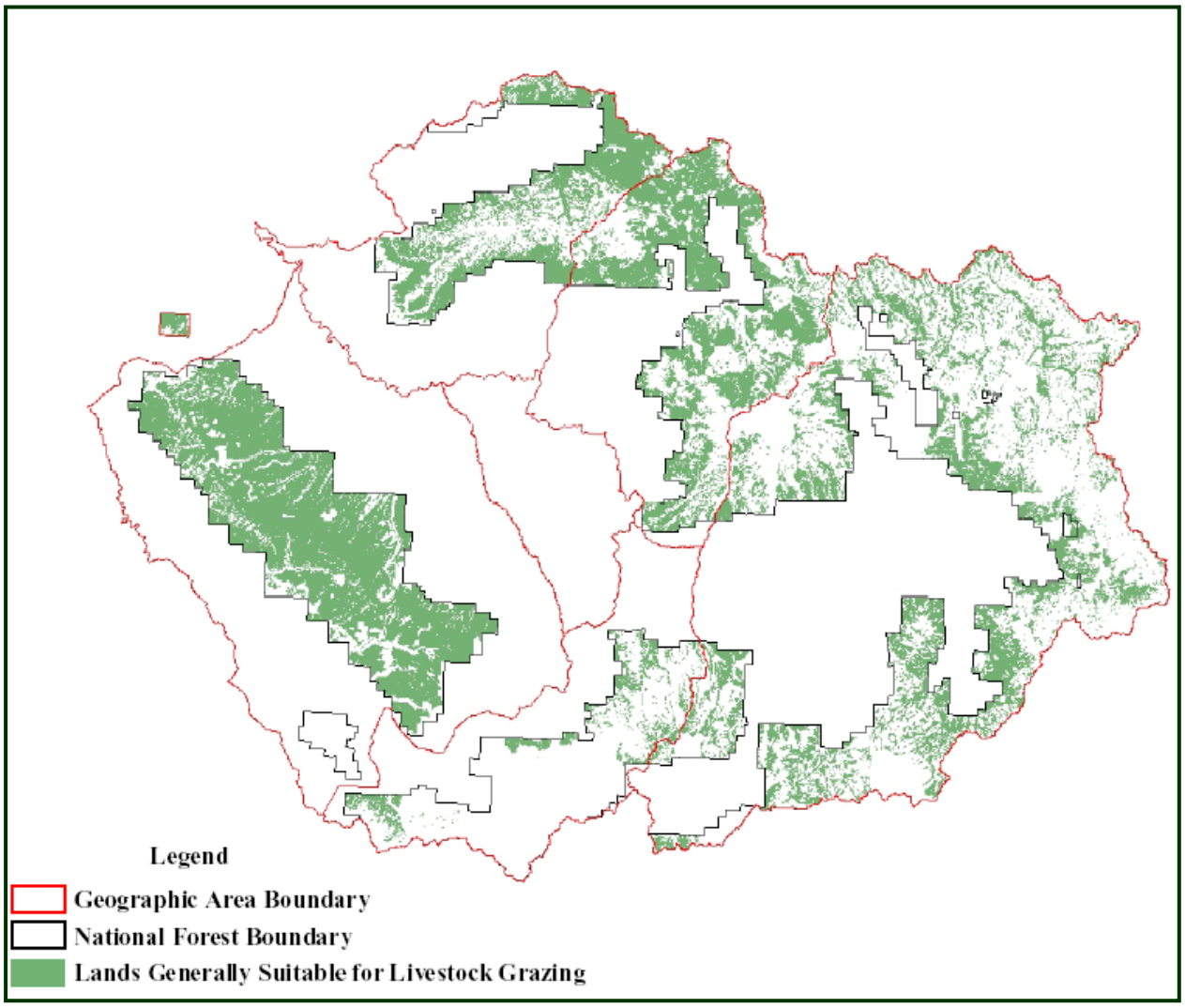
Examples of Broadly Mapped Zones



Generally Suitability						
Use/Land Use zone	Special	Ecological	Renewable Resources	Recreation	Ecological - Residential Interface	Developed
Timber Production			X			
Livestock Grazing		X	X	X		
Summer Motor Vehicle Use		X	X	X		
Over-Snow Vehicles		X	X	X	X	X
An “X” in a box indicates that the use is comparable with the land use zone desired conditions.						

