INTERAGENCY
VISITOR USE MANAGEMENT
COUNCIL

Visitor Use Management Framework

A Guide to Providing Sustainable Outdoor Recreation

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DEPARTMENT	AGENCY
Department of the Interior	Bureau of Land Management
Department of the Interior	National Park Service
Department of the Interior	U.S. Fish and Wildlife Service
Department of Agriculture	U.S. Forest Service
Department of Commerce	National Oceanic and Atmospheric Administration
Department of Defense	U.S. Army Corps of Engineers

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Abstract

Visitor use management is fundamental for maximizing benefits for visitors while achieving and maintaining desired resource conditions and visitor experiences on federally managed lands and waters. By using this Visitor Use Management Framework, managers collaboratively develop long-term strategies for providing access, connecting visitors to key visitor experiences, protecting resources, and managing visitor use. The purpose of the framework is to provide cohesive guidance on four major elements for analyzing and managing visitor use on federally managed lands and waters. It is also intended to provide a legally defensible, transparent decisionmaking process that meets law and policy requirements, ensures agency accountability, and provides sound rationales upon which to base management decisions and actions. A common thread throughout the framework is the use of the sliding scale. A sliding scale is used to ensure the investment of time, money, and other resources for a project is commensurate with the complexity of the project and the consequences of the decision. Issues with clearly small impacts usually require less depth and breadth of analysis than those with impacts of greater significance. Overall, this framework is meant to be adaptable to different agencies' policies and regulations and yet allow for a professional, comprehensive, and consistent approach to visitor use management on federally managed lands and waters.

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Chapter 1: Introduction

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Chapter 1: Introduction

"Everybody needs beauty as well as bread, places to play in and pray in, where Nature may heal and cheer and give strength to body and soul alike."

- John Muir, 1912

Kayakers at river's edge

Every year, people across the country flock to federally managed lands and waters for a variety of recreational purposes. Some are visiting an area for the first time, while others are returning to places they visit year after year. Some visitors are alone, and others visit with friends and family. On any given day, visitors are planning their trips, others are immersed in a long visit, and some are heading home and reflecting on their shared memories of time well spent. Recreation is a core element of American culture and a vital thread in the fabric of society. It allows people to connect with their natural and cultural heritage, be healthier in mind and body, enhance the bonds between family and friends, contribute to the economic vitality of communities, and be inspired and rejuvenated. Further, these opportunities allow people to better understand and care for resources and federal lands and waters, creating citizen stewards who want to support sustained management of our collective heritage.

The last decade has been an exciting time with many initiatives, such as the White House's America's Great Outdoors and Every Kid in a Park and the Department of the Interior's America's Youth in the Great Outdoors, which encourage visitor access and connections to federally managed lands and waters. In particular, these initiatives encourage federal agencies to be responsive to an increasingly diverse public that has changing interests and expectations. With this encouragement of access, there is a corresponding need to heighten managers' thoughtful approaches to managing visitor use.

The Interagency Visitor Use Management Council (the council) was chartered in 2011 to develop best practices for visitor use management on federally managed lands and waters. Visitor use management is the proactive and adaptive process for managing characteristics of visitor

The Interagency Visitor Use Management Council's vision statement: Providing a unified voice for excellence in visitor use management on our nation's federally managed lands and waters to sustain resources and quality visitor experiences. See the council's website: visitorusemanagement.nps.gov/.

use and the natural and managerial setting using a variety of strategies and tools to achieve and maintain desired resource conditions and visitor experiences. Simply put, it means managing use well to provide sustainable recreation.

Visitor use refers to human presence in an area for recreational purposes, including education, interpretation, inspiration, and physical and mental health. The Interagency Visitor Use Management Council considers visitor use management and recreation management as synonymous concepts.

This Visitor Use Management Framework (the framework) is intended to provide managers of federal lands and waters guidance regarding a common approach to visitor use management. More specifically, this framework provides the analytical elements necessary to address visitor use management opportunities and issues, consistent with applicable law, within existing agency management processes. The elements of the framework are combined with the appropriate procedural components (e.g., public involvement and environmental and cultural resource analysis) for the particular project being conducted. By using this framework, managers collaboratively develop long-term strategies for providing access, connecting visitors to key visitor experiences, protecting resources, and managing visitor use. The decisions made within the framework are professional judgments informed by the best available science, staff expertise, and public input.

The concepts presented in this framework are not new; the framework is the product of an evolution of earlier efforts, modified to reflect lessons learned. It follows all of the council agencies' planning principles and illustrates how to specifically address visitor use management. It is consistent with previous efforts, such as the Limits of Acceptable Change process and the Visitor Experience and Resource Protection Framework. In particular, one of the goals of this framework is to avoid the limitations of previous frameworks. Past frameworks were perceived to apply only in certain situations or to specific federal agencies, to be overly complex and costly, as stand-alone processes that were separate from other agency planning efforts, and as reactive. See appendix A for a brief summary of the history of visitor use management concepts and frameworks.

Children participating in an educational program

This framework will enhance consistency in visitor use management on federally managed lands and waters, since it will be used

by all agencies. The elements of this framework are broadly applicable to all visitor use management opportunities and issues. The framework is applicable across a wide spectrum of situations that vary in spatial extent and complexity, from site-specific decisions to large-scale comprehensive management plans. More specifically, the framework may be used as part of a general or comprehensive planning effort, which typically provides overall guidance on desired conditions, appropriate uses, and general management strategies for different areas within a unit. The framework may also be used to guide project-level planning and management, which typically define actions for specific areas. This framework may also be used across a series of projects that build on each other and may be applied to internally driven activities (e.g., analyzing a management action), as well as externally driven activities (e.g., a permit request or an action by another agency).

All federal agency actions are subject to a variety of procedural requirements, including the National Environmental Policy Act (NEPA) and the National Historic Preservation Act. However, each agency has specific policies and procedures for implementing and documenting these requirements. This requires planners to be familiar with and apply their specific agency NEPA and National Historic Preservation Act direction and any other procedural planning rules when using this framework. Chapter 4 highlights some of these commonalities and differences by agency.

OVERVIEW AND PURPOSE

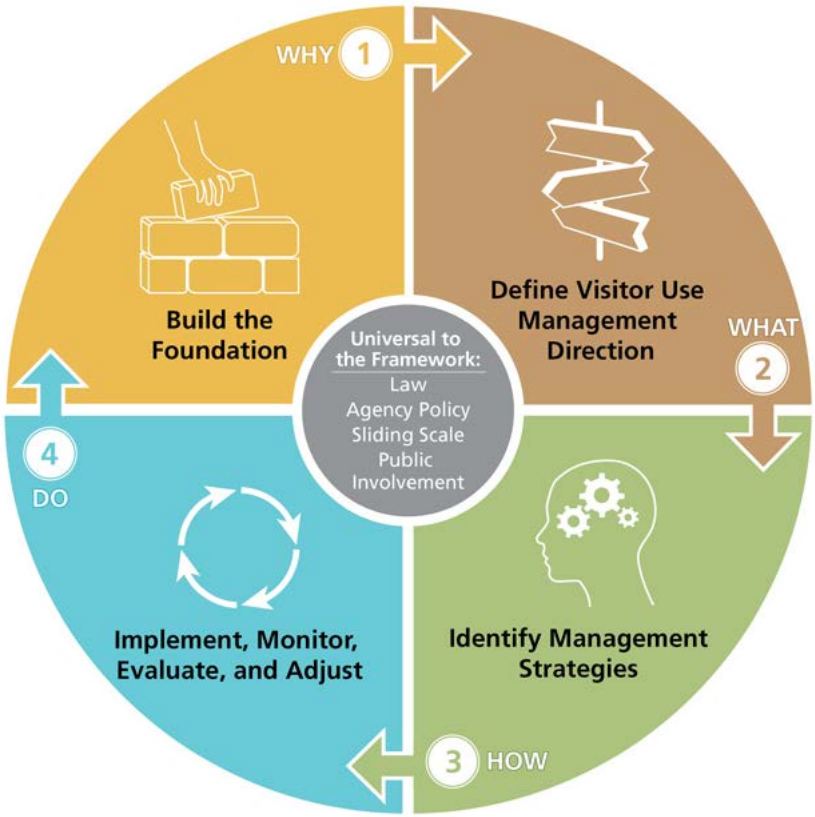
The purpose of the framework is to provide cohesive guidance on the major elements for analyzing and managing visitor use on federally managed lands and waters. It is also intended to provide a legally defensible, transparent decisionmaking process that meets law and policy requirements, ensures agency accountability, and provides sound rationale upon which to base management decisions and actions. In short, the framework provides a professional, comprehensive approach to visitor use management on federal lands and waters.

This framework is designed to be highly flexible and adaptable to local situations and needs. Of particular importance is the notion of a sliding scale of analysis, whereby the investment of time, money, and other resources in the analysis is commensurate with the complexity of the project and the consequences of the decision. For some projects, one person might work through the framework to a decision in a few hours; other projects might require multiple years of work by large teams. Another important concept is applying the framework proactively to determine which management actions are necessary to meet management objectives before unacceptable impacts occur. Monitoring data can help refine the understanding about which actions are necessary to maintain and/or achieve desired conditions and improve the understanding and use of indicators and thresholds. This framework and a subsequent guidebook on indicators, thresholds, and monitoring emphasize the importance of setting thresholds at acceptable levels of impact and responding to trends in changing conditions as identified by monitoring.

ORGANIZATION OF THE FRAMEWORK

This framework is organized into five chapters. The current chapter, chapter 1, gives an overview of the framework and a summary of background information. Chapter 2 introduces the concept of the sliding scale of analysis and describes, generally, how it applies to all steps of the framework. Chapter 3 provides more detailed descriptions of each element and its steps within the framework (see figure1). Chapter 4 provides guidance on integrating the framework into agency planning processes and procedural requirements; each agency may apply the framework in a slightly different way to conform to its planning guidance. Appendix A offers a brief history and limitations of previous visitor use management frameworks. A hypothetical example of applying the framework is included in appendix B. A glossary of key terms follows appendix C, which is a blank decision support tool.

Figure 1. Overview of the Visitor Use Management Framework



This document is not a "cookbook" of exactly how to implement each step of the framework; the context of each project guides the application of the framework. In addition, each agency's planning processes and procedural requirements are considered during implementation of the framework. Application of the framework should include creativity and flexibility to ensure meaningful visitor use management projects and decisions. Additional "how to" guidance on several of the framework steps is included in subsequent council guidebooks. See the council's website for more information (visitorusemanagement.nps.gov/).

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Chapter 2: The Sliding Scale

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Chapter 2: The Sliding Scale of Analysis

The sliding scale is used in each element and is explained in this chapter. This chapter provides guidance for determining the level of analysis required to adequately address visitor use management opportunities and issues on federally managed lands and waters. A misperception of earlier frameworks was that they were complex in application and costly in time and money. Therefore, this led some to use a less detailed process for simpler visitor use management issues. In this framework, regardless of the significance of the situation, all framework steps still apply. That is, the process does not vary with project complexity; rather, the investment of time and resources varies. The amount of investment is dependent on where the project is on the sliding scale. The same fundamental elements and steps are used regardless of the placement on the sliding scale.

This sliding scale approach is consistent with direction given in the Council on Environmental Quality's interpretation of NEPA. This approach implements the instruction that agency NEPA documents shall "focus on significant environmental issues and alternatives" (40 CFR 1502.1) and shall discuss impacts "in proportion to their significance" (40 CFR 1502.2(b)) (CEQ 2005, 2007). In short, when applying the sliding scale approach to NEPA analysis, the preparer should analyze issues and impacts with a level of detail commensurate to their significance. (Note: Under the Council on Environmental Quality's regulations and judicial rulings, the degree to which environmental effects are likely to be controversial with respect to technical issues is a factor in determining significance (40 CFR 1508.27).)

Applying this "sliding scale of analysis" seeks to match the investment made in analysis with the level of uncertainty and risk associated with the issues being addressed. Recognizing that it may not always be entirely clear what level of analysis is appropriate, this chapter attempts to provide some general guidance.

DETERMINATION CRITERIA FOR PLACEMENT ON THE SLIDING SCALE

A variety of factors influence where a given visitor use management issue lands on the sliding scale, including the level of uncertainty about the issue, risk of impacts to resources and visitor experiences, degree of stakeholder interest, and level of controversy/potential for litigation. To establish or set the level of analysis, which affects the investment of time, money, and other resources, use professional judgment.

Use the following criteria to infer the level of analysis for an issue:

- **Issue uncertainty:** What is the level of uncertainty about the issue being addressed?
  - This first criterion provides an opportunity to explore the issue as a whole, which aids in answering the subsequent criteria. Be careful not to underestimate the uncertainty surrounding a given visitor use issue and where that uncertainty puts it on the sliding scale.

- **Impact risk:** Are there considerable threats to the quality of resource conditions and visitor experiences?
  - Determine if special interest groups are involved. Are there imminent threats to unique or irreplaceable resources? Are there threats to unique or irreplaceable visitor experiences and recreational opportunities? Are the impacts at a landscape scale? If the answer is "yes" to any of these questions, then a higher level of analysis may be appropriate to address concerns. Analyze the nature of impacts, their causes, and potential effects.
- **Stakeholder involvement:** What is the level of stakeholder interest in the issue?
  - Are special interest groups involved? Are they well organized, well established, and engaged? Engaged stakeholder groups are more likely to closely track the process. Therefore, higher levels of analysis are required to satisfy their information needs. It is important to build trust and move a decision or action forward through two-way communication with stakeholders, partner groups, and government agencies, such as tribes, counties, and towns. If there is little stakeholder interest, it is still important to understand how they feel about or perceive the issue associated with the project.
- **Level of controversy/potential for litigation**
  - If an issue is controversial or more likely to be litigated, a higher level of analysis is required. Generally, legal battles over visitor use management issues can be minimized and outcomes likely more positive when the process includes a rigorous, well-documented analysis with a complete administrative record that supports the decision.

DECISION SUPPORT TOOL

The decision support tool (appendix C) is a simple high, moderate, or low rating system that, when used in conjunction with the broad criteria previously presented, can help inform the level of analysis needed for a project. If the overall responses to the questions are "high," then the level of analysis is likely high. If the overall responses are "low," then the level of analysis is likely low. However, if some of the responses are high, some are low, and some are moderate, the level of analysis is likely somewhere in the middle. When only one guideline rates out as high, carefully decide the overall level of analysis. For example, a high risk of controversy may mean that the level of analysis is also high or that the level of analysis is moderate and accompanied by a robust public involvement process. Document the rationale for any determination, regardless of the level of analysis.

The decision support tool's list of questions is undoubtedly incomplete; the decisionmaker must consider other factors and variables in cases in which regulatory standards must be met. While the decision support tool can help determine where a project falls on the sliding scale, the decisionmaker ultimately decides the necessary level of analysis. See the council's website for a blank decision support tool: http://visitorusemanagement.nps.gov/VUM/Resources. Table 1 provides an example of a completed decision support tool for a project on the low end of the sliding scale.

Table 1. Example of a completed decision support tool for determining the location of a project on the sliding scale of analysis: Reduce the size of a campground

Decision Support Tool	RATING QUESTIONS	RATIONALE	HIGH MODERATE LOW
Project: Reduce the Size of a Campground (see a full description in example 1 under chapter 2, "Relating Issues to the Sliding Scale")			
1	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **natural** resources?	Surveys show the site has no sensitive, rare, or irreplaceable natural resources.	Low
2	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **cultural** resources?	Surveys show the site has no sensitive, rare, or irreplaceable cultural resources.	Low
3	What is the likelihood of imminent and significant changes to the natural or cultural resources?	The footprint of the campground has already been established, so significant changes will not occur.	Low
4	What is the likelihood of imminent and significant changes to **visitor experience?**	There may be short-term disturbance, but overall, the improvements will enhance visitor experience.	Moderate
5	How will the issue affect other aspects of land management in the area or surrounding areas?	As major maintenance, there may be short-term disturbance during construction, but overall, the improvements will enhance visitor experience.	Low
6	What is the geographic extent of the issue's impacts? Scales of impacts include: national, regional, state, local/county, and site or project.	This is a local campground and is considered a project.	Low
7	What is the relative interest of stakeholders affected by the action? Stakeholders may include: local communities, general public, special interest groups, recreational visitors, commercial users, traditional-subsistence users, tribes, and others.	Stakeholders are locals and are interested in the improvements as shown by attendees of local outreach meetings.	Low
8	Is the impact temporary (low) or long lasting (high)?	The maintenance happens over one season, but the improvements to visitor experience are long lasting.	Low - High

Table 1. Continued

CRITERIA - Use the ratings assigned to questions 1-8 to evaluate the following 4 sliding scale criteria. Combine those criteria into a single qualitative rating (high, moderate, or low) of the project's appropriate location on the sliding scale.