A Simple General Suitability Map

Simple general suitability maps can be overlaid on other maps (one map per topic).



Generally, suitability is not identified acre-by-acre, but a broad characterization of areas in the forest. Care should be taken so that the scales of maps reflect the accuracy of inventories upon which the identification is based. "Fuzzy lines" may be appropriate to indicate transition zones.

Example of Linking Suitable Area Identification with Guidelines

The example table below summarizes the general suitability for four broad use categories in each of the special areas. Even though a use is identified generally suitable in a special area, additional guidelines may also apply to that use (for example, BCB-1 refers to the first guideline for the Bent Canyon Bluffs special area).

The guideline references for each special area offer the reader additional information to consider when understanding whether a particular use is compatible with that special area's desired conditions. See Part Three—Design Criteria of the plan for guidelines that may apply when determining whether a use is generally suitable in a special area.

Part three of the plan would discuss area-specific guidelines for above broad use categories.

Generally Suitability in Identified Special Areas

Identified Special Areas and Guidelines	Broad Use Categories and Guidelines			
	Livestock Grazing	Summer Motor Vehicle Use	Over-Snow Vehicles	Utility Corridors
Bent Canyon Bluffs **Applicable Guidelines:** **BCB-1** **BCB-2**	X BCB-1 BCB-2		X BCB-1 BCB-2	X BCB-1 BCB-2
Campo RNA **Applicable Guidelines:** **CMP-1** **CMP-2**		X CMP-2	X CMP-1	

Sample Guideline

BCB-1. Designated off-highway vehicle (OHV) use should avoid areas that are necessary for the protection of populations and habitat of species-of-concern plants.

Special Areas

Previously designated special areas should be identified. Special areas under the authority of the responsible official may be proposed and designated. In addition, the responsible official may propose and make a preliminary recommendation for other special areas, such as congressional designation (e.g. wilderness). Special areas should be related to forestwide desired conditions and objectives.

Remember that desired conditions in the vision can be written for geographic areas or management areas, including those that may be preliminary recommendations.

These desired conditions should be broad enough to allow for both designation and non-designation.

The motivation for the recommendation and designation should flow from the vision.

If any proposed special areas are extensions of—or additions to—existing areas, the relationship between the existing and proposed areas may be described.

Categories

Preliminary Administrative Recommendation for Congressional Designation

- Wilderness
- Wild and Scenic Rivers (Wild, Scenic, or Recreational)
- National Monuments
- National Trails
- National Recreation Areas
- National Scenic Areas

Recommendations to Regional Forester

- Research Natural Areas
- Experimental Forests
- Botanical Areas over 160 acres
- Geological Areas over 160 acres

Designated in Plans

- Botanical Areas up to 160 acres
- Geological Areas up to 160 acres

Objectives

This section would briefly describe intermediate outcomes that lead towards achievement of the desired conditions described in the vision.

- Objectives must be concise projections of measurable, time-specific intended outcomes (36 CFR 219.7(a)(2)(ii)).
- The objectives guide the unit in preparing "tactical" plans that depend on more localized information.
- Do not include process guidance; such as, "When newly discovered species habitat is identified, conduct an analysis."
- Use tables or graphs to depict future expectations when appropriate, but avoid creating the impression of great precision.
- The key message of this section should be disclosure of the future expectations as it relates to past performance.

"Forest planning. . . models were not intended by their developers to provide precise information. Rather they were intended to provide indications of direction of change, rough estimates of the magnitude of change, and the timeframes surrounding such change."
—Former Chief Jack Ward Thomas, Forest Watch, Jan/Feb 1992

Projections

NFMA calls for plans to be written, "reflecting proposed and possible actions, including the planned timber sale program" (16 U.S.C. 1604(f)(2)). The first generation of forest plans responded by developing detailed projections of future outputs and activity levels.