	CRITERIA	RATIONALE	HIGH MODERATE LOW
A	**Issue Uncertainty**	This project is clearly stated, and the ability to complete the work is fairly certain. No surprises are anticipated.	Low
B	**Impact Risk**	The risk to resources and visitor experience is low since the campground is established and surveys have been completed.	Low
C	**Stakeholder Involvement**	Stakeholders are supportive of the project and want it to be completed.	Low
D	**Level of Controversy**	Low levels of controversy exist due to the established nature of the campground. Additionally, the project will create opportunities to improve the visitor experience.	Low
	Location on the Sliding Scale		Low

RELATING ISSUES TO THE SLIDING SCALE

The following four examples demonstrate how the rating questions of the decision support tool are considered collectively to determine the project's place on the sliding scale.

RV camping at Hartwell Dam Recreation Area

Example 1: Reduce the size of a campground.

Consider an agency-operated campground that only reaches capacity on some holiday weekends. Some visitors are highly attached to the area and enjoy using the same sites year after year. The campground is at a point in its lifecycle in which major maintenance is required (e.g., resurfacing roads, replacing picnic tables, replacing fire pits, redesigning campsites in compliance with the Architectural Barriers Act). The agency wants to reduce the number of sites for a variety of reasons so that the campground meets the visitation needs of average weekends. Maintenance budgets have declined, and planners think the preferred design will maximize the visitor experience, safety, and

operation of the campground. Based on the use history of the facility, the number of remaining sites will still be commensurate with the projected average amount of visitor use; design capacity will be exceeded on some holiday weekends.

When considering the rating questions to determine where along the sliding scale this issue falls (see table 1), significant consequences to physical, biological, social, and managerial attributes are not likely. The situation does not involve sensitive, rare, or irreplaceable resources. The change does not impact the current management plan. Considering some of the more detailed questions, the elimination of some sites may result in some conflict for visitors who find their favorite site gone. However, few visitors are likely to be affected, and there is a chance that repeat users may actually enjoy the changes. Existing data on use levels is adequate to anticipate future use needs in the area and to determine a necessary number of sites. Considering the whole situation, the management decision is likely to be on the low end of the sliding scale of analysis.

Example 2: Manage overnight use at a popular national park.
Consider the issue of planning for continued or increased overnight use in a popular national park with an iconic valley that does not meet current demand for overnight use. The valley contains campgrounds and various types of lodging, from tents and cabins, to motel-style lodging, to an upscale hotel. Amenities at overnight accommodations range from simple food facilities to tennis courts and a swimming pool, some of which are deemed inappropriate for a national park by some stakeholders. Some of the traditional campgrounds, located close to the river, have been closed to protect riparian ecological values—an action that is highly unpopular to some stakeholders. A new management plan is being developed and will include decisions about the amount of various types of overnight accommodation. This planning process is being closely followed by multiple stakeholder groups, each with a different opinion about what is appropriate.

This issue poses a high risk of consequences to sensitive, rare, or irreplaceable resources. This risk results from decisions about the amount of overnight use to allow and the mix of camping and lodging to provide. The concessionaire's business interests will be affected by decisions regarding the types of lodging and amenities. The amount of camping provided close to the river will affect visitor experiences, in both positive and negative ways, and will influence the ecological integrity of the riparian ecosystem. Decisions about the overall magnitude of overnight use will affect local economies, visitor experiences, and ecological resources. Stakeholders are well organized and capable of litigation. A high level of understanding of the existing conditions is needed for the plan to be successful. This situation suggests the need for a high level of analysis and certainty and a well-documented rationale, placing it on the high end of the sliding scale of analysis. Table 2 provides an example of a completed decision support tool for this particular issue.

Table 2. Example of a completed decision support tool for determining the location of a project on the sliding scale of analysis: Manage overnight use at a popular national park

Decision Support Tool	RATING QUESTIONS	RATIONALE	HIGH MODERATE LOW
Project: Manage overnight use at a popular national park			
1	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **natural** resources?	Some of the traditional campgrounds, located close to the river, have been closed to protect riparian values.	High
2	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **cultural** resources?	Much of the current camping areas and resorts are considered historic structures, and there are several prehistoric sites in the valley.	High
3	What is the likelihood of imminent and significant changes to the natural or cultural resources?	There are minimum risks to natural and cultural resources since those risks can be mitigated.	Moderate
4	What is the likelihood of imminent and significant changes to **visitor experience?**	Significant changes to visitor experience are expected.	High
5	How will the issue affect other aspects of land management in the area or surrounding areas?	There is the potential for a large regional impact both economically and regarding visitor experiences.	High
6	What is the geographic extent of the issue's impacts? Scales of impacts include: national, regional, state, local/county, and site or project.	This project scope is national.	High
7	What is the relative interest of stakeholders affected by the action? Stakeholders may include: local communities, general public, special interest groups, recreational visitors, commercial users, traditional-subsistence users, tribes, and others.	The process is being closely followed by multiple stakeholder groups, each with a different opinion about what is appropriate.	High
8	Is the impact temporary (low) or long lasting (high)?	The impact from implementation will be long lasting.	High

Table 2. Continued

CRITERIA - Use the ratings assigned to questions 1-8 to evaluate the following 4 sliding scale criteria. Combine those criteria into a single qualitative rating (high, moderate, or low) of the project's appropriate location on the sliding scale.

	CRITERIA	RATIONALE	HIGH MODERATE LOW
A	**Issue Uncertainty**	Resource conditions and potential impacts are well understood; however, how the issue will affect visitor experiences and surrounding communities is less certain.	Moderate
B	**Impact Risk**	There are significant natural resources, cultural properties, and visitor experiences involved with this issue.	High
C	**Stakeholder Involvement**	The process is being closely followed by multiple stakeholder groups, each with a different opinion about what is appropriate.	High
D	**Level of Controversy**	All potential solutions will be considered controversial by one or several stakeholders, and there is a history of litigation for this park.	High
	Location on the Sliding Scale		**High**

Example 3: Decide capacity in a low-use remote river setting.

Consider a river located in a remote, primitive setting that has been designated as a wild and scenic river and, therefore, must have a comprehensive management plan that addresses user capacity (see www.rivers.gov for guidance on comprehensive management plans and associated legal requirements). Recreational use of the river is low due to the remote location and difficult access, and there is no expectation that use will increase in the foreseeable future. Based on current use levels, one group typically applies for a river use permit every 2 weeks during the summer season. The typical group size is less than 12. The group size is naturally limited by the size of the aircraft that private parties must use to access the launch sites. Designated campsites are not available. However, ample nondesignated camping locations are available along the river, which give visitors the opportunity to disperse and avoid contact with other groups. Typically, use levels are low enough that areas recover from campsite use within one season, and previous use is not noticeable the next season. Current natural and cultural resource conditions and visitor experiences through the river corridor are within acceptable thresholds. The plan is not likely to generate controversy because the visitor access and local guide services will not be significantly affected. The analysis will be based on local expert knowledge and professional judgment and will draw on plans and research from similar rivers and primitive settings. The background information regarding this issue suggests a low level of analysis, which places it at the low end of the sliding scale. Table 3 provides an example of a completed decision support tool for this particular issue.

Table 3. Example of a completed decision support tool for determining the location of a project on the sliding scale of analysis: Decide capacity in a low-use remote river setting

Decision Support Tool	RATING QUESTIONS	RATIONALE	HIGH MODERATE LOW
Project: Decide capacity in a low-use remote river setting			
1	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **natural** resources?	While a comprehensive survey has not been completed, a literature search turned up no natural resources of concern.	Moderate
2	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **cultural** resources?	While a comprehensive survey has not been completed, a literature search turned up no cultural resources will be affected.	Moderate
3	What is the likelihood of imminent and significant changes to the natural or cultural resources?	Current natural and cultural conditions through the river corridor are within acceptable thresholds.	Low
4	What is the likelihood of imminent and significant changes to **visitor experience?**	Visitor access and local guide services will not be significantly affected.	Low
5	How will the issue affect other aspects of land management in the area or surrounding areas?	With such a low amount of anticipated use, there should not be any issues with the surrounding areas.	Low
6	What is the geographic extent of the issue's impacts? Scales of impacts include: national, regional, state, local/county, and site or project.	The geographic extent is local.	Low
7	What is the relative interest of stakeholders affected by the action? Stakeholders may include: local communities, general public, special interest groups, recreational visitors, commercial users, traditional-subsistence users, tribes, and others.	There are few stakeholders, and visitor access and local guide services will not be significantly affected by any possible decision.	Low
8	Is the impact temporary (low) or long lasting (high)?	The completion of a plan will provide long-lasting guidance for the river.	Moderate

Table 3. Continued

CRITERIA - Use the ratings assigned to questions 1-8 to evaluate the following 4 sliding scale criteria. Combine those criteria into a single qualitative rating (high, moderate, or low) of the project's appropriate location on the sliding scale.

	CRITERIA	RATIONALE	HIGH MODERATE LOW
A	**Issue Uncertainty**	While there is some uncertainty about current conditions associated with use patterns, the difficultly of access and low levels of use mitigate this criteria.	Low
B	**Impact Risk**	Low levels of use limit the risk of impacts.	Low
C	**Stakeholder Involvement**	Low number of stakeholders and no significant change for river users and outfitters.	Low
D	**Level of Controversy**	No controversy is expected.	Low
	Location on the Sliding Scale		**Low**

Example 4: Decide capacity in a high-use river setting.

Consider a newly designated wild and scenic river located in a wilderness area that is easily accessible and offers outstanding whitewater recreational opportunities. Numerous commercial guides operate on the river, and a high level of private use occurs. A mix of private recreational activities includes whitewater kayaking, rafting, fishing, scenic viewing, and picnicking. High use has impacted natural resources and reduced opportunities for solitude. Proposed management actions for the affected areas are designed to limit encounters, separate potentially conflicting users (boaters and others), and address ecological impacts (user-created trails and nondesignated camping locations) and related aesthetics (litter). Decisions to reduce or restrict recreational use, in order to maximize solitude and preserve natural resources, will affect both private and commercial users on the river. These management actions are being addressed in a revision to the comprehensive management plan and are needed due to the level of impacts as documented by previous monitoring efforts. The planning process is being closely followed by multiple stakeholder groups.

Rafters enjoying river rapids

These issues pose a high risk of consequences to physical, biological, social, and managerial attributes. On one hand, restricting the use levels of commercial outfitters in the area may have both positive and negative impacts. On the other hand, maintaining current use levels is impacting the resource quality and the social setting (solitude). Any selected alternative is likely

to result in substantial change to the recreational use of the river. While other whitewater recreational opportunities exist in the area, this wild and scenic river offers unique wilderness opportunities. However, these opportunities are threatened by the current level of use. Current resource and social conditions are approaching thresholds, according to the comprehensive management plan. Stakeholders are well organized and capable of litigation. A high level of certainty is necessary to make defensible decisions, which places this issue on the high end of the sliding scale of analysis. Table 4 provides an example of a completed decision support tool for this particular issue.

Table 4. Example of a completed decision support tool for determining the location of a project on the sliding scale of analysis: Decide capacity in a high-use river setting

Decision Support Tool	RATING QUESTIONS	RATIONALE	HIGH MODERATE LOW
Project: Decide capacity in a high-use river setting			
1	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **natural** resources?	While a comprehensive survey has not been completed, a literature search turned up no natural resources of concern.	Moderate
2	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **cultural** resources?	While a comprehensive survey has not been completed, a literature search turned up no cultural resources will be affected.	Moderate
3	What is the likelihood of imminent and significant changes to the natural or cultural resources?	High use has impacted natural resources.	High
4	What is the likelihood of imminent and significant changes to **visitor experience?**	High use has reduced opportunities for solitude.	High
5	How will the issue affect other aspects of land management in the area or surrounding areas?	Decisions to reduce or restrict recreational use, in order to maximize solitude and preserve natural resources, will affect both private and commercial users on the river and may disperse use to other rivers regionally; decisions will also affect the local economy.	High
6	What is the geographic extent of the issue's impacts? Scales of impacts include: national, regional, state, local/county, and site or project.	The river's popularity makes it regional in scope.	Moderate

Table 4. Continued

	RATING QUESTIONS	RATIONALE	HIGH MODERATE LOW
7	What is the relative interest of stakeholders affected by the action? Stakeholders may include: local communities, general public, special interest groups, recreational visitors, commercial users, traditional-subsistence users, tribes, and others.	The planning process is being closely followed by multiple stakeholder groups.	High
8	Is the impact temporary (low) or long lasting (high)?	Any selected alternative is likely to result in substantial change to the recreational use of the river for the long term.	High

CRITERIA - Use the ratings assigned to questions 1-8 to evaluate the following 4 sliding scale criteria. Combine those criteria into a single qualitative rating (high, moderate, or low) of the project's appropriate location on the sliding scale.

	CRITERIA	RATIONALE	HIGH MODERATE LOW
A	**Issue Uncertainty**	A high level of certainty is present since issues have been clearly defined and data exists to confirm evaluation of impacts.	Low
B	**Impact Risk**	High use has impacted natural resources and reduced opportunities for solitude.	High
C	**Stakeholder Involvement**	The planning process is being closely followed by multiple stakeholder groups.	High
D	**Level of Controversy**	The possibility of restricting use levels of commercial outfitters will likely be seen as highly controversial.	High
	Location on the Sliding Scale		**High**

SUMMARY OF THE SLIDING SCALE

Applying a sliding scale of analysis is important for the flexibility to address issues based on level of uncertainty, risk of impacts to resources and visitor experiences, degree of stakeholder interest, and level of controversy/potential for litigation. History suggests an agency decision is more likely to withstand a challenge when the process for making the decision is followed, well documented, and explains the analysis used in supporting that decision. Ultimately, determining the appropriate level of analysis for applying this framework is a matter of careful assessment and professional judgment.

Applying the framework at the appropriate level of analysis requires practice, targeted expertise, and knowledge of the area's resources and visitors.

3

Chapter 3: Framework Elements

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Chapter 3: Framework Elements

This framework is divided into four major elements: (1) Build the foundation; (2) Define visitor use management direction; (3) Identify management strategies; and (4) Implement, monitor, evaluate, and adjust. These represent the most basic and critical elements for successfully managing visitor use. In many cases, these basic elements are applicable across the entire breadth of visitor use management projects, regardless of agency. Each element includes steps that provide more detailed direction on the various management topics that support their achievement (see figure 2). Finally, several concepts are universal to the implementation of the framework including application of law, agency policy, the sliding scale, and public involvement (see figure 1).

It is important to note that although presented in a linear order, these elements and steps are highly iterative in nature. As noted previously, this framework is intended to be applied in a flexible manner using the sliding scale concept. The strengths of this framework are that it is iterative, adaptable, and flexible.