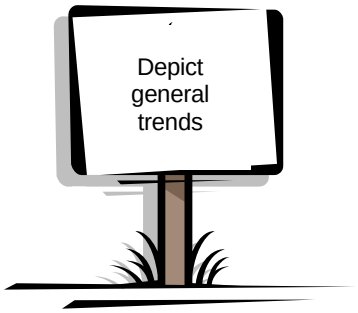
Unfortunately, these projections were rarely, if ever, fully realized and were inconsistent with the aspirational nature of forest plans. FSH 1909.12, Chapter 60 requires the development of vegetation projections. These projections need to be realistic and consistent with the aspirational nature of forest plans.

Examples for Displaying Objectives

Narrative

To increase early seral conditions in spruce-fir by five to ten percent in the wildland-urban interface (WUI) buffer and management area (MA) 4, MA5.1, MA5.2, MA7, MA8.1, and MA8.2 by 2020.

By 2020, 25 percent of facilities at recreation sites are accessible to people with disabilities.



Use narratives, tables, charts, or other means to depict general trends, but avoid creating the impression of great precision.

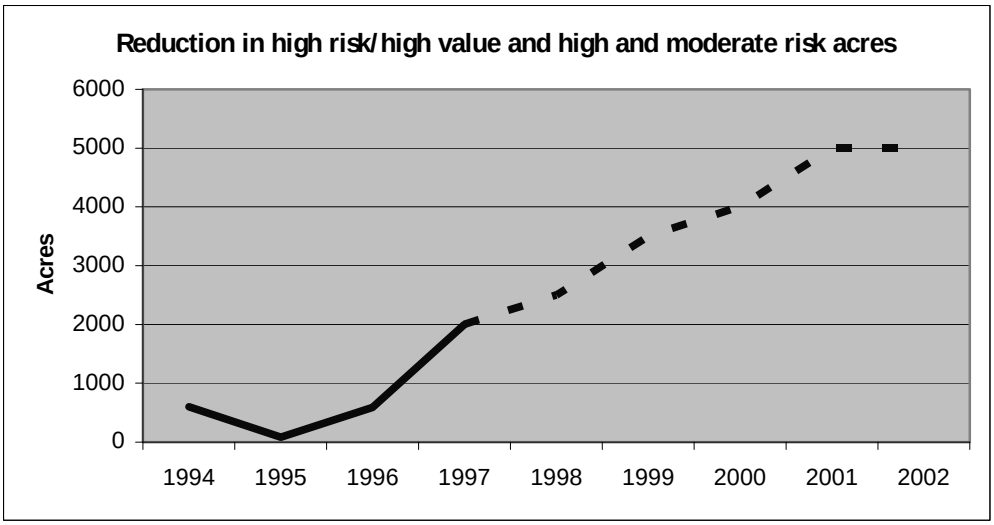
Tables

Number of Watersheds by Condition Class

	Class 1: Functional	Class 2: At Risk	Class 3: Non-functional
Existing	**41**	**87**	**19**
10-Year Trend	**42-48**	**83-86**	**16-19**