Figure 1. Overview of the Visitor Use Management Framework

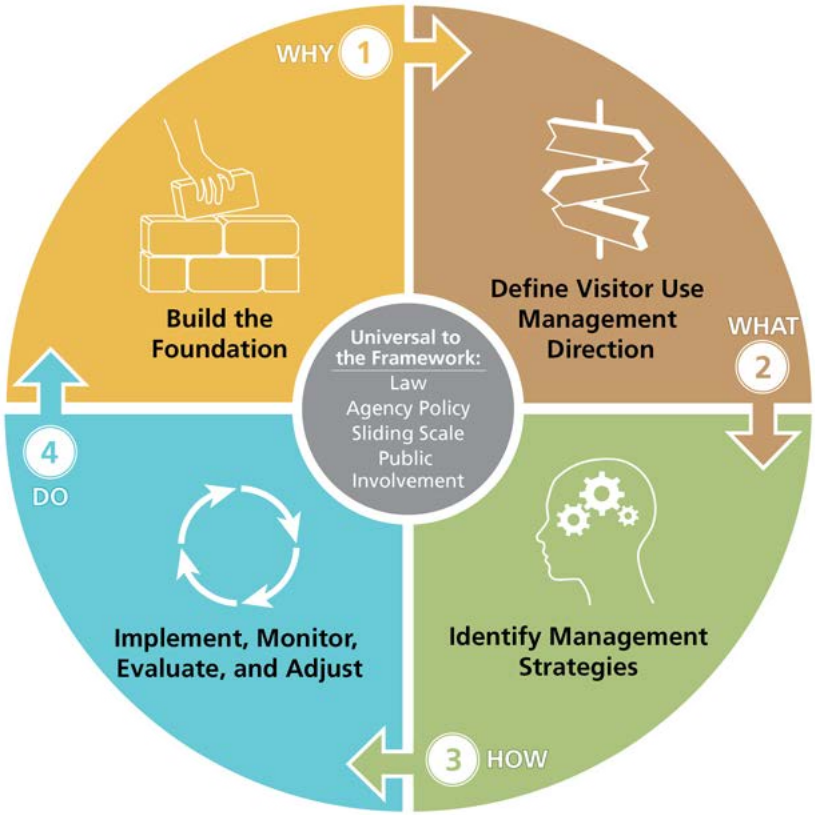


Figure 2. Elements and steps of the Visitor Use Management Framework

Steps:

1. Clarify project purpose and need.
2. Review the area's purpose and applicable legislation, agency policies, and other management direction.
3. Assess and summarize existing information and current conditions.
4. Develop a project action plan.

Outcome: Understand why the project is needed, and develop the project approach.

Steps:

5. Define desired conditions for the project area.
6. Define appropriate visitor activities, facilities, and services.
7. Select indicators and establish thresholds.

Outcome: Describe the conditions to be achieved or maintained and how conditions will be tracked over time.

Steps:

8. Compare and document the differences between existing and desired conditions, and, for visitor use-related impacts, clarify the specific links to visitor use characteristics.
9. Identify visitor use management strategies and actions to achieve desired conditions.
10. Where necessary, identify visitor capacities and additional strategies to manage use levels within capacities.
11. Develop a monitoring strategy.

Outcome: Identify strategies to manage visitor use to achieve or maintain desired conditions.

Steps:

12. Implement management actions.
13. Conduct and document ongoing monitoring, and evaluate the effectiveness of management actions in achieving desired conditions.
14. Adjust management actions if needed to achieve desired conditions, and document rationale.

Outcome: Implement management strategies and actions, and adjust based on monitoring and evaluation.

Element 1: Build the Foundation

Building the foundation is the first of the four elements of the framework. The purpose of this element is to understand why a project is relevant and how best to approach the project.

The steps in this element help managers understand what needs to be done, how to organize the project, and how to define the resources needed to complete the project. Use the sliding scale to determine the amount of effort needed for the steps in this element. Completion of this element establishes a foundation for the other three elements of the framework and is a key component in developing a solid process.

Element 1 includes four interrelated steps:

Step 1. Clarify the project purpose and need.

Step 2. Review the area's purpose(s) and applicable legislation, agency policies, and other management direction.

Step 3. Assess and summarize existing information and current conditions.

Step 4. Develop a project action plan.

STEP 1. CLARIFY THE PROJECT PURPOSE AND NEED

STEP 1

The purpose of this step is to clarify the scope and focus of the project. The importance of this step cannot be overemphasized. The scope of a project may range from localized issues, such as small-scale construction or maintenance, to comprehensive management planning. The outcome of this step is a purpose and need statement, which is an expression of the visitor use management opportunities and issues (subsequently referred to as issues) to be addressed.

> The success or failure of many projects often can be traced to how well the project purpose and need was described and understood.

The project's purpose and need are derived in part from an area's purpose(s), legislative mandates, and issues uncovered during scoping. Writing the purpose and need statement is a dynamic and iterative process and may evolve with greater clarity while working through the other steps. In the purpose and need statement, explain the nature of the overarching issue and the compelling reason for action, not the proposed action or solution. Clarify the issues (see the subsequent description for determining and analyzing the project issues).

This step provides the foundation for identifying management objectives, strategies, and specific actions (see element 3). When developing a NEPA document, this step provides the foundation for a reasonable range of alternative management decisions.

Determine the Project Issues

Issues are often presented as opportunities or points of controversy with adverse effects to physical, biological, social, and managerial attributes. Identify issues early in the process, and carefully document them by writing issue statements (an example of an issue statement is provided in appendix B under step 1). This is essential for determining which issues are within the scope of the project and clarifying the project purpose and need. Not all issues can or should be addressed in a single process or project.

Analysis of Issues

Consider the following questions as an issue analysis tool and a way to formulate and shape the issue statements:

Enjoying a guided horseback riding opportunity

- What is creating the issue or opportunity?
  - Amount or timing of visitor use?
  - Changes in visitor preferences and interests for specific activities?
  - Changes in behavior of visitors?
  - Operational change that allows for a new opportunity?
  - Changes in the status, trends, or vulnerability of the area's natural and/or cultural resources?
  - Budget changes that impact the ability to manage visitor use effectively?
- What key values or desired conditions could be affected?
- Who is or could be affected by the issue? What is known about their interests and concerns?

STEP 2. REVIEW THE AREA'S PURPOSE AND APPLICABLE LEGISLATION, AGENCY POLICIES, AND OTHER MANAGEMENT DIRECTION

STEP 2

The purpose of this step is to identify, review, and become familiar with an area's stated purpose(s) and the authorities that established it. Every area has at least one unique purpose or special value associated with it that differentiates it from other areas. In some instances, the purpose of an area may be included in legislation designating the area or in planning documents, such as foundation documents, comprehensive conservation plans, land management plans, land use plans, and other long-range planning documents. In other instances, the

purpose of an area may be stated as part of the area's vision or mission or may be clarified in case law. Typically, specific policies and management directions for the area reflect its fundamental legal purposes.

Other sources to consult may include:

- Executive orders
- Presidential proclamations
- Secretarial orders
- Public land orders
- Cooperative agreements
- Legislative history

Pay special attention to agency policies, regulations, and management direction (see chapter 4). These provide an interpretation of congressional intent and implementation guidance for agency planners and managers.

Review the area's history to better understand the background on the area's establishment. Also, review any further documentation of the area's significance or niche and special values to better understand what makes the area important and unique within the larger region and/or system of federally managed lands and waters. Use this collective information as guidance and context for the project.

STEP 3. ASSESS AND SUMMARIZE EXISTING INFORMATION AND CURRENT CONDITIONS

The third step is to conduct information assessments to clearly define the project area and to identify which information needs and data gaps are most important. It is vital to develop a clear understanding of the project area, what affects it, and how the area influences other areas and people beyond its boundaries.

Define the Project Area

Clearly delineate the affected area to help determine how much investment is needed for reviewing existing data and assessing current conditions. Study existing maps and create new maps as needed. Visit the area.

Consider the geographic scale of the area. Generally, the broader the scale, the more general the data collected (e.g., regional tourism data). At the local or site-specific scale, the data need to be more detailed to make accurate evaluations and decisions (e.g., number of permits issued for the site).

For relatively large project areas, consider:

- The role of the area in the larger ecosystem or landscape.
- Current status and condition of all natural, cultural, and recreational resources and visitor experience opportunities in the area.
- Threats to significant resources and visitor experiences.

Some cultural resources can be highly vulnerable to visitor use

- Public use and recreation trend data.
- Existing administrative resources and operations, including staffing, funding, and public use facilities.

For less complex projects, focus assessments on data from the specific site or a comparable site with a similar visitor use management issue. The amount of assessment work will vary based on the scope of the project and the nature of the decision, including where the project falls on the sliding scale (see chapter 2).

Organize the Assessment

Coordinate as needed with other federal and state agencies, private organizations, user groups, tribes, and research institutions to obtain existing data and other pertinent information. Use the project purpose and need in conjunction with the area's physical, biological, social, and managerial attributes to determine the value of data collected and how much information is relevant to the project. Not all information will be useful.

Knowing what information is needed helps prioritize collection and assessment. Focus on information to help the project team, stakeholders, and decisionmakers reach a common understanding of the issues. Make the assessment account for major data gaps and help identify necessary management actions. Be sure to gather and synthesize information on those aspects of the project that may be controversial or of significant interest to stakeholders. Consider the costs and benefits of gathering and synthesizing existing data versus collecting new data at different scales. Use the sliding scale approach when making these decisions (see chapter 2).

Determine how each dataset will be used in the project and what questions it will help answer. The following questions may help determine data needs:

- Which data sources are necessary to make defensible visitor use management decisions?
- How will the identified data inform the project?
- How much confidence is there in existing data?
- Based on the previous questions, does new data need to be collected, or will existing data suffice? If new data is needed, can it be collected with existing resources, or will outside or technical assistance be required?

Document the Assessment

After completing the assessment and data inventory work, synthesize, summarize, and document the key information in a useful format. Produce an assessment document that records the most important physical, biological, social, and managerial attributes and values for the area or the site. Identify and map the opportunities and challenges for the area in descriptive terms, such as areas of land that are both suitable and desirable for recreational activities and other uses by visitors. Use the assessment document during the course of the project and as part of the final project documentation.

STEP 4. DEVELOP A PROJECT ACTION PLAN

STEP 4

The purpose of this step is to organize and develop a project action plan to identify who will accomplish the project and when. Project team membership is finalized based on needed expertise. Team members may include recreation planners, resource managers, ecologists, social scientists, landscape architects, communication/interpretive specialists, senior leadership, and administrative officers. The team now has enough information to clarify the scope of the project, including schedules and budgets. Parts of this step may be developed while working through steps 1, 2, and 3. Use the sliding scale approach to ensure the amount of investment in project planning and the number of people involved, including stakeholders, is commensurate with the scope of the project and the nature and magnitude of the decision (see chapter 2).

Depending on the specifics of the project, the project team size will likely vary. In the case of a small project with a lower level of analysis needed, the team could conceivably be a single person. For more complex projects with a higher level of analysis needed, the project team may consist of agency specialists and stakeholders.

The project team and the decisionmakers must discuss and agree on the quality of deliverables, timelines, and amount of resources to expend on the process. When developing a project action plan:

- Organize the team and assign associated roles and responsibilities.
- Identify the resources needed and available to tackle the project.
- Develop the timeline, including schedules, project milestones, and deliverables.
- Develop a public involvement strategy.

Public Involvement Strategy

Most projects will benefit from some level of public participation. Develop and follow a public involvement and outreach strategy to ensure the proper level of public participation and meaningful input. Use the sliding scale approach (chapter 2) along with applicable laws and regulations to determine which level of public participation is appropriate for the project.

Invest substantial time in developing a public involvement plan for a complex and potentially controversial project that includes environmental analysis at the environmental assessment or environmental impact statement level. In the case of a smaller and less complex

The Council on Environmental Quality's "Collaboration in NEPA: A Handbook for NEPA Practitioners" outlines a spectrum of public participation, adapted from the International Association for Public Participation's public participation spectrum (www.iap2.org), that describes the increasing levels of public input, including inform, consult, involve, and collaborate (CEQ 2007).

project (e.g., categorical exclusion or no NEPA analysis), the team may contact key individuals and partners to gauge the level of public participation that may be desired.

Gather pertinent information on all project stakeholders, such as:

- Interest levels
- Quality of relationships between stakeholders and area managers
- Length of time in the area
- Use history
- Preferred activities
- Sense of place and level of attachment

Design the public involvement and outreach plan to communicate clearly how and when the public will be invited to participate. Outline how the project team will interact with the public and address their concerns during the process. Identify appropriate techniques and materials to use to involve the public at various stages of the process. Also, determine if the Federal Advisory Committee Act applies to the public participation process (BLM 2005; GSA 2012).

SUMMARY OF ELEMENT 1

SUMMARY

Building the foundation is the first element of the framework process—a key component in developing a solid project. The information in this section helps the team understand how to organize the project and the resources needed to complete it. Major steps in this element include clarifying the purpose and need of the project; reviewing the area's purpose and reviewing establishing legislation, agency policies, and other management direction; assessing and summarizing existing information and current conditions; and developing a project action plan, including a plan for outreach and public involvement.

Project converted an old railroad line into a mountain bike trail

Element 2: Define Visitor Use Management Direction

The purpose of this element is to answer the questions: What are we trying to achieve, and how will conditions be tracked over time?

The products that result from element 2 include:

- A narrative that describes desired condition(s) for a geographic area or for zones within a geographic area.
- Lists of visitor activities, facilities, and services that are appropriate, appropriate with restrictions, or not appropriate.
- An indicator or indicators that managers are committed to monitor over time to ensure resource conditions and opportunities for visitor experiences remain consistent with desired conditions (i.e., within established thresholds).

Element 2 has three interrelated steps:

Step 5. Define desired conditions for the project area.

Step 6. Define appropriate visitor activities, facilities, and services.

Step 7. Select indicators and establish thresholds.

Completion of all three steps constitutes "visitor use management direction." This direction may be developed as part of a programmatic document, such as a National Park Service general management plan, U.S. Forest Service land management plan, Bureau of Land Management resource management plan, National Oceanic and Atmospheric Administration national marine sanctuary management plan, U.S. Army Corps of Engineers master plan, or U.S. Fish and Wildlife Service comprehensive conservation plan. However, visitor use management direction may be more fully developed as part of a plan for a specific resource or activity, such as a comprehensive management plan for a wild and scenic river, climbing management plan, wilderness management plan, travel management plan, or other specific plan. Developing this direction is not a stand-alone process but, rather, is embedded within appropriate agency planning guidance for managing recreation or visitor use, including NEPA compliance and public involvement. Chapter 4 provides more information about specific agency planning processes.

There are several benefits to developing clear visitor use management direction. First, managers can communicate a positive vision for the future. Managers are forced to get out of an operational mode and delve into the task of articulating values and setting a vision for the future (Cahill 2003). While challenging, taking the time to do this work upfront creates shared goals and greatly reduces the potential for conflict when plans are implemented. Second, clear visitor use management direction provides a defensible link for future management actions

and accountability. With clear understanding about the conditions to be achieved, the choice and purpose of management actions is more evident. Third, managers can ensure they are managing by design, not default.

Well-defined visitor use management direction communicates a positive vision for the future, provides a clear link for future management actions, and guards against incremental or haphazard change.

Defining desired conditions provides long-term direction about the resource conditions and visitor opportunities to be provided. Clear, purposeful management helps focus action and guards against incremental or haphazard change that may occur when managers are reacting only to the issue of the day. Many managers have learned that once undesirable change has occurred and use has become established, it is exceedingly difficult to alter visitor use patterns. The key to avoiding this situation is to proactively and strategically develop clear, meaningful visitor use management direction so that change can be guided in a planned way to achieve desired results.

As has been emphasized throughout this framework, a sliding scale approach is paramount (see chapter 2). For a relatively simple project, this element might produce a short description of desired conditions and one qualitative indicator with a threshold, developed using available information. At the complex end of the scale, the project area might be divided into zones, each of which has a description of desired conditions, appropriate uses, and a set of quantitative indicators and thresholds that have been developed with considerable analysis and potentially a large research investment.

STEP 5

STEP 5. DEFINE DESIRED CONDITIONS FOR THE PROJECT AREA

This step is fundamental to answering the question: What are we trying to achieve? Desired conditions are defined as statements of aspiration that describe resource conditions, visitor experiences and opportunities, and facilities and services that an agency strives to achieve and maintain in a particular area. Such statements are often built on the foundational language that legally established the area. Desired conditions describe what conditions, outcomes, and opportunities are to be achieved and maintained in the future, not necessarily what exists today. Desired condition descriptions paint a picture of what the particular area will look like, feel like, sound like, and function like in the future. They do not answer the question of how conditions will be maintained or achieved—that comes later.

A range of opportunities is not always needed for some areas. However, for large geographic areas or areas where there is potential to provide a diverse range

Write the desired conditions to answer the question: What are we trying to achieve?