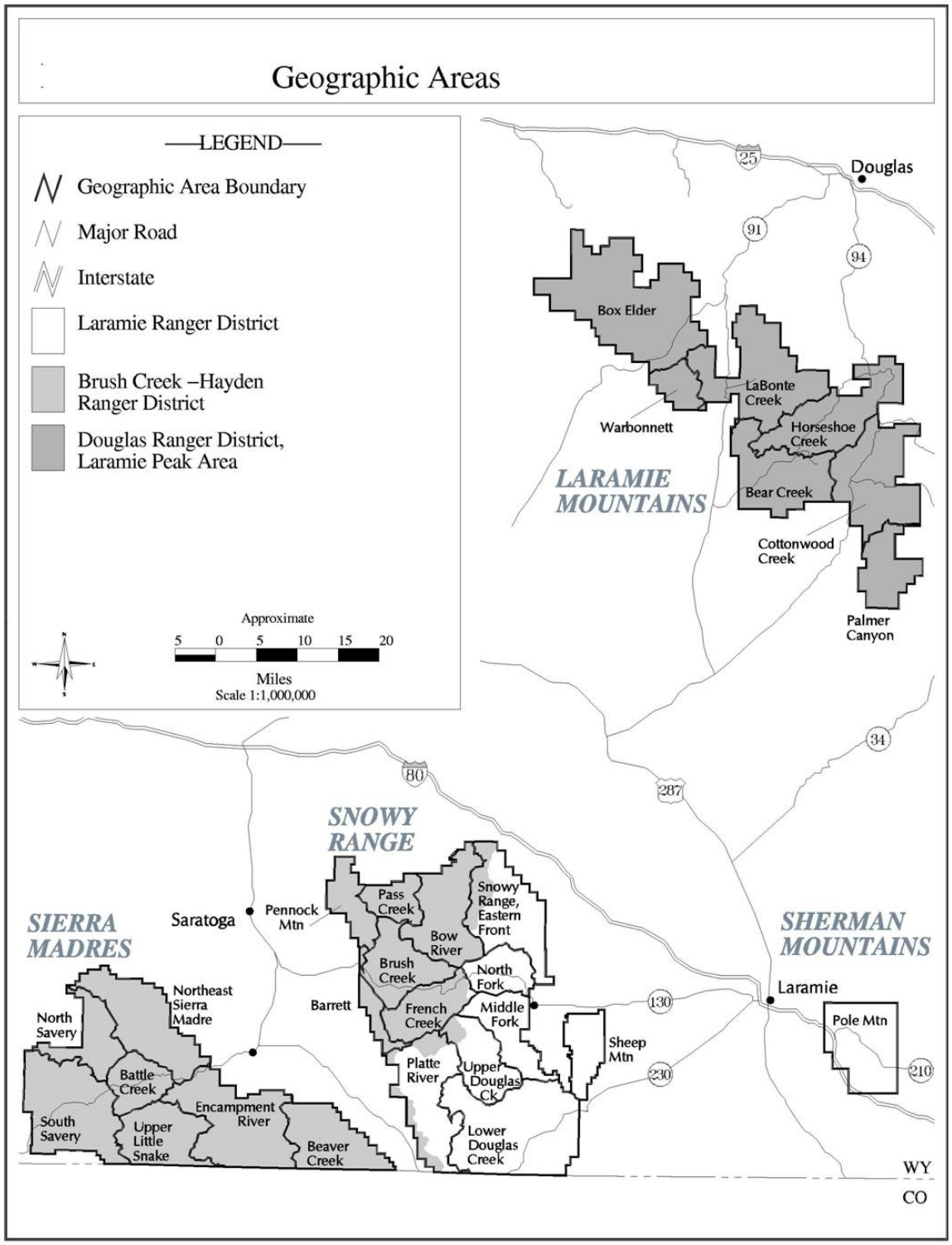
Charts

Our objective is to reduce the high risk/high value and high and moderate risk acres as displayed in following table.



Geographic Areas

To the extent that detailed information is available, forests may wish to develop specific objectives for some or all of their individual geographic areas.



Choices in Relating Objectives and Desired Conditions

The process described for desired conditions in Part One—Vision will lead to a discussion about objectives. It is often difficult to separate desired conditions from objectives because they are both outcomes. The relationship between objectives and desired conditions may be simple and direct or complex and indirect.

There are many ways to think about the relationship and examples are shown below. Objectives may be developed using any one, or some combination, of these approaches. When desired conditions are developed, participants in the process should also define the subsequent process for developing objectives.

- **Objectives might be framed as the difference between existing and desired conditions.** Objectives would be described and measured the same way as desired conditions and the objective values would simply be the difference between existing and desired.

- Objectives could be an intermediate step to desired conditions. Units of measure and descriptions would be the same.

- Objectives could be the same as desired conditions if achievable during the life of the plan.

- **Objectives and desired conditions might have a functional relationship.** The nature of that relationship would be the focus of monitoring. In many cases, a relationship between a Forest Service program and resulting conditions is either known or assumed. Both the program objectives and the desired condition are measurable.

For instance, a desired condition might be the presence and genetic purity of greenback cutthroat trout in specified streams. The population of trout might be a function of water quality, and water quality might be a function of sedimentation. The objective's outcome might be less sediment in the streams to allow trout to flourish.

Optional Discussions

Performance History, Management Approaches, and Performance Risks

A discussion of performance history, management approaches, and performance risks is optional. However, if included in a plan, they should be a series of brief (1/2 page) descriptions of the anticipated strategies.

Performance history should begin with a discussion of factors causing recent trends and expectations for changes in these factors over the planning horizon.

Strategies may be summarized into logical programs related to objectives, such as terrestrial wildlife habitat and management of natural fuels. If discussed this would be a moderately "high altitude" look at what the business of the forest is—not a fine-grained depiction of all the projects and activities that must be carried out to reach the objectives.

1 Performance History

This optional section, if included, should briefly describe our achievement of objectives identical to, or closely similar to, planned outcomes. This may include a table or chart of performance in key objective areas covering the last 3 to 5 years. After the first strategy is published, this may cover the elapsed period since the previous document.

If included, focus should be on the trends in achievement that led to the forward-looking "Objectives" section. This section should be closely coordinated with information in the comprehensive evaluation report. A key message of this optional section is that the forest is an ongoing enterprise with a history that influences (but does not dictate) future choices.

2 Management Approaches

This optional section, if included, should briefly describe the principal management approaches the responsible official is inclined to use. If included, these should derive from, and be responsive to, the vision and the objectives. They may convey a sense of priority and focus among objectives so that the public will know where to expect the greatest management importance. For a few important programs, management approaches should indicate the future course or direction of change in programs, recognizing past trends of budget and program accomplishments, without making precise estimates of quantities.

This section may also describe partnership opportunities and collaboration arrangements that support the achievement of desired conditions and objectives. Plans must avoid making predictions that appear to be precise, but actually are quite speculative. In addition, plans must avoid creating unrealistic expectations among stakeholders regarding the delivery of programs.

3 Performance Risks

This optional section, if included, should briefly discuss internal and external factors that could influence the timing or magnitude of accomplishment of objectives. Performance risks would disclose any uncertainties around these strategies; such as, the need for cooperation by partners, funding issues, or limitations on the use of fire (prescription burn windows).

While recognizing the ongoing nature of the forest "enterprise," this section, if included, should convey the idea that circumstances beyond the agency's control may affect performance. The dynamic nature of the physical, social, and economic systems in which the unit operates may be described, along with an assessment of the unit's ability to respond to changes.

A discussion of performance risks is essential to creating a realistic expectation regarding any unit's ability to achieve the objectives. This may be considered in the plan or the plan approval document.

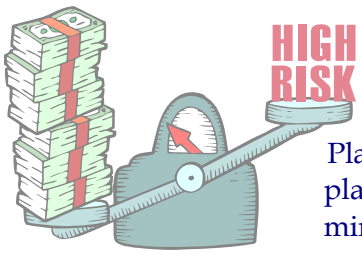
This optional narrative of performance history and management approaches may show a reader how planned outcomes are built on trends from the recent past, while also reflecting movement toward a desired condition.

Dealing with Scientific Uncertainty in the Planning Process

The planning rule requires that the Responsible Official ensure that science is taken into account, appropriately interpreted, and applied in planning. Incomplete or unavailable information, scientific uncertainty, and risk should be evaluated and disclosed. When conducted independently, this evaluation and disclosure of uncertainty and risk provides a crosscheck to an appropriate interpretation and application of science and help to clarify the limitations of the information base.

Plan Approval Document

The plan approval document (PAD) should briefly summarize how best available science was taken into account and briefly summarize the responsible official's evaluation of scientific uncertainty and risk. Furthermore, the PAD should provide a reference to additional discussion on the role of science in plan amendment, plan development, or plan revision.