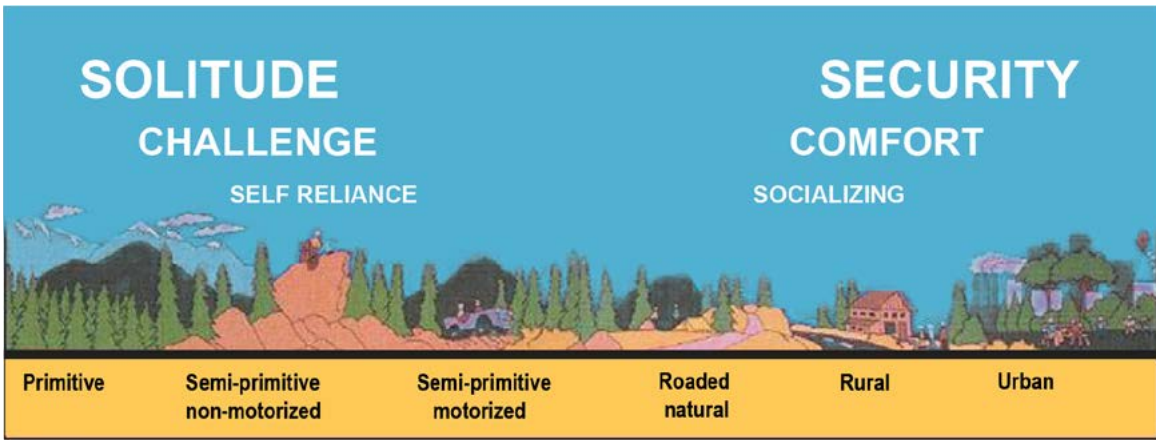
of opportunities, the project area is typically divided into management areas or "zones," each with a description of desired conditions that may be arranged along a continuum of visitor opportunities to be provided. Developing a spectrum of zones is done within the bounds of the fundamental purpose of the area, such as the requirement to protect wilderness character in wilderness areas or to protect and enhance outstanding remarkable values on a wild and scenic river. While developing desired conditions for different "zones" makes implementation somewhat more complex, the advantage is that managers can offer a spectrum of opportunities to meet the needs of a broader array of diverse public interests (Haas et al. 1987; Wagar 1964; ORRRC 1962). Zoning stems from the reality that not all areas have the same ecological sensitivity (thus, some places require more protection than other places); not all areas have the same attractiveness; and people are not all seeking the same opportunities (thus, providing a diversity of settings offers more choices). The key is to develop a zoning scheme that recognizes the desired diversity across the landscape, while avoiding zoning that is more complex than can be realistically managed for on the ground.

A highly developed area to accommodate high visitation

A guided adventure along a river

The concept of providing a diversity of settings is rooted in the Recreation Opportunity Spectrum (Clark and Stankey 1979). The spectrum is based on the premise that managers can provide a continuum of recreation opportunities by focusing on a combination of physical, biological, social, and managerial attributes, collectively referred to as the "setting." The diversity of settings included in the Recreation Opportunity Spectrum range from highly developed (i.e., urban) to very undeveloped (i.e., primitive), or as Nash (1973) phrased it, "from the paved to the primeval" (figure 3). Different zones may be delineated by landscape characteristics, such as watershed boundaries; or zones may be delineated based on social attributes, such as remoteness from infrastructure or services; or they may be delineated based on some combination of topographic landform and social characteristics. Zoning can also be based on a temporal scale, particularly if different seasons (e.g., summer versus winter) offer a very different mix of settings and different opportunities across the landscape.

Figure 3. Illustration representing the range of settings included in the Recreation Opportunity Spectrum



An example of a desired condition statement for a nonmotorized trail system close to a population center might read:

The area is predominately natural with the evidence of human development and impacts subservient to the natural environment. A sustainable, well-developed trail network with associated trailhead facilities is provided to focus recreation use near town where such use can be more successfully managed. Visitors have opportunities to connect with nature through natural sounds, smells, and views of largely undeveloped landscapes. Although recreation use is high compared with surrounding areas, a diversity of experiences is still available. Settings range from places where social interaction predominates to places where interaction with other people is less frequent and the area feels somewhat remote—particularly for those coming from an urban environment. Interactions among trail users are generally positive with a sense of unity in the opportunity of having access to a beautiful natural place. Opportunities to learn about nature and participate in the care of the area are readily available, and visitors act in a way that conveys respect for wildlife and the land. Onsite management is apparent to ensure resource protection, public safety, and minimal visitor conflict. Information about the area is readily available, and the need for advanced outdoor skills is relatively unimportant. Wildlife populations continue to thrive, and conflicts with mountain lions, bears, and moose are avoided so that animals and people are not harmed. Streams are free flowing with well-developed riparian vegetation and largely intact streambanks. Plant communities retain natural integrity with the presence of weeds confined to small localized spots that can be readily treated.

Hikers getting oriented before their hike

Getting Started

1. Begin with the foundational information developed in element 1 of this framework, particularly the information regarding the area's purpose, legislative mandate, unique values, and role in a regional or national context (i.e., the area's "niche"). Build on this information, and connect desired conditions to the specific resource conditions, values, and experiences that are crucial to achieve.

2. Ask the project team and involved public to imagine returning to this place in the future, and pose the following questions:

   - What key values need to be protected?
   - What is meaningful about the area?
   - What differentiates this area from other areas both in terms of natural resource values and in terms of visitor experiences and unique opportunities?

3. Use examples of desired conditions from other plans to help get the discussion started. Involve creative writers. The more compelling and meaningful the description of desired conditions, the easier it will be to identify and mobilize efforts to implement on-the-ground actions.

4. If engaged citizens are focused on specific issues or actions, use the following question to dig deeper: What will be achieved when the issue is resolved or the action is implemented? If people say that they want conditions to stay the same, ask what is important about existing conditions that need to be maintained or managed for in the future.

5. Match the complexity of desired condition descriptions with the complexity of the project as described on the sliding scale and management capability. Focus on conditions that can be reasonably managed or influenced. For relatively simple situations or small geographic areas, developing one description of desired conditions may be perfectly adequate to guide future visitor use management.

6. If the planning area is divided into zones, (1) use topographic or definable features so that zone boundaries are recognizable in the field; (2) do not create tiny zones around specific features that inadvertently result in creating an incompatible setting for the visitor experience; and (3) although existing infrastructure may well influence future opportunities, avoid allowing the existing infrastructure to be the primary driver of the mapping.

Once the desired condition statement is developed, use the following criteria as a final test. If the statement fits these criteria, then the description of desired conditions should be effective (Cahill 2003). The criteria include:

- **Results oriented:** Addresses conditions rather than specific management actions—the "what," not the "how."
- **Focused:** The desired condition statement focuses on the fundamental resources and values of the area—the resources, visitor experiences, and opportunities that are fundamental to achieving the area's purpose.
- **Integrated:** The desired condition statement integrates physical, biological, social, and managerial attributes to describe resource conditions and visitor experiences or opportunities that are ecologically, socially, and economically sustainable.
- **Future oriented:** The desired condition statement considers a 10-year-plus timeframe and allows some flexibility over time, considering dynamic ecological systems, climate change, and trends in visitor demographics and activities.
- **Responsive:** The desired condition statement reflects the range of opportunities consistent with legal requirements and is responsive to input received from the engaged public.
- **Useful:** The desired condition statement is clearly worded and detailed enough that managers and the public have a shared understanding of the short- and long-term outcomes of implementing the desired condition statement.

STEP 6. DEFINE APPROPRIATE VISITOR ACTIVITIES, FACILITIES, AND SERVICES

STEP 6

This step further answers the question: What are we trying to achieve? The product of this step provides more specific direction for the types of visitor activities, facilities, and visitor services that are consistent with and complement desired conditions. The intent is not to provide an exhaustive list but, rather, to provide some examples to help convey a broad, more complete picture of desired conditions for the area. This step is considerably intertwined with desired conditions so the information developed in this step may be incorporated into the description of desired conditions. This information provides useful direction to help managers specifically understand which activities, facilities, and services are appropriate versus those that are not appropriate when site-specific issues arise.

Importantly, this step recognizes that there is a connection between what is appropriate in a particular project area and the purpose of the area; the desired condition influences the type of activity, facility, or service. For example, snowmobile use may be considered not appropriate or only appropriate with restrictions in an area where the desired condition is to provide a quality backcountry skiing opportunity. Likewise, developed restrooms and picnic shelters may not be considered appropriate in an area where the desired condition is to provide a primitive, undeveloped camping experience. In a remote area intended to provide outstanding opportunities for self-reliance and personal challenge or discovery, commercial services may not be considered appropriate.

At the site-specific project level, appropriate uses already may have been identified in a higher level plan. However, if the project entails preparing a broad, general plan, identifying appropriate uses will likely need to be accomplished. At the low end of the sliding scale, in which there is only one desired condition description for the project area, the product of this step would be a simple list of visitor activities, facilities, and services that are considered appropriate, appropriate with restrictions, or not appropriate. At the high end of the sliding scale, the product of this step may be displayed as a table that lists possible visitor activities, facilities, and services for each of the different "zones" and may include detailed rationale for determining which activities, facilities, and services are appropriate versus not appropriate.

Getting Started

Seek examples of appropriate uses from other visitor use projects. Publications about the Recreation Opportunity Spectrum can provide useful guidance on potential activities, facilities, and services that may or may not be appropriate within a particular setting (Clark and Stankey 1979; USFS 1982). Individual agencies may have specific guidance or screening criteria to help determine the appropriateness of various visitor activities, facilities, or services. Activities, facilities, or services that fall into the category of "appropriate with restrictions" are often those that generate a response of "it depends." For example, an activity that would only be appropriate if a seasonal or timing restriction is applied would fit in this category.

Visitors explore a cave

Dispersed camping along a river

Father and daughter enjoy an evening hunt

The following example of a nonmotorized trail system close to a population center shows the product for this step at the low end of the sliding scale. This information ties to the example of the desired condition statement provided in step 5:

- Nonmotorized, day-use recreation activities, developed trails, information boards, restrooms, small interpretive structures, and some fully accessible trails are **appropriate** uses.
- Off-road motor vehicles, developed drinking water sources, developed picnic facilities, and overnight camping are **not appropriate**.
- Recreation events are **appropriate with restrictions** to minimize conflict with public use.

Table 5 provides an example of a product at the high end of the sliding scale for this step—a hypothetical example of a historical park with multiple zones and descriptions of the park's respective desired conditions and appropriate activities and facilities.

Table 5. Example of a product from steps 5 and 6—a historical park's desired conditions and appropriate activities and facilities for multiple zones

	BACK COUNTRY ZONE	DEVELOPED ZONE
Overall Natural Resource Desired Condition	Natural and physical resources are intact, and natural ecological processes sustain the integrity of these resources.	Natural and physical resources are relatively intact but may be highly modified and manipulated to accommodate and withstand high levels of visitor use. Natural ecological processes may be controlled to protect human life and infrastructure.
Overall Visitor Experience Desired Condition	Visitors have opportunities to be immersed in a primitive and wild environment and experience natural sounds, a sense of remoteness, self-reliance, and self-discovery. Encounters with other visitors are low.	Visitors have a structured, educational experience. Amenities and services are available to welcome and orient visitors to the park and support day-use activities. Social interaction with other visitors may be high but does not interfere with learning about the park.
Activities	Walking, hiking, and viewing cultural and natural resources are appropriate activities.	Appropriate visitor activities include walking, natural and cultural resource observation, educational programs, informal learning, picnicking, and photography. Special events are allowed with a permit.
Facilities	Only the minimal facilities necessary to protect resource values, including native surface trails and cairned routes, are appropriate.	Visitor support facilities, such as contact stations, exhibits, demonstration areas, parking areas, comfort stations, benches, sidewalks, and walking trails, are appropriate in this zone. Most facilities are accessible to visitors with disabilities.

	CULTURAL IMMERSION ZONE	GUIDED ADVENTURE ZONE	SENSITIVE RESOURCES ZONE
Overall Natural Resource Desired Condition	The natural elements of cultural landscapes reflect a specific time period(s) if essential for visitor understanding of a historic period(s), or they are managed to support visitor and staff activities for indepth interpretation of a historic period(s).	Natural and physical resources are intact, and natural ecological processes sustain the integrity of these resources.	Rare and exceptional natural resources are protected unless management is necessary to protect sensitive cultural resources. Natural ecological processes take precedence over visitor amenities.
Overall Visitor Experience Desired Condition	Visitors have the opportunity to be immersed in a historic setting. Visitors experience the sights, sounds, and activities that are evocative of the site's period of significance.	Visitors can explore park resources as part of a guided group. Intimacy with resources, learning, social interaction among the group, and the security of a guided experience are key elements of this experience.	Access to these areas is restricted. The visitor experience focuses on opportunities to learn that particularly sensitive resources are preserved for future generations.
Activities	Appropriate activities include walking, free play, viewing resources, and attending interpretive talks and demonstration programs.	Hiking and camping with a guide are appropriate activities.	Activities are appropriate with restrictions. Access is by permit only for activities including scientific research, ranger-led hikes, resource collection or use for traditional cultural activities, and resource monitoring.
Facilities	Trails (which could be surfaced), overlooks, small seating areas, and wayside exhibits are appropriate in this zone. Support facilities such as restrooms and small picnic areas may also be present.	Native surface trails and cairned routes are appropriate. Designated primitive campsites are also appropriate in this zone.	Facilities or developments for visitors are not appropriate in this zone.

Keep in mind, no matter what the complexity of the situation, developing an exhaustive list of all potential uses is not necessary and can be counterproductive. Anticipating all possible activities, given that interests will likely evolve with changing technology, is not practical. Since desired conditions are focused on the future, managers need to consider where foreseeable activities may and may not be accommodated in order to protect important resource conditions and visitor experiences.

Learning about a site through interpretation

STEP 7

STEP 7. SELECT INDICATORS AND ESTABLISH THRESHOLDS

This step answers the question: What are acceptable levels of impact from visitor use? Answering this question involves selecting monitoring indicators and establishing a threshold for each indicator. Indicators translate the broad description of desired conditions into measurable attributes that can be tracked over time to evaluate change in conditions. Thresholds ensure that conditions remain acceptable for the selected indicators.

This step provides transparency to the public and establishes the foundation for management accountability by focusing the monitoring effort on indicators that directly link to achieving desired conditions. All recreation activities cause some impact; the challenge is to determine the acceptable amount of change. The acceptable amount of change is established by defining the point at which visitor impacts to desired resource conditions and visitor experiences is anticipated to become enough of a concern that a change in management strategies or actions will be required to improve conditions. By monitoring conditions over time and clearly identifying when conditions become problematic, managers can implement programs to prevent unacceptable conditions.

> A key task in managing visitor use is committing to monitoring change over time.

Indicators are defined as specific resource or experiential attributes that can be measured to track changes in conditions so that progress toward achieving and maintaining desired conditions can be assessed. Thresholds are defined as minimally acceptable conditions associated with each indicator. Alternative terms for "threshold"—notably "standard" or "standard of quality"—have been used in many plans, visitor use frameworks, and academic publications.

The concept of thresholds is well established as part of monitoring programs associated with many natural resource disciplines (Guntenspergen 2014). Thresholds help managers avoid problems by clearly identifying when conditions would become unacceptable. As such, thresholds serve as a stop sign or a "line in the sand" letting managers and the public know that corrective action must be taken to keep conditions acceptable so that progress toward desired conditions can be achieved over time.