Examples of Performance Risks

Risks related to the natural environment:

- Fire, disease, insect, or other disturbances
- Species receiving special management emphasis that could experience a change in status

Risks related to the institutional environment:

- Budgets different than original projections
- National or regional strategic initiatives that may emerge in response to broad-scale issues
- Litigation
- Changing national direction
- Organizational capability

Risks due to scientific uncertainty:

- Current information is inconclusive
- Interrelationships between resources are uncertain
- Models have limitations

Dealing with Budgetary Uncertainty

Plans are not budget documents. However, plans should be developed with budgets in mind. In most cases, a reasonable assumption is that budgets will stay at levels close to those of the past three to five years. The objectives and monitoring program should be designed accordingly.

Budget priorities will change over time, and it may be necessary to update the plan strategy every three to five years to reflect these changes.

Evaluation and Monitoring of the Strategy

The monitoring questions and measures may be interwoven throughout the strategy, displayed in one part of the document; such as, in the strategy or in an appendix.

Following are types of questions that an evaluation may answer about the strategy.

Evaluation of Suitability of Areas

- Is the availability of uses meeting the demand?
- Are the suitable areas being used?
- Are uses consistent with the desired condition?
- Are conflicts occurring?
- Have changes in use (patterns, equipment, levels) created a need to revisit suitability determinations?

Evaluation of Objectives

- Are there results?
- Are objectives being achieved?
- Are risks to achieving objectives changing?
- Can uncertainty be reduced?
- Are the assumptions valid?
- Is monitoring of objectives effective?

The Relationship between the Strategy and Tactical Planning

The objectives and identification of general suitability support subsequent tactical planning. In addition, objectives and identification of general suitability are built on a foundation of desired conditions and are influenced by the design criteria and the results of monitoring.

Tactical planning (the next level of planning) includes functional plans; timber plans, oil and gas availability decisions, recreation plans, and so on; area plans (such as Research Natural Area establishment, Wilderness Implementation Strategy, and so on), and annual budgeting.

The plan provides a framework focused on why and what. Whereas, tactical plans, developed under the framework of the plan, focus on how projects and activities may be carried out.

Part Three—Design Criteria

- Guidelines and standards influencing the design of
- projects and activities developed under the
- framework of the strategy
-
- References to other sources of information

"[the] demand [for] more and more accountability of public officials through the issuance of laws, edicts, and rules to control behavior, will invariably fail" —Roberts, Keeping Public Officials Accountable Through Dialogue: Resolving the Accountability Paradox, 2001

Guidelines, Standards, and Other Guidance

The design criteria bound the strategy, subsequent projects, and subsequent activities. The design criteria include guidelines, standards, and references to other sources of information.

Design criteria provide the sideboards in which strategies may operate. In the absence of a proposal for a use or activity, design criteria are inert and have little significance.

The collection of standards and guidelines in older forest plans is typically unfocused and bloated. It is not uncommon to find statements that are actually desired conditions, objectives, or program direction that belong in the directives (Forest Service Manual or Forest Service Handbook).

The concept of design criteria presupposes that all the extraneous information will be deleted and housed where it belongs; for example, with desired conditions in the vision document, with objectives in the strategy document, or with program direction in the directives system for particular resources.

Typical Statements that are Not Guidelines or Standards

Process Direction

"When newly discovered species habitat is identified, conduct an analysis."

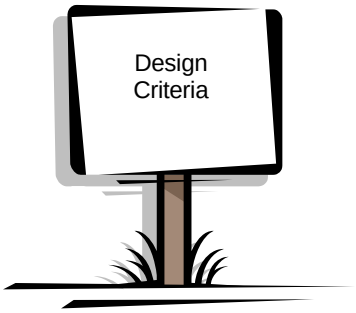
Statements of Desired Conditions

"The function of key habitats is maintained."

Strategic Statements or Objectives

"To establish a minimum of 12 prairie dog towns on 200 acres, in clusters of three or more."

True design criteria are the technical and scientific specifications that are needed to create an acceptable project that maintains or moves towards the desired conditions.