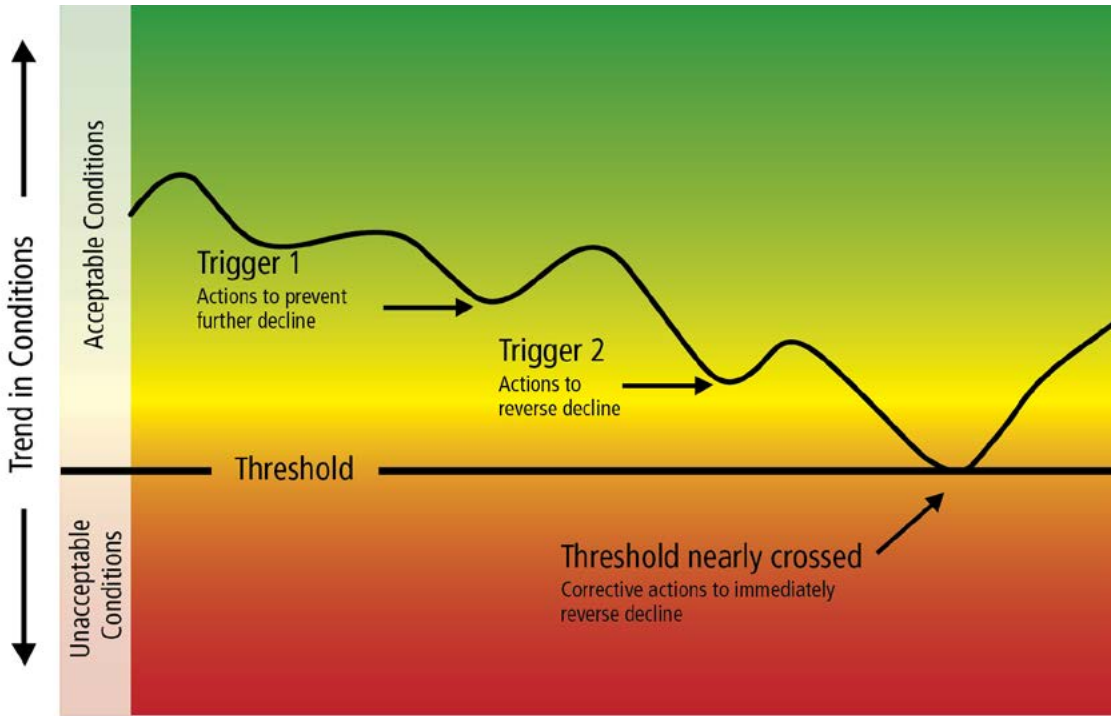
Two critically important concepts for thresholds are that (1) although defined as "minimally acceptable conditions," thresholds still represent acceptable conditions—not degraded or impaired conditions; and (2) establishing a threshold does not imply that nothing will be done prior to reaching the threshold.

Those conducting visitor use management should always strive to make progress toward meeting and maintaining desired conditions. Thresholds serve a critical role to alert when conditions are close to becoming unacceptable. In contrast, one role of objectives is to inform the positive direction, defining in measurable terms what will be achieved. Both concepts are useful to help achieve desired conditions over time. In situations in which managers want to define measurable outcomes for what should be achieved within specified timeframes, establish objectives linked to desired conditions. Like thresholds, objectives include an indicator and involve monitoring change over time. Objectives comply with SMART principles: specific, measurable, attainable, realistic, and timely.

Indicators and their associated thresholds define the focus of the monitoring effort.

The sliding scale approach is essential here. Monitoring is an essential component of good visitor use management. However, monitoring does not imply that a substantial research, staff, and funding investment is required. At the low end of the sliding scale, it may be sufficient to identify a coarse indicator that reflects one attribute managers believe will be useful to inform whether or not progress toward desired conditions is occurring. The threshold associated with the indicator may simply be a qualitative statement developed using professional expertise that describes what change in conditions would prompt more management attention and investment. At the high end of the sliding scale, selecting a set of quantitative indicators will likely be necessary along with establishing thresholds that are informed by a potentially large research investment and public engagement process. Additionally, in more complex projects or for particularly sensitive resources, triggers may be established in addition to thresholds. A trigger is defined as a condition of concern for an indicator that is enough to prompt a management response to ensure that desired conditions continue to be maintained before the threshold is crossed. Triggers and thresholds are related, but separate, values. A sensitive resource that requires close scrutiny may have multiple trigger points to ensure preventative management responses are taken to avoid eventually crossing the threshold (see figure 4).

Figure 4. Management triggers and thresholds in relation to trend in conditions



The product from this step includes the selection of an indicator or set of indicators with an associated threshold(s) that managers (1) are committed to monitor over time and (2) are committed to use to inform management actions so that desired resource conditions and visitor experiences are achieved. An "Indicators, Thresholds, and Monitoring Guidebook" (visitorusemanagement.nps.gov/VUM/Framework) serves as a companion to this framework with tips and examples to help select indicators, establish thresholds, and develop monitoring programs.

Example of Selecting Indicators and Establishing Thresholds

Many potential indicators could be used to assess change and progress toward achieving the desired condition in the example of a nonmotorized trail system close to a population center (see the example in step 5, which includes the desired condition statement). The project team might decide that the visitor impacts of most concern relate to (1) trail congestion and (2) the development of visitor-created trails accessing the stream that could wash sediment into streams. Because of this focus, the team selects two key indicators to track change over time:

1. Indicator: Number of trail encounters with other groups per day.

   Threshold: Individual groups encounter no more than 15 other groups on the trail per day at least 90 percent of the primary use season (May 1 through September 30).

2. Indicator: Number of visitor-created trails that access stream per mile of stream.

   Threshold: No more than two visitor-created trails exist per mile of stream.

The team also elects to include two objectives to help achieve the desired conditions. Objectives for the nonmotorized trail system might be:

1. At least 75 percent of the trail system mileage is cleared annually of debris, cleaning and repairing drainage structures where necessary.
2. Five educational or service programs are offered annually to give visitors the opportunity to learn about the natural history of the area and what they can do to minimize impacts and care for the area.

Getting Started

The following tips can help ensure success in selecting indicators and establishing thresholds:

1. Review desired condition statements and current monitoring or recording practices. What are the key issues? What kind of information has been useful in the past? Are there relevant visitor-related studies?
2. Identify potential topic areas that are most important to focus on, and form a list of potential indicators. Aim for simple, feasible indicators that incorporate existing efforts to the extent possible. Consider literature reviews that summarize use-impact relationships and that suggest potential indicator topics (Manning and Anderson 2012; Marion et al. 2016). Indicators must be clear to those who will be doing the monitoring and using the information.
3. Screen potential indicators using the following criteria. If the indicator does not meet the first three criteria, then do not consider it. Other criteria for screening indicators can be found in Manning (2010).
   - **Connected to visitor use:** Can the trend created from monitoring information demonstrate a correlation to visitor use or to an aspect of the setting that is important to achieving the desired conditions?
   - **Importance:** Is the indicator highly relevant to the desired conditions? Will the indicator provide useful information to inform management decisions?
   - **Sensitive to change:** Is the indicator sensitive enough to provide useful and timely information to managers so that management action can be taken?
   - **Reasonable:** Is the indicator related to an existing monitoring effort, or can it be reasonably or feasibly monitored with existing staff or partners?
   - **Reliable:** Can the indicator be monitored accurately and yield the same result if measured by different people (i.e., does the observed change in conditions reflect a true change rather than a measurement error)?
4. Determine the appropriate unit of measurement for each indicator. Pay attention to the level of precision needed. The levels of precision and confidence in the threshold need to be commensurate with the management decisions expected from use of the monitoring information.
5. Incorporate an initial "test" period if possible. A test period provides an opportunity to work out any problems and gather preliminary information.

6. Use a project team, past monitoring information, public input, and literature reviews (Manning 2010) to establish thresholds for each selected indicator.

Recognize that thresholds are informed by science, but establishing thresholds is a value-based management choice that is linked to the area's purpose and desired conditions.

7. Thoroughly document the rationale behind the establishment of the threshold so there is a clear link between desired conditions, the information gathered, and the choice made. The defensibility of thresholds is enhanced when the decision contains explicit rationale and the public has had an opportunity to comment and offer input.

The most important lesson learned from past experience is the need to focus on the minimum number of indicators that are truly important to informing management so that desired conditions can be achieved.

Begin with the end in mind; envision the information obtained through monitoring, and only select indicators that will influence a management response. When establishing thresholds, recognize that they should be informed by science, professional experience, and legal requirements and that they are management decisions. Also, recognize that indicators and thresholds will likely be a subset of a larger visitor or recreation monitoring program.

SUMMARY

SUMMARY OF ELEMENT 2

Establishing visitor use management direction means defining desired conditions, identifying appropriate and inappropriate uses, and monitoring change over time. Together, these steps:

- Create a shared purpose among agency personnel and the public they serve.
- Create clear visitor use management direction that benefits the public and provides a foundation for future management actions and accountability.
- Help managers manage by design, not default.

Element 3: Identify Management Strategies

The purpose of this element is to answer the question: How will visitor use be managed to achieve or maintain desired conditions? This element is intended to help managers identify management strategies and actions to achieve and maintain the desired conditions of a project area. Management strategies are general approaches of addressing visitor use management issues, while actions are specific ways of implementing management strategies. This element also describes the identification of a visitor capacity and implementation plans for that capacity. Visitor capacity is a component of visitor use management and is the maximum amounts and types of visitor use that an area can accommodate while achieving and maintaining the desired resource conditions and visitor experiences that are consistent with the purposes for which the area was established.

The steps of this element help managers understand the relationship between existing and desired conditions and make defensible decisions about visitor use management strategies and actions, including those regarding visitor capacity.

Element 3 includes four distinct steps:

Step 8. Compare and document the differences between existing and desired conditions, and, for visitor use-related impacts, clarify the specific links to visitor use characteristics.

Step 9. Identify visitor use management strategies and actions to achieve desired conditions.

Step 10. Where necessary, identify visitor capacities and additional strategies to manage use levels within capacities.

Step 11. Develop a monitoring strategy.

The desired outcomes of this element include:

- Documentation of the gap between existing and desired conditions and clarification of the link with visitor use.
- Identification of management strategies and actions to achieve the desired conditions.
- Establishment of visitor capacities where needed or required.
- Development of a program to monitor conditions over the long term.

As in all elements of this framework, make project efforts commensurate with the magnitude of the decision being made. At the low end of the sliding scale, comparison between existing and desired conditions is likely to include more qualitative methods than quantitative and could be completed in just a few hours. Identification of a handful of management strategies and actions could be done quickly; likewise, the monitoring strategy might only include a small number of

indicators and qualitative thresholds and thus could be developed in a matter of hours or days. When the development of a visitor capacity is incorporated into the process, it is typically based on an analysis of existing information, including current level of visitation.

In contrast, at the high end of the sliding scale, the comparison between existing and desired conditions is expected to be complex and include an analysis across multiple indicators and thresholds. This process is likely more involved, examining many strategies and actions, capacities, and other metrics over a period of months, including public participation. A matrix of management strategies would probably be developed for multiple zones within the project area. Where the development of a visitor capacity is needed, more current data may be needed in the analysis, and the rationale for the capacity could be based on a multitude of factors. If the monitoring program is robust, additional investment in comprehensive data compilation, analysis, and interpretation may be needed.

STEP 8

STEP 8. COMPARE AND DOCUMENT THE DIFFERENCES BETWEEN EXISTING AND DESIRED CONDITIONS, AND, FOR VISITOR USE-RELATED IMPACTS, CLARIFY THE SPECIFIC LINKS TO VISITOR USE CHARACTERISTICS

The purpose of this step is to assess conditions and visitor-related impacts to better understand how to manage visitor use to achieve desired conditions. This step is essentially a problem analysis, examining the gap between existing and desired conditions (Marion 2003). Begin by reviewing existing information and current conditions. Use the work completed in step 1 (clarify the project purpose and need), in step 3 (assess and summarize existing information and current conditions), step 5 (define desired conditions for the project area), and step 6 (define appropriate visitor activities, facilities, and services).

Visitor use characteristics include the amount, type, timing, and distribution of visitor use, including activities and behaviors.

Compare the existing situation to desired condition statements and indicators. Visit the project area and evaluate what is seen, heard, and smelled to assess how the area is functioning. In reviewing the desired condition statements, ask the following types of questions: Are conditions still being maintained or achieved? Do the existing conditions largely match what is written for the desired conditions? If not, what is different?

Are the indicators and thresholds tracking changes in conditions so they may be compared with the desired conditions? If the indicator is not monitoring what was intended to be monitored, choose a new indicator reflective of the desired conditions. Always establish indicators and thresholds that support the desired conditions.

Comparisons between existing and desired conditions lead to one of the following:

1. **Desired conditions are being achieved, and existing conditions are well within the established thresholds**. There is little reason to think conditions will change in the upcoming planning cycle. The need for additional management strategies or the development of a visitor capacity is low. Proceed to step 11, and develop the monitoring strategy.

2. **Desired conditions could fail to be achieved in the near future, and existing conditions are close to thresholds**. Additional management strategies are needed to ensure desired conditions are maintained and thresholds are not exceeded. In this situation, assess the potential reasons for changes in condition. An urgent change in management approach may be required, including the implementation of additional management strategies and actions. Identifying visitor capacities and developing strategies to manage use within those capacities may also be necessary when issues are directly related to the amount of use. Continue with step 8.

A few tips for comparing existing conditions with desired conditions include:

- When it is available, use trend data. Trend data is preferable to a one-time dataset because it can more accurately represent baseline conditions. Weather anomalies, natural disasters, tourism spikes, and changes in staffing are all examples of intermittent events that can influence a short-term comparison of existing and desired conditions.
- Ensure identical metrics are used when comparing conditions. For example, the threshold may be expressed as number of visitors, but visitation data might be reported as number of vehicles. In this situation, collect additional data on the number of people per vehicle for the project area, and include this information in the comparison of existing and desired conditions.
- Examine the data closely for accuracy. For example, trail- or road-counter data typically include anomalies; it needs careful review.
- If existing information includes public comments from a concurrent process, allow time and resources to compile and analyze comments methodically.
- Review the completeness of the current condition data across the project area, looking for holes and gaps that would suggest existing information is inadequate. If the data are lacking, conduct additional inventories or monitoring. In situations in which additional time or funding is not available but a decision still needs to be made, expect a greater reliance on professional judgment and the need to articulate that the decision was based on the "best available data."
- Use the same considerations when examining resource condition data (e.g., soil and vegetation types).

In the second half of this step, clarify the specific links between visitor use and existing conditions. If desired conditions are not achieved and/or indicators are at thresholds, analyze the probable causes; explore which aspects of use are causing the impacts and how serious and widespread they are.

Consider the following probable causes (Cole et al. 1987) related to the nonachievement of desired conditions:

- Type of visitor activity
- Behavior of visitors
- Inappropriate visitor attitudes and expectations
- Timing of use
- Location of use
- Inadequate site durability
- Spatial distribution of visitation
- Amount of use

For each desired condition and threshold that is affected, identify the probable cause(s) for not meeting minimally acceptable conditions. The more conditions are affected, the greater the need for additional management strategies. If the project area consists of multiple subunits, perform this process for each subunit. Identifying these causal factors is an important step toward selection of management strategies to maintain and achieve desired conditions.

STEP 9. IDENTIFY VISITOR USE MANAGEMENT STRATEGIES AND ACTIONS TO ACHIEVE DESIRED CONDITIONS

STEP 9

The purpose of this step is to identify visitor use management strategies and actions to achieve desired conditions. Management strategies are general approaches of addressing visitor use management issues, while actions are specific ways of implementing management strategies.

For example, if the issue is hikers shortcutting switchbacks on a trail, the most important management strategy is to modify visitor behavior so hikers stop shortcutting. Management actions may include:

- Site management, such as piling brush to make it physically difficult to shortcut the switchback.
- Education, such as informing people about the impacts caused by shortcutting and asking them to stay on the trail.
- Regulation enforcement, such as prohibiting switchback shortcutting and increasing enforcement patrols.

Example of an enforcement sign

Management Strategies

Refer to step 8 to determine if desired conditions were not achieved or if they might not be achieved in the near future. Identify the probable causes of the nonachievement. Develop management strategies and actions to address or prevent the issue(s). Among the many sets of management strategies in use today, the following is a simple classification from wilderness visitor management (Cole et al. 1987):

1. Modify type of use.
2. Modify visitor behavior.
3. Modify visitor attitudes and expectations.
4. Modify the timing of use.
5. Modify the location of use.
6. Increase the ability of sites to handle use.
7. Modify the spatial distribution of use.
8. Reduce use or increase the supply.

Select management strategies before identifying management actions.

Based on this list, select the management strategy or strategies to address or prevent the issue(s). Once a management strategy has been selected, choose specific actions to implement the selected strategy. The three fundamental categories of management actions include (1) site management/engineering, (2) information and education, and (3) regulation/enforcement. These are sometimes referred to as the three "E's"—engineering, education, and enforcement.

Engineering: Site design, construction, and maintenance are most commonly employed to modify the location and spatial distribution of use and to increase the ability of sites to withstand use. The more common engineering actions include providing, removing, or relocating facilities and structures; strengthening and hardening sites; and using vegetation and other physical barriers to direct visitor use. Be careful not to underbuild or overbuild sites; match the development scale to desired conditions. Select the appropriate level of development based on area zoning, such as the Recreation Opportunity Spectrum. These and other design solutions encourage appropriate uses and discourage inappropriate uses.

Example of engineering

Education: Information and education is most commonly employed to modify visitor behavior, adjust visitor attitudes and expectations, and alter the spatial and temporal distribution of use. Common examples include the Leave No Trace program, interpretive panels, signs, and visitor contacts.

Enforcement: Regulations with enforcement can be used to implement all management strategies. Examples include restricting or prohibiting access to specific locations, access at particular times, certain types of behavior, particular activities, equipment or modes of travel, length of stay, and group size.

Management Actions

When managers thoroughly understand why an issue is occurring, it is easier to select management actions to achieve desired conditions. For any given management strategy, the actions are likely to vary. For example, why is campsite disturbance expanding? Is it because visitors cannot find unoccupied sites? Is it because existing sites are no longer desirable? Have the group sizes grown over time, causing sites to enlarge to accommodate changing use patterns? In situations like these, go to the field to examine the sites, and talk with visitors about their experiences.

Education is one of the three fundamental categories of management actions
Credit line: *© 1999 by the Leave No Trace Center for Outdoor Ethics: www.LNT.org*

Once the probable cause or causes are understood, selecting the most appropriate management action becomes apparent. For example, if campsite disturbance is expanding, select a strategy that modifies the spatial distribution so that camping impacts are more confined. Actions might include (1) education—developing an education program that encourages visitors to camp within established sites; (2) engineering—relocating sites or felling trees and locating rocks so that camping is confined to smaller spaces; or (3) enforcement—restricting camping to designated sites. The key is to select management strategies and actions that specifically address the issue(s).

Another important consideration in selecting the most appropriate management action is the manner and degree to which the action impacts the visitor's experience. Management actions can be thought of as a continuum, from influencing behavior to regulating behavior, from subtle to obvious, from indirect to direct. Land management agencies typically strive to minimize impact to visitors and management effort while still achieving desired conditions. For example, it may be more effective to manage use by employing a permit system than by limiting the size of a parking lot, particularly if there is little ability to keep people from parking along the road that accesses the lot. However, if limiting the size of

the lot is effective, it might be the preferred option because it maintains a higher level of visitor freedom and requires less active management than a permit system. In another example, concentrating camping on durable sites might be subtly accomplished by making desirable sites visually obvious and easy to access, or it might be achieved by directly limiting camping to designated sites. Generally, a mix of indirect and direct and subtle and conspicuous actions are needed to ensure desired conditions are maintained or achieved.

No single formula exists for deciding which management actions are best to implement a particular management strategy. The process considers the best available data, relies heavily upon the manager's experience and professional judgment, and requires both objective and subjective decisions. To select an appropriate management action(s), focus on three questions:

1. How likely will the action address the probable causes of the issue or opportunity?
2. To what degree does the action protect the visitors' abilities to enjoy their recreational experiences without unnecessary regulation by the managing agency?
3. How effectively can the action be implemented?

Some other questions that Anderson et al. (1998) suggest asking include:

- Does the action affect visitors during the planning stages of their trip or while they are engaged in their recreational experience?
- Does the action adversely affect a large or small number of visitors?
- Does the action adversely affect an activity to which visitors attach a great deal of importance?
- Are visitors likely to resist the management action?
- What are the implementation costs of the action in terms of facility construction, operation and maintenance, staff workload, communication, and enforcement?
- Is the action likely to create new issues or move issues elsewhere?

Answering these questions can lead to further refined management actions. For more information on the evaluation of management actions in terms of their costs to visitors, management, and likely effectiveness, see Anderson et al. (1998).

The outcome of step 9 is a list of the management strategies and actions needed to ensure that desired conditions are achieved and thresholds not exceeded. If the project area consists of many different subunits, do this for each subunit. This outcome does not vary much along the sliding scale. However, at the low end of the scale, the list of actions may be short, and relatively little time is needed to develop those management actions.

STEP 10. WHERE NECESSARY, IDENTIFY VISITOR CAPACITIES AND ADDITIONAL STRATEGIES TO MANAGE USE LEVELS WITHIN CAPACITIES

STEP 10

Visitor capacity is defined as the maximum amounts and types of visitor use that an area can accommodate while achieving and maintaining the desired resource conditions and visitor experiences that are consistent with the purposes for which the area was established.

If one of the management strategies selected in step 9 includes managing the amount of visitor use or if visitor capacities are legally required, managers must:

- Identify and implement visitor capacities when they are legally required.
- Identify and implement visitor capacities when managing the amounts and types of visitor use is directly related to achieving and maintaining desired conditions and statutory requirements.

Two Parts of Visitor Capacity

Perhaps the most difficult aspect of step 10 is remaining clear on the difference between the identification of visitor capacities and the identification of additional management strategies to manage within capacities.

- The first part of this step focuses on the capacity itself. What is the maximum amount and type of use the area can accommodate while still achieving desired conditions?
- The second part of this step focuses on ensuring the amount of visitor use is managed within the established capacity. What additional management actions and strategies should be implemented to ensure use remains within the established capacity?

Consider the following example for identifying a visitor capacity. A project team works through the framework, and a decision is made that the number of people accessing a scenic viewing platform should be limited to no more than 25 people at one time. This helps ensure high-quality viewing opportunities, ample space to minimize conflicts, and that the sounds of nature prevail.

This example continues with identification of management strategies to manage use levels within the capacity—a viewing platform capacity of 25 people. The parking lot for the viewing platform is then sized to accommodate about 25 people at one time (10 single vehicle parking spaces with an assumed average of 2.5 people per car). Additional management strategies may also be employed to ensure the visitor capacity is not exceeded. For example, parking along the adjacent county road might have to be prohibited for 2 miles on either side of this parking lot to restrict additional use of the viewing platform. For this example, the second half of step 10 is the purposeful selection of the number and type of parking spaces and

the parking restrictions on the adjacent county road. These strategies (i.e., modify supply and type of use) and actions (i.e., construct 10 single vehicle parking spaces, and restrict parking on adjacent roadways) manage use to levels within capacity and help achieve desired conditions.

Relating Number of Visitors to Desired Conditions

Establish visitor capacities when the number of visitors is directly related to achieving and maintaining desired conditions. For instance, a high-demand wilderness area close to a growing urban population creates a concern about a loss of opportunities for solitude in the wilderness area. Therefore, develop and implement visitor capacities to ensure opportunities for solitude are preserved.

Legal Requirements

The 1968 Wild and Scenic Rivers Act, 1978 National Parks and Recreation Act, and 1968 National Trails System Act require the identification of capacities and the development of management strategies to manage use within capacities. For more guidance on the expectations for addressing these legal requirements, see the council's "Visitor Capacity on Federal Lands and Waters: A Position Paper to Guide Policy" (http://visitorusemanagement.nps.gov/VUM/WhatGuidesIt). The three laws and their capacity-related passages include:

> **Wild and Scenic Rivers Act, Section 3(d)(1):** "*…the Federal agency charged with the administration of each component of the National Wild and Scenic Rivers System shall prepare a comprehensive management plan for such river segment to provide for the protection of the river values. The plan shall address resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of this Act." (For more information addressing this topic for wild and scenic rivers, please see the Interagency Wild and Scenic Rivers Coordinating Council technical paper, "Addressing User Capacities on Wild and Scenic Rivers.")*
>
> **National Parks and Recreation Act, Section 604(b)(3):** *This act requires units of the National Park System to complete general management plans and that the plans include "identification of and implementation commitments for visitor carrying capacities for all areas of the unit."*
>
> **National Trails System Act, Section 5(e)(1):** *"…the responsible Secretary shall…submit…a comprehensive plan for the acquisition, management, development, and use of the trail, including…specific objectives and practices to be observed in the management of the trail, including the identification of all significant natural, historical, and cultural resources to be preserved…and an identified carrying capacity of the trail and a plan for its implementation."*

Identifying Visitor Capacities

For indepth guidance on identifying visitor capacities, please see the council's "Visitor Capacity Guidebook" (http://visitorusemanagement.nps.gov/VUM/WhatGuidesIt). While the development of visitor capacities is unique to each planning area, the following are basic guidelines with which to start:

1. Determine the analysis area (e.g., Is it necessary to identify visitor capacity for an entire river corridor—a large area that contains multiple access points and multiple different activities—or a specific feature or destination point?). In certain circumstances, there may be a need to develop an overall visitor capacity that is some combination of the individual analysis areas.
2. Review existing direction and knowledge. Review desired conditions and indicators and thresholds, and pay particular attention to conditions and values that must be protected and are most related to use levels. Also, review management strategies and actions from step 9. Are there lessons learned from comparable areas where desired conditions, indicators, thresholds, and management strategies are similar?
3. Identify the limiting attribute(s). Identify the physical, biological, social, or managerial attribute(s) that most constrain the analysis area's ability to accommodate visitor use. The limiting or constraining attribute(s) may vary across the analysis area.
4. Identify capacity. Use monitoring data, research, lessons learned from comparable areas, and professional judgment to identify a capacity based on desired conditions and the limiting factor.

Consider the following example: The amount of use that can be accommodated in a multiday river corridor may be constrained by the number of campsites. Based on the desired condition of providing freedom from the sounds and sights of others while camping, it may be preferable for some campsites to remain unoccupied. Using a threshold of "maximum 80 percent campsite occupancy" would allow the visitors most sensitive to the sights and sounds of others to camp away from others. Thus, the capacity could be expressed in terms of number of groups (e.g., with a group size limit of 15) that can be accommodated in the river corridor, which would be based on the number of campsites multiplied by 80 percent. For example, if a particular river corridor contains 10 campsites, the capacity would be 80 percent of those 10 campsites, or 8 campsites. Regarding the number of visitors, 8 campsites multiplied by 15 people per campsite equals 120 visitors at one time. Include both capacity metrics (e.g., 8 campsites, 120 people) in the decision document for this area.

Understanding current use levels and patterns is particularly useful in identifying a capacity. Based on an understanding of current use levels and current conditions in relation to desired conditions, consider whether the capacity could be increased, whether it can remain the same, or whether it must be decreased. If desired conditions are being achieved, then capacity can be set at or above existing use levels. For example, if the encounter rate on trails is the most limiting factor in an area and current conditions are nearing, but not exceeding thresholds, then consider setting the capacity based on existing use levels to maintain current conditions.

Develop a rationale to support the selected capacity: Use a logical, reasonable rationale to ensure the successful development and implementation of a visitor capacity. A well-articulated rationale is not only helpful when communicating with other agency staff, partners, line officers, and the general public; it is also the best defense in the court of law. Repeated legal decisions have stressed the importance of explaining the connection between existing conditions and management decisions (setting a capacity) and have shown a deference to the agencies in regard to technical expertise (c.f. American Whitewater v. Tidwell (Nov. 5, 2014); Ohio Valley Environmental Coalition v. Aracoma Coal Company, 556 F.3d 177, 192 (4th Cir. 2009); Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 376-77 (1989)).

Strategies to Manage within Capacities

The second half of this step focuses on the identification of strategies and actions to manage the amount of visitor use within the established visitor capacities. Consider if any additional strategies and actions need to be taken to fully implement the capacity and to achieve desired conditions. Begin by reviewing the management strategies and actions established in step 9.

If use is quickly approaching the established visitor capacity, develop management strategies and actions to keep visitation at or below the visitor capacity and to achieve desired conditions. Managing within capacity can be achieved through any of the three major types of actions: engineering, education, or enforcement.

For example, consider an extremely popular nonmotorized area with a 13,000-foot destination peak where visitors reported high levels of crowding and where physical resources (especially sensitive soils) showed signs of impact. The project team considered how to manage use levels within capacity. Initially, the team implemented additional actions related to information/education, including limiting agency promotion of the area and increasing Leave No Trace education efforts. Next, because the last mile of road to this area's most popular trailhead washed out every year, the team used engineering to decommission that final mile and construct a new trailhead away from the area's stream. This action increased the distance to the 13,000-foot summit by 2 miles, reduced peak visitation to the summit, and dispersed visitation throughout the rest of the area. Finally, the team considered regulation/enforcement as a final action to keep use within the visitor capacity. While a limited entry permit system during peak summer visitation was considered, since the current amount of use remained below the visitor capacity, the team decided to monitor visitation over time to understand if or when additional management actions will be required.

Salmon fishing on the Russian River, Chugach National Forest

Who or what is being managed? Select appropriate capacity metrics to ensure achievement of desired conditions. Some examples of capacity metrics include the number of people, number of people by activity (e.g., climbers, boaters, hikers), number of groups of people, number of stock, number of heartbeats (e.g., combined human and horse), number of boats, number of vehicles, and number of commercial and competitive permits. For example, in the early 1970s, many river-based visitor capacities focused on encounter rates with boats from other parties. However, as visitors increasingly moved from rafting to kayaking, the number of boats per party and the number of encounters with boats from other parties increased sharply. This change in visitation pattern resulted in exceeding the encounter rate and the capacity without an increase in visitation. As this example illustrates, it is necessary to address all of the variables affecting the issue or opportunity identified in step 1 and the desired conditions. In this case, both the overall number of people and the number of boats per group were important.

Where (geographically) will the capacity be implemented? Carefully consider the overall issue when deciding on the boundaries or spatial extent of the area being placed under capacity. For example, consider a single lake in the middle of a 10,000-acre nonmotorized zone that receives 90 percent of the area's visitation. Assume the soils around this lake are compacted by visitation, and visitors report high levels of crowding. Desired conditions are being achieved in most of the area but not immediately adjacent to the lake where resource and social conditions are threatened. Focus on managing visitor use levels in the area immediately adjacent to the lake because the rest of the area is not threatened by high levels of visitor use. Also, consider the possibility of displacement, as it may not be desirable to move the problem elsewhere. It is possible that adopting a visitor capacity for the lake in question could reduce visitation there but lead visitors into the next drainage. This could create a similar issue in an adjacent area.

In certain situations, there may be a need to identify an overall user capacity for a larger area that includes several individual analysis areas, such as a large wilderness area or a 100-mile section of river. An overall user capacity may be needed if visitor use levels will be managed for the larger area (e.g., a reservation system for a unit or access by a required shuttle system into a corridor) to support the achievement of desired conditions for several individual analysis areas.

When will the capacity be implemented? Consider the timing of visitation—including times of day, days of the week, and months of the year. Modifying the timing of use is one of the eight basic management strategies (presented in step 9). Numerous temporally related actions can be taken to achieve an area's desired conditions. Regarding times of day, consider if the area should be open 24 hours per day or if it should be restricted to less than 24 hours (typically day use only). Regarding the days of the week, typically differentiate between weekends and weekdays. For example, offer shuttle buses or require permits on weekends, but don't require them on weekdays. For another example, on trails, allow hikers/equestrians on even days, and reserve odd days for mountain bikers.

Managing use by the months of the year, or seasonally, is a third approach. Use biophysical changes, including climatic conditions, presence of snow or mud, wildlife nesting or brooding, or water levels (boatable or not), to segment the visitation by month or season. When establishing a season of use, expect visitation patterns to change over time, especially in the first 3 years of implementation. For example, when managing a permitted river corridor with visitation peaks between Memorial Day and Labor Day, establish the permit period from May 1 to September 30 to prevent visitation spikes the weeks before Memorial Day or the weeks after Labor Day. Overall, select management strategies and actions that are implementable and sustainable and that contribute to achieving desired conditions.

Capacity and allocation: While capacity is the maximum amount of use for an area, an area can be divided into subparts based on allocation (e.g., private (general public), commercial (outfitters and guides), and competitive (foot races, fishing contests)). In certain circumstances, consider agency administration (e.g., ranger patrols, scientific surveys) as part of an allocation. These allocation decisions are especially important to existing and prospective commercial and competitive permit holders as they establish a maximum number of user days available in the area.

Capacity and adjusting management actions: Expect that capacities will need adjustment over time. Describe the process for adjusting visitor capacities. Include in the description:

1. The criteria and rationale for establishing visitor capacities.
2. The relationship between the amount of visitor use and existing conditions and how the implementation of additional management actions would affect that relationship.
3. The types of new information that would trigger reevaluation and adjustment of visitor capacities.
4. Additional input the decisionmaker might consider from partners and the public.