Types of design criteria:

- Guidelines
- Standards
- Other referenced sources of information

Examples of Guidelines

- Activities and land use disturbances should not take place within 0.5 miles of active dens of swift fox (*Vulpes velox*) from March 1 to August 31.
- Vegetation cutting and use of mechanized ground disturbing equipment should stay more than 30 feet away from perennial streams unless such activity is needed for riparian wildlife habitat, stream channel stability, or to provide access for recreation or stream crossings.
- Low impact techniques should be emphasized in dispersed recreation areas. The use of "Use Tread Lightly" techniques should be employed in education and interpretation.
- When developing new open roads and trails, contiguous areas of effective snipe habitat should not be reduced to less than 250 acres nor should areas of effective habitat of 20 to 250 acres be further reduced, except where access is required by law.
- Exceptions to the culmination of mean annual increment requirements for even-aged regeneration harvests (FSM 1921.12f, FSH 1909.12, section 61.3) include where specific management objectives have been identified in project planning for forest health, visual enhancement, wildlife diversity, and ecosystem restoration and management.
- For permit issuance or re-issuance, burial of telephone lines and electrical utility lines of 33 kilovolts or less (including new lines and the replacement of existing lines in existing corridors) is recommended unless one or more of the following applies:
- Objectives for scenery can be met using an overhead line.
- Burial is not feasible due to geologic hazard or unfavorable geologic conditions.
- Greater long-term site disturbance would result if the lines were buried.

Apply design criteria to projects early in their development to achieve consistency with the desired conditions, objectives, and suitability of areas.

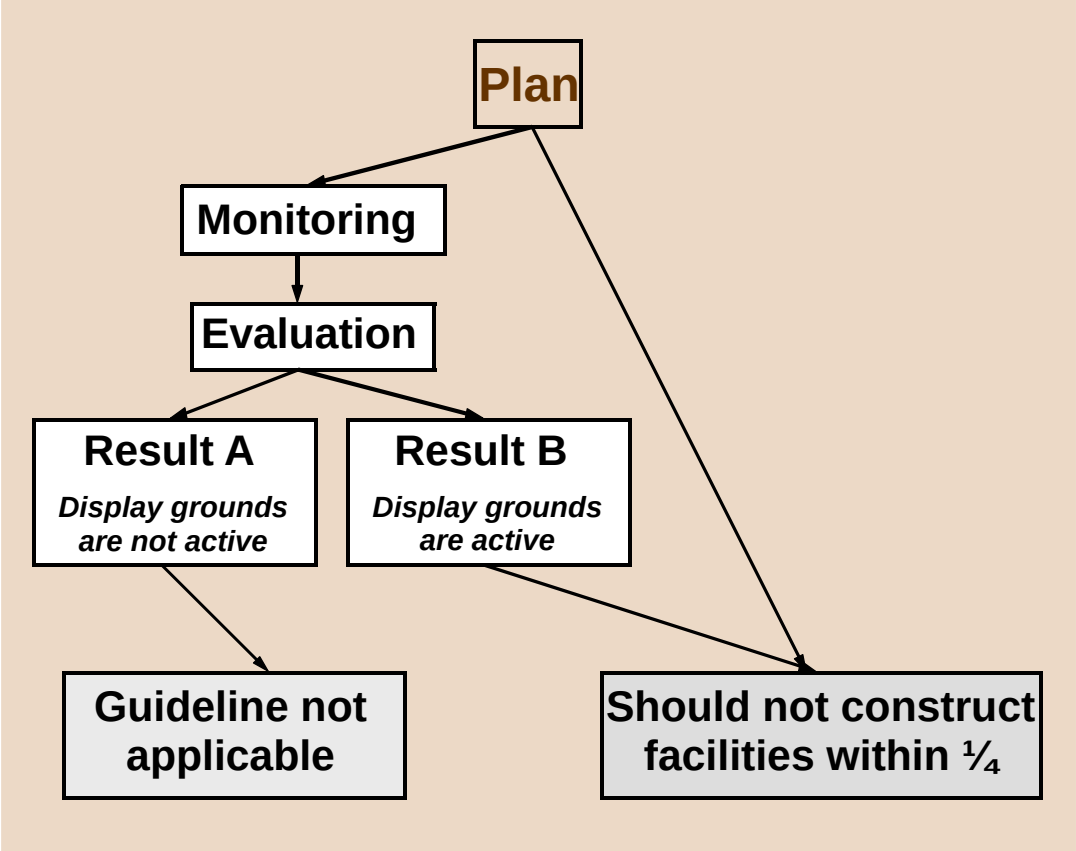
If guidelines cannot be met by a proposed activity or project, consider modifying the project, rejecting the project, or amending the forest plan.

Adaptive Guidelines

Guidelines may be written to be adaptable and respond to monitoring.

Example

To help reduce adverse impacts to breeding sharp-tailed grouse and their display grounds, new facilities should not be constructed within ¼ mile of active display grounds. A display ground is no longer considered active if it is known to have been unoccupied during the current or most recent breeding season.



Examples of Other Sources of Information

- ❒ Oil and gas leasing standard stipulations
- ❒ Timber sale contract clauses
- ❒ Special use authorization standard clauses
- ❒ Grazing permit terms and conditions
- ❒ Mineral operations permits
- ❒ Memoranda of understanding between the Forest Service and other agencies
- ❒ Congressional direction
- ❒ Best management practices guidebooks
- ❒ Conservation Agreements

Linking Plans to Other Information

Forest plans are not the only vehicle for providing information for subsequent projects and activities to help achieve the desired conditions. The design criteria section of a plan should list these other sources of information, provide a digest of relevant information, and show how this information relates to the forest plan.

Use of the Forest Service Directives System

All Forest Service employees are responsible for consulting the directives system in carrying out assigned work and for bringing needed changes in directives to the attention of the issuing unit through appropriate channels. (FSM 1104.1)

Policies and Procedures are in the directive system (manual and handbook) and not the forest plan.

Agency-wide management policy and procedure relevant to planning and resource management are issued through the Forest Service directive system.

Mandatory direction in the directives system must be followed unless there are extreme or highly unusual situations and it is legal to deviate from the directive. In such a case, the line officer must promptly document and inform higher-level officials of the reasons for taking such exception to established policy and procedure. (FSM 1103(6))

The Forest Service Manual is intended for line officers and primary staff officers (with application to all employees). The Forest Service Handbook contains detailed procedures, standards, practices, and techniques needed primarily by technicians and specialists. Employees are expected to follow Manual and Handbook direction unless there are good reasons for not doing so. (FSM 1111 and 1112)

A weakness of relying on directives is that some parts tend to be functional and lack true interdisciplinary review. Line officers should carefully review changes to the directives from a broad perspective.

Final Thoughts:
A New Way to Think about Forest Planning

Focus on vision instead of detail

Three parts, with a process tailored to each part

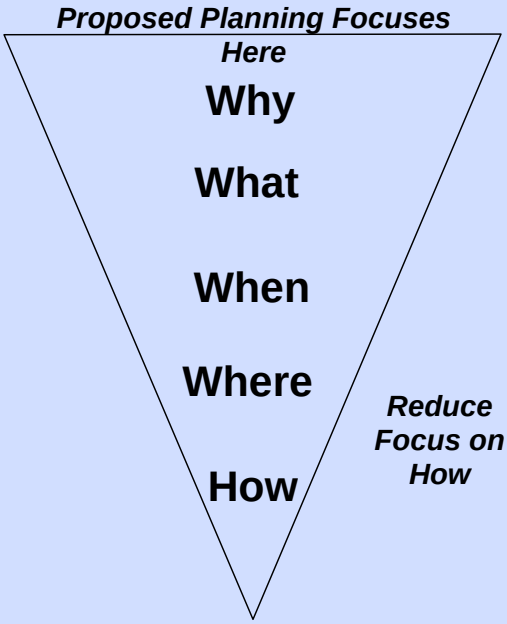
An adaptive approach with frequent updates

The widths of these triangles correspond to the amount of time devoted to types of planning questions.

Past planning efforts have focused mainly on "where," "when," and "how" and not as much on "what" and "why."

Instead, planning should emphasize strategic decisions: "why" and "what," and to a lesser extent, "when" and "where." The "how" decision should generally be left to tactical or project plans.

Current Planning Focuses Here



Proposed Planning Focuses Here

Reduce Focus on How

Based on an earlier forest planning framework developed by Regions 1 and 4

Preparing a Forest Plan (Volume 1/Version 3.1)