STEP 11. DEVELOP A MONITORING STRATEGY

The outcome of this step is a monitoring strategy or strategies. An effective monitoring strategy is as important as the development of management strategies and actions. Monitoring is integral to the framework, as it provides key feedback of conditions to managers. Monitoring is also critical to determine whether actions taken to protect resources and provide high-quality opportunities are indeed effective. There are usually two types of monitoring: (1) implementation monitoring, which answers the question: Were the planned actions implemented (including when and how they were implemented)?; and (2) effectiveness monitoring, which answers the question: How effective were the actions? The information in this step applies to both types of monitoring.

The term monitoring strategy refers to the periodic collection of information related to visitor use and its impact on an area's resources and opportunities for visitor experiences. Visitor use monitoring data typically include variables, such as use levels and patterns, sociodemographic characteristics, preferences and expectations, and other evaluative measures. These variables are translated into "indicators," as they are used to indicate the condition of resource values and the quality of visitor experiences at any given time.

The sliding scale (chapter 2) applies to monitoring strategies. For example, at the high end of the sliding scale, the project will likely require greater investment in information about the use and impacts occurring. Conversely, at the low end of the sliding scale, more rapid monitoring strategies could be developed to provide general knowledge of visitor use and related resource conditions. Careful assessment and professional judgment are applicable at any point on the scale.

Well-planned monitoring strategies reduce the uncertainty of existing conditions and increase the effectiveness of management actions in achieving desired conditions (Cole 2006). Monitoring strategies make monitoring operationally feasible and financially viable over an extended period of time. The more aware the management team is of visitor use monitoring, the greater the receptivity it will have to approving new management actions as a result of monitoring.

To help develop a monitoring strategy, answer the following questions (checklist modified from Broom and Hall 2008):

- ✓ The purpose for monitoring: What is going to be monitored and why?
- ✓ Where will monitoring occur?
- ✓ Which techniques will be used for each indicator?
- ✓ How often will an indicator be monitored?
- ✓ Where are comparable areas for later reference?
- ✓ How will data be collected?
- ✓ Who will collect the data?
- ✓ What equipment is needed?
- ✓ How will data be managed?
- ✓ How will data be used?
- ✓ What data will be analyzed?
- ✓ How will the findings be reported?
- ✓ Who are the audiences for receiving the monitoring information (e.g., managers, stakeholders)?
- ✓ Are there other data sources that provide the indicator data?

When developing a monitoring strategy, the level of monitoring effort should be commensurate with the complexity of the management actions to be monitored. At the low end of the sliding scale, one or two people could develop the monitoring strategy. At the high end of the sliding scale, form a diverse project team to develop the monitoring strategies, and include staff who are committed to the project over the long term. For highly complex projects, develop monitoring strategies based on peer-reviewed, well-established, and scientifically robust protocols. Monitoring of any kind can experience an ebb and flow of support from the public and management; the necessity of clearly outlining a monitoring strategy cannot be overstated.

Develop monitoring strategies in which the methods can be easily replicated and results easily compared across sampling intervals.

Make data collection protocols replicable. Bring in new reviewers/advisors over time to make sure protocols can be understood by staff within a relatively short amount of time.

Data Management

Actively manage monitoring data to ensure data quality and consistency. Develop an accessible and understandable data storage system. Ensure all users know how to access these data.

SUMMARY OF ELEMENT 3

Identifying management strategies is key to developing a plan to manage visitor use to achieve desired conditions. Steps 8 through 11 help managers identify:

- The gaps between existing and desired conditions and analyze the relationship between visitor use and changing conditions.
- Visitor capacities and strategies to manage within those capacities.
- Monitoring strategies.

Element 4: Implement, Monitor, Evaluate, and Adjust

The purpose of this element is to answer the questions: How will management actions be implemented, and when are adjustments made based on lessons learned?

The steps in this element show a process for implementing management actions, monitoring those actions, evaluating monitoring results, and making adjustments to management strategies and actions based on monitoring results.

Element 4 includes three distinct steps:

Step 12. Implement management actions.

Step 13. Conduct and document ongoing monitoring, and evaluate the effectiveness of management actions in achieving desired conditions.

Step 14. Adjust management actions if needed to achieve desired conditions, and document rationale.

Assessing the outcome of management actions is necessary to ensure that these actions are having the intended effects. In many cases, monitoring programs involve dynamic social and natural resource systems. Conditions are monitored against established indicators and thresholds and triggers, if triggers were developed. Based on monitoring, current management action effectiveness is evaluated. This process allows managers to be sensitive to changing conditions and to adjust management strategies and actions as necessary.

Monitoring aids a learning-based approach in which the more that is known, the better staff can manage for desired conditions.

The work in this section builds upon previous steps and allows managers to evaluate current conditions compared to the desired conditions as related to results of monitoring indicators. Like other elements of the framework, the level of effort associated with any project is largely dependent on where the project falls on the sliding scale. At the low end of the scale, actions may be implemented immediately, and the associated monitoring may require a single indicator that is qualitative in nature. However, on the higher end of the scale, implementation may require a specific and phased strategy due to the number or complexity of actions to be implemented, and the monitoring may be more intensive, comprehensive, and quantitative.

STEP 12. IMPLEMENT MANAGEMENT ACTIONS

STEP 12

The purpose of this step is to implement management actions. Implement management actions that were identified and designed in step 9 of element 3 and additional management actions that may have been added in step 10 if managing within capacity. These management actions were selected to achieve desired conditions and to help ensure that thresholds are not exceeded.

Implementation involves at least three steps:

Prepare for implementation: Make sure that the resources necessary for implementation are available. Ensure that the funding, training, staffing, and other resources are available to initiate the new action. Develop a communication plan with the sliding scale (chapter 2) in mind. If a planned action is not going to be implemented, document it at this time.

Implement the new management action: Gather and prepare staff to initiate the action. Make sure relevant staff members and stakeholders know about the implementation. Train relevant staff on the new action; purchase supplies, equipment, and products; and hire contractors, if necessary. Ensure staff members know how to care for changed facilities and what the desired conditions are for the area. Inform the public with announcements so people know change is coming.

Watch for immediate reactions: Look for the visitors' immediate reactions toward change, and implement support on the ground and in the office when the new management action is applied. This is essential and will increase the chances of success because it increases the agency's ability to address concerns and respond appropriately. The length of time to watch for these immediate reactions depends on the magnitude of the change, the reaction of visitors, and where the project is on the sliding scale. Whatever the action is, ensure agency presence so problems can be addressed immediately and visitors' questions and concerns can be answered and noted.

STEP 13. CONDUCT AND DOCUMENT ONGOING MONITORING, AND EVALUATE THE EFFECTIVENESS OF MANAGEMENT ACTIONS IN ACHIEVING DESIRED CONDITIONS

STEP 13

Conduct Ongoing Monitoring

Monitoring programs regularly assess indicators to ensure that desired conditions are being achieved and thresholds are not being exceeded. Monitoring alerts managers if, when, and how much conditions are changing and identifies when a threshold is nearly reached.

Follow the monitoring strategy developed in step 11. Focus on indicators that provide consistent observations over time. After monitoring data has been analyzed and if a downward trend is documented, take corrective action; don't wait for the end of a planned monitoring period to do so. Use monitoring results as a tool to inform ongoing adjustment of management strategies and actions.

The monitoring strategy developed in step 11 commits an agency to monitoring, directing how and when to monitor for indicators and desired conditions. Ongoing monitoring efforts ensure that appropriate and timely actions are taken to protect resources and visitor experiences. For additional information on monitoring programs, see the council's "Indicators, Thresholds, and Monitoring Guidebook" (visitorusemanagement.nps.gov/VUM/Framework).

Document Conditions and Report

Document the effectiveness of management actions in maintaining and meeting the desired conditions that were developed in step 5 of element 2. Retain monitoring data to ensure quality and consistency over time and to identify trends and novel patterns or relationships. Use monitoring data to brief managers, project teams, stakeholder groups, and the general public.

Evaluate Management Actions

Make this analysis very similar to the analysis that was completed as a part of step 8. As observations are made over time about conditions, continually evaluate them in context of the desired conditions. When analysis of monitoring data shows that desired conditions are not being achieved or may fail to be achieved in the near future, adjust the management actions.

STEP 14

STEP 14. ADJUST MANAGEMENT ACTIONS IF NEEDED TO ACHIEVE DESIRED CONDITIONS, AND DOCUMENT RATIONALE

The purpose of this final step in the framework is to adjust management actions based on what is learned during the monitoring process to ensure desired conditions are maintained. For example, on a trail built in a specific area with sensitive resources, monitoring shows impacts from informal trail creation and trail widening. Therefore, one management action may be to better delineate the trail to keep use on the originally planned trail.

When to Make Adjustments

Monitoring or other observations of conditions may show a divergence between the current condition and the desired condition. Make adjustments in management strategies or actions when there is evidence that thresholds are being approached, when triggers have been reached, or when conditions are trending away from desired conditions. Adjustments or actions may or may not require NEPA documentation. Don't be pressured into changing thresholds. They should not be changed without rigorous analysis and a strong rationale.

Problem Analysis

Before making adjustments, strive to identify the probable cause of the issue. Determine the level of action required to correct the resource condition based on the extent to which resources and visitor experiences have changed locally and throughout the protected area. It may be prudent to evaluate the possibility that unexpected changes in desired conditions may be influenced by broader processes

(e.g., effects of climate change) and not directly related to local visitor use. Finally, consult other resources and monitoring efforts to ensure that a change to protect one resource does not adversely affect another.

Document Rationale for Adjustments

Document the rationale for adjustments, as adjustments are often diversions from the original justification for action. This documentation helps ensure clarity of purpose and desired outcomes for the agency and various stakeholder groups. For documentation, include:

- A summary of the original action and how it was implemented (step 11).
- Analysis of the monitoring data that suggests the need for an adjustment (step 12).
- Reasoning for the selection of the new actions, including analysis/evidence from which decisions were based.
- What will change, how it will change, and the resources needed to make the change.
- How this adjusted action will improve conditions.

Changing Management Strategies or Actions

Many management actions do not require NEPA documentation, such as a greater agency presence, volunteer patrols, and an increased or changed use of signs. When management actions and strategies change, NEPA documentation may be needed. A small change may only involve a 1-day notification in a local newspaper to comply with the requirement of notifying the public of a change. A more significant change may require a plan amendment. Agencies will determine the level of required NEPA documentation.

Example of Element 4

A meadow restoration plan includes the action of installing a boardwalk to concentrate use and reduce the number of informal trails throughout the meadow. One desired condition is a healthy meadow ecosystem with a boardwalk allowing visitors to experience being "in" a meadow with a minimum of informal trails through the meadow. The threshold for meadow fragmentation from user-created trails is 10 percent.

The monitoring program measures the meadow for informal trail fragmentation on a yearly interval. In this example, analysis of monitoring data showed a trend over 3 years that meadow fragmentation was increasing from 3 to 5 to 9 percent. While all of these values were better than the desired condition, they showed a trend of decline rather than improvement. This declining trend prompted the manager to implement additional management strategies (e.g., increasing education about meadow health and trails) and actions to reverse the trend and improve the condition of the resource.

SUMMARY

SUMMARY OF ELEMENT 4

During this final section of the framework, all the planning and decisionmaking is put into action. The approach to implementation and monitoring outlined here prompts managers to take action to achieve desired conditions and monitor and adapt those actions to ensure that the current conditions are consistent with desired conditions.

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Chapter 4: Relationship to Larger Agency Planning Processes

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Chapter 4: Relationship to Larger Agency Planning Processes

AGENCY PLANNING POLICIES AND PROCEDURES SPECIFIC TO THE FRAMEWORK

This framework supports existing agency planning policies and procedures. This chapter begins with a general overview of how the framework supports and enhances planning. Sections from this chapter summarize programmatic goals and planning processes for each council agency, showing how the framework supports a specific agency's planning program.

The framework also provides a common language to enable recreation and resource management specialists across all agencies to communicate with one another and with the public regarding visitor use management.

Planning Rules and Regulations

Each federal agency with land, water, and resource management responsibilities generally has an organic act or establishing legislation and subsequent regulations, policies, and procedures that guide how the agency will develop plans to manage recreation, visitor use, and various resources in accordance with the agency's mission, goals, and mandates. Agencies also follow the provisions set forth in laws that cover certain types of trails, rivers, wilderness areas, and marine areas, including the National Trails System Act of 1968, Wilderness Act of 1964, Wild and Scenic Rivers Act of 1968, and National Marine Sanctuaries Act of 1972.

While many federal resource agencies share broad conservation goals and mandates, they vary considerably in the specifics of how those missions are pursued through management of public lands and waters. Each agency has unique planning processes that vary in their particular steps and terminology and, as a result, different approaches to planning and conducting visitor use management. Recognizing this diversity, the framework is designed to be applicable to many conservation efforts and to be applied flexibly for these different but compatible purposes, such as:

- Recreation and visitor use management sections of large comprehensive land, water, and resource management plans.
- Site-specific plans, such as recreation area management plans, activity plans, project plans, zone or area plans, and implementation plans.

Table 6 lists the large comprehensive land, water, and resource management plans from which site-specific plans and management decisions are tiered. Refer to the agency sections that follow for more specific descriptions of the planning policies and procedures.

Table 6. Large-scale plans required for federal land- and water-managing agencies

AGENCY	LARGE-SCALE PLANS
Bureau of Land Management	Resource Management Plan
National Park Service	General Management Plan
U.S. Fish and Wildlife Service	Comprehensive Conservation Plan
U.S. Forest Service	Land Management Plan
National Oceanic and Atmospheric Administration	National Marine Sanctuary Management Plan
U.S. Army Corps of Engineers	Engineer Regulation 1130-2-550, Master Plan 1165-2-400

Public Involvement

Almost all federal agency planning processes require some form and degree of public involvement. This may range from a simple notification in a local newspaper to holding public workshops, a series of meetings, or full collaboration, depending on the complexity of the project. Public involvement is also one of the primary purposes of NEPA. Public involvement is an ongoing effort that begins early in a planning process and continues throughout. Although the type and amount of public involvement will vary based on specific agency procedures and the scale of the analysis, this framework complements the full range of these efforts. This framework helps guide the conversation with the public and allows agencies to obtain meaningful public input relevant to visitor use management in the context of NEPA and planning processes.

RELATIONSHIP TO EACH AGENCY'S PLANNING POLICIES AND PROCEDURES

The Bureau of Land Management (BLM), National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service (USFS), National Oceanic and Atmospheric Administration (NOAA), and U.S. Army Corps of Engineers (USACE) have regulations, policies, and procedures that guide management of visitor use. Each agency manages land and/or water resources and provides opportunities for visitor activities consistent with the agency's purpose and mission. The purpose and mission of these agencies range from preservation to multiple use, and the visitor opportunities and management approaches vary accordingly. This section highlights how this framework relates to each agency's planning policies and procedures.

Bureau of Land Management

Specific Laws and Policies Related to Visitor Use Management

- Federal Land Policy and Management Act of 1976
- 43 CFR 8360, Visitor Services
- 43 CFR 9268, Recreation Programs
- BLM Handbook H-1601-1, Land Use Planning Handbook, Appendix C
- BLM Manual 8320, Planning for Recreation and Visitor Services
- BLM Handbook H-8320-1, Planning for Recreation and Visitor Services

Summary of the BLM Planning Framework

The BLM determines how lands are managed through a land use planning process. Land use planning includes consideration of various management scenarios for all resources that are present within a geographic area to achieve management goals and objectives. Recreation resources and uses are allocated through this land use planning process.

Recreation planning is accomplished through decisions made in land use plans and implementation plans. The BLM planning process is consistent with the framework in that a land use plan builds the foundation, defines visitor use management direction, and, in part, identifies management strategies. The implementation plan also addresses identifying management strategies and implementing, monitoring, evaluating, and adjusting strategies.

Land use plan decisions: Land use planning decisions are usually made on a broad scale and customarily guide subsequent site-specific implementation decisions. The land use plan establishes management direction for all resources and resource uses that are present, including recreation, and ensures all program goals and allocations are complementary.

BLM plans for recreation and visitor services address issues, concerns, and potential recreational opportunities identified by BLM staff, other agencies, organizations, or the general public. The three required land use plan decisions for recreation and visitor services are to:

- Designate recreation management areas.
- Establish recreation and visitor services objectives for each recreation management area.
- Identify land use plan-level supporting management actions and allowable uses for each recreation and visitor service.

Recreation management area designation: To help effectively manage recreation and visitor services, the BLM designates recreation management areas, and the areas are classified as either a special recreation management area or an extensive recreation management area. Both types of areas are recognized as producing quality recreation opportunities and offering beneficial outcomes for recreation participants, recreation-tourism partners, visitor service providers, and communities. Recreation and visitor services objectives in recreation management areas are recognized as a primary resource management consideration, and specific management is required to protect the recreation opportunities. The recreation management area designation is based on recreation demands and issues, recreation setting characteristics, resolution of use conflicts, compatibility with other resource uses, and resource protection needs. There is no requirement to designate all lands as recreation management areas. This BLM process is consistent with this framework, particularly element 1, build the foundation.

Recreation management areas identify where the BLM generally prioritizes the expenditure of funding. However, in public lands not designated as recreation management areas (undesignated lands), addressing visitor health and safety, resource protection, and use and user conflicts may be of equal or greater importance.

Special recreation management areas: A special recreation management area is an administrative unit where existing or proposed recreation opportunities and recreation setting characteristics are recognized for their unique value, importance, and/or distinctiveness, especially as compared to other areas used for recreation. A special recreation management area is managed to protect and enhance a targeted set of activities, experiences, benefits, and desired recreation setting characteristics. The land use plan may subdivide a special recreation management area into recreation management zones to further delineate specific recreation opportunities. Within a special recreation management area, recreation and visitor services management is recognized as the predominant land use plan focus in which specific recreation opportunities and setting characteristics are managed and protected on a long-term basis.

Special recreation management areas must have measurable outcome-focused objectives. These objectives must define the specific recreation opportunities (i.e., activities, experiences, and benefits derived from those experiences) that will become the focus of recreation and visitor services management.

The BLM must also identify necessary management actions and allowable use decisions for recreation and visitor services and other programs to achieve special recreation management area objectives to accomplish the following:

- Sustain or enhance recreation objectives.
- Maintain or enhance the desired physical, social, and operational recreation setting characteristics.
- Constrain uses, including noncompatible recreation activities that are detrimental to meeting recreation objectives.
- Address visitor health and safety, resource protection, and use and user conflicts (e.g., areas closed to target shooting, camping limitations).
- Address the type(s), activities, and locations where special recreation permits will or will not be issued.

Extensive recreation management areas: An extensive recreation management area is an administrative unit that requires specific management consideration in order to address recreation use, demand, or recreation and visitor services program investments. An extensive recreation management area is managed to support and sustain principal recreation activities and associated qualities and conditions. Management of extensive recreation management areas is commensurate with the management of other resources and resource uses (as opposed to a special recreation management area in which recreation management is the primary focus of the area). While generally unnecessary, extensive recreation management areas may be subdivided into recreation management zones to ensure recreation and visitor services are managed commensurate with other resources and resource uses.

The BLM is required to establish measurable objectives for extensive recreation management areas. These objectives must define the recreation activities and associated qualities and conditions that will become the focus of recreation and visitor services management. In the land use plan, the BLM must identify management actions and allowable use decisions for recreation and visitor services and other programs to achieve area objectives and ensure all decisions are compatible with other resource objectives. Supporting management actions and allowable use decisions are developed to accomplish the following:

- Facilitate visitor participation in the identified outdoor recreation activities.
- Maintain particular recreation setting characteristics.
- Restrict or constrain uses, including incompatible recreation activities that are detrimental to achieve interdisciplinary objectives.
- Address visitor health and safety, resource protection, and use and user conflicts (e.g., areas closed to target shooting, camping limitations).
- Address the type(s), activities, and locations where special recreation permits will or will not be issued.

Public lands not designated as recreation management areas: Public lands that are not designated as recreation management areas (undesignated lands) are managed to meet basic recreation and visitor services and resource stewardship needs. Recreation is not emphasized on these lands; however, recreation activities may occur, except on those lands closed to public use. The recreation and visitor services are managed to allow recreation uses that are not in conflict with the primary uses of these lands.

Implementation of the land use plan: Implementation decisions direct site-specific actions to achieve land use plan decisions. These decisions can be made in the land use plan or in a separate implementation plan. For recreation and visitor services, the implementation decisions include these four categories:

- **Management:** Includes recreation management actions, such as commitment of resources, services to be offered to visitors, and the development and provision of facilities (e.g., recreation sites, roads and trails, and concessions).
- **Administration:** Includes regulatory actions, such as the implementation of allocation systems, permits, fees, use restrictions, and partnership agreements, as well as business plans or fiscal accountability systems and data management protocols.
- **Information and education:** Includes information and education actions, such as providing maps, brochures, websites, outreach efforts, events, interpretation, environmental education, signs, and other visitor information delivery services.
- **Monitoring:** Includes monitoring recreation resources and human use, such as visitor use and use patterns; recreation-caused resource effects or impacts; visitor satisfaction; and effectiveness or attainment of outcomes-focused management objectives, recreation setting characteristics, standards, and indicators.

National Park Service

Specific Laws and Policies Related to Visitor Use Management

- National Park System General Authorities Act of 1970, Section 12
- National Parks and Recreation Act of 1978, Sections 604 and 607
- Legislative History of the National Parks and Recreation Act of 1978
- NPS Management Policies 2006
- 36 CFR, Chapter 1, Parts 1-7

Summary of the NPS Planning Framework

The planning framework used by the NPS begins with a broad-scale foundation and general management planning and proceeds through progressively more specific implementation planning. A foundation document is a formal statement about law and policy direction for a park that provides basic guidance for all future decisions. Core elements of the foundation document include the park's purpose, significance, fundamental resources, values, and interpretive themes. The foundation document also includes park-specific special mandates and desired conditions based on law and policy direction. The document defines why the park was established and identifies the most important resources and values, including visitor opportunities that would be protected and provided. When developing a foundation document, project teams also conduct an assessment of the park's highest priority planning and data needs. Park managers use these documents to guide all other planning and decisionmaking, including direction for short- and long-term visitor use management activities. Element 1 of the framework is consistent with the various components of the NPS foundation.

General management plan: A general management plan builds on the foundation statement to provide broad policy decisions. This comprehensive plan sets a long-term vision (20 or more years) for a park but does not include detailed site-level decisionmaking or analysis. Traditionally, a general management plan is developed as a stand-alone document. A general management plan for each unit is legally required to include, but is not limited to:

1. Measures for preservation of the area's resources.
2. Indications of types and general intensities of development (including visitor circulation and transportation patterns, systems, and modes) associated with public enjoyment and use of the area, including general locations, timing of implementations, and anticipated costs.
3. Identification of and implementation commitments for visitor carrying capacities for all areas of the unit.
4. Indications of potential modifications to the external boundaries of the unit and the reasons therefore.

To meet these legal requirements, a general management plan is directed to include desired conditions by management zone, general management strategies, and indicators and thresholds. These components of a general management plan provide direction on resource protection as well as how visitor use will be managed. These directives are used to guide the types and levels of visitor use that would be accommodated while sustaining the quality of park resources and visitor experiences consistent with the purposes of the park. The framework, particularly element 2 (define visitor use management direction) and element 3 (identify management strategies), is consistent with and can be a point of reference for NPS general management plans.

In 2012, the NPS revised the park planning framework to implement a "planning portfolio," a responsive and flexible approach to meeting needs for park planning. In short, not all of the four required elements, including the requirement to identify visitor capacities, will necessarily be found in a single plan.

Visitor use management plan: A visitor use management plan is one planning product of the revised park planning framework. This type of plan is intended to provide for the implementation of effective visitor use management that protects both resources and visitor experiences and meets legal requirements. The plan may target specific areas of a park or be inclusive of the entire unit. A visitor use management plan may be developed to address a park's need to enhance opportunities for access to the park's key visitor experiences, reduce conflicts between different user groups or between visitors and resources, and/or balance tradeoffs between different visitor use management strategies. A visitor use management plan provides implementation-level direction and, as appropriate, satisfies compliance requirements for taking management actions upon completion of the plan. More specifically, the plan includes visitor use management goals and objectives, detailed management strategies, indicators and thresholds, and implementation protocols.

A visitor use management plan builds on the foundation document and other existing plans (e.g., general management plans, long-range interpretive plans). Depending on the visitor use issues and needs at the park, the plan may include detailed guidance on managing particular visitor use facilities (e.g., campsites, trails, boat launches, transit), visitor activities (e.g., climbing, boating, motorized use, commercial services), and visitor use issues (e.g., visitor demand, risk and conflict management) that are often dealt with in separate plans. A visitor use management plan also addresses the requirements of Section 12 of the National Park System General Authorities Act, which requires that the NPS complete general management plans that include "identification of and implementation commitments for visitor carrying capacities for all areas of the unit." This framework will help guide the development of NPS visitor use management plans.

Other implementation-level plans: Other implementation-level plans also relate to managing visitor use and include wilderness stewardship plans, long-range interpretive plans, trail management plans, off-road vehicle management plans, transportation plans, wildlife management plans, wild and scenic river plans, commercial services plans, and so on. These plans will likely address visitor use management in varying degrees, and the project team should refer to the framework, particularly elements 2 and 3, for guidance in addressing the relevant visitor use components. Element 2 defines visitor use management direction, and element 3 identifies management strategies and a monitoring strategy to guide future implementation. For instance, a wilderness stewardship plan provides specific direction on how to manage visitor use to ensure protection of wilderness resources and associated visitor experiences, while enhancing wilderness character. A wild and scenic river comprehensive management plan provides specific direction on how to manage visitor use to ensure protection and enhancement of river values. This type of plan also must address capacities per the Wild and Scenic Rivers Act. For more information on addressing this topic for wild and scenic rivers, please see the Interagency Wild and Scenic Rivers Coordinating Council technical paper, "Addressing User Capacities on Wild and Scenic Rivers."

U.S. Fish and Wildlife Service

Specific Laws and Policies Related to Visitor Use Management

- Refuge Recreation Act of 1962, Section 1
- National Wildlife Refuge System Administration Act of 1966, Section 4(a)(2-3)
- National Wildlife Refuge System Improvement Act of 1997, Sections 5-7
- Alaska National Interest Lands Conservation Act of 1980, Section 304(g)

Summary of the USFWS Planning Framework

Legislation directs that a comprehensive conservation plan (or comprehensive plan) be developed for each refuge unit or refuge complex in the National Wildlife Refuge System. As part of building the foundation and consistent with the framework, the following information is identified and described prior to developing a comprehensive plan:

- The populations and habitats of the fish and wildlife living on the refuge.
- Significant problems that may adversely affect these habitats and populations of fish and wildlife.
- The special values of the refuge, including archaeological, cultural, social, ecological, geological, historical, paleontological, scenic, or wilderness.
- Areas within the refuge suitable for use as administrative sites or visitor facilities, or for visitor services as provided for in the Alaska National Interest Lands Conservation Act, Sections 1305 and 1306 (for Alaska refuges only).
- Current and potential future requirements for access to the refuge, as provided for in the Alaska National Interest Lands Conservation Act, Title XI (for Alaska refuges only).

The USFWS uses the comprehensive plan to categorize and designate areas within a refuge according to their respective resource values and compatible uses. For each area of a refuge, the USFWS is directed to specify which conservation or recreation programs it intends to implement. The USFWS uses the comprehensive plan to describe and propose opportunities for refuge visitors to hunt, fish, and otherwise enjoy and learn about wildlife and other resources, including other types of recreation, visitor uses, and scientific research. The USFWS specifies which uses and activities are compatible with refuge purposes.

The USFWS is required to ensure that adequate opportunities exist for interagency coordination and public participation during the planning process. Any interested and affected parties, such as state agencies, Alaska Native Corporations, tribes, and other local and national residents that may be affected by planning decisions, must be provided meaningful opportunities to communicate their views and opinions. The USFWS is required to publish notices in the Federal Register to initiate public review and comment. Copies of comprehensive plans are made available on the Internet and in regional USFWS offices throughout the United States. The USFWS writes a summary of the major issues and management proposals contained in the comprehensive plan and delivers it to the public for review and comment.

The USFWS follows the planning requirements specified in the National Wildlife Refuge System Administration Act, as amended by the National Wildlife Refuge System Improvement Act; Section 304(g) of the Alaska National Interest Lands Conservation Act; planning policy (602 FW 1 and 3); the National Environmental Policy Act (42 U.S.C. 4321-4347); and the Council on Environmental Quality's "Regulations for Implementing Procedural Provisions of the National Environmental Policy Act." The USFWS uses an eight-step planning process (figure 5):

- Design the planning process (preplanning).
- Initiate public involvement and scoping.
- Determine significant planning issues.
- Develop and analyze alternatives.
- Prepare a draft comprehensive plan and NEPA document.
- Prepare and adopt a final comprehensive plan.
- Implement, monitor, and evaluate the final plan.
- Review and revise the final plan as necessary over time.

Figure 5. Planning process for refuge comprehensive conservation plans

Design the planning process (preplanning): To build the foundation, the USFWS identifies relevant laws, regulations, policies, and other direction to consider during the planning process (USFWS 2006). The USFWS forms diverse project teams to review the available data on the biophysical and human environments of refuges, conduct a public participation process, and identify areas in which additional work is needed. This design process is consistent with element 1 of the framework (build the foundation).

Initiate public involvement and scoping: The USFWS informs the national and local publics that a refuge is beginning a comprehensive plan and asks them to help identify major planning issues. Formal public scoping begins with Federal Register publication of a "notice of intent" to revise or develop a new refuge plan. Local media, newsletters, comment cards, and mailing lists are used to facilitate public review and comment. This design process is consistent with element 2 of the framework (define visitor use management direction).

Determine significant planning issues: The project team reviews and summarizes the public comments and the issues identified by members of the public, refuge staff, and other USFWS divisions. Their analysis determines the most important issues, opportunities, and challenges to be addressed in the comprehensive plan. The planning issues must be within the management purview of the refuge. Issue statements are written that present multiple options regarding what could be done to address each issue. This step links element 1 (build the foundation) with element 2 (define visitor use management direction).

Develop and analyze alternatives: Project teams discuss and develop a set of draft alternatives, or management proposals, to address the planning issues. The management alternatives are presented to the USFWS regional director and to the public for comment as part of the public review process. The USFWS addresses major management actions such as zoning, use limits, visitor capacity, and closures in these alternatives and as part of the NEPA process. In this step, the USFWS defines management direction and identifies management strategies consistent with element 2 of the framework.

Prepare a draft comprehensive plan and NEPA document: The USFWS produces a draft plan for public review, which describes the alternatives (including no action) for managing the refuge during the next 15 years. To comply with NEPA, the USFWS prepares either an environmental assessment or draft environmental impact statement that is published as part of the draft comprehensive plan. The document describes an analysis of the potential effects of implementing each alternative and describes how the USFWS selected the preferred alternative.

The draft plan includes an analysis of appropriate uses and compatibility determinations for uses on refuge lands and waters. The public review draft also describes desired conditions, a vision, goals, objectives, and other management direction that stays the same no matter which alternative is implemented. The direction includes goals, objectives, and strategies for public uses and visitor services (Brooks and Massengale 2011), in which project teams and refuge staff can define

desired conditions, standards, and thresholds for visitor use management. The USFWS may concurrently conduct a visitor services plan or a public use management plan during the process used to develop the comprehensive plan (i.e., step-down plan). Or, the project team may write specific objectives to direct the USFWS to create a step-down plan upon finalization of the comprehensive plan. In relation to the framework, this step is part of both defining visitor use management direction in element 2 and identifying management strategies in element 3.

Prepare and adopt a final comprehensive plan: The project teams review and summarize all public comments on the draft comprehensive plan, modify the document as needed, and develop a final comprehensive plan. A "finding of no significant impact" or "record of decision" is signed with the plan at time of finalization. The USFWS publishes a Federal Register notice of availability to announce the decision and publishes and distributes the final comprehensive plan. This is consistent with element 3 of the framework (identify management strategies).

Implement, monitor, and evaluate the final plan: The USFWS and the refuge staff work with partners to implement the final comprehensive plan. A critical component of implementing the management direction in the plan is monitoring. Monitoring is defined as measuring and assessing resource and social conditions to make sure that progress is being made toward meeting refuge purposes, goals, and objectives. Monitoring is used to determine if the methods used to implement the comprehensive plan are effective in meeting management objectives for the refuge. The refuge applies an adaptive management approach. Consistent with element 4 of the framework, the USFWS uses information and experience learned from monitoring to evaluate and adjust methods of implementation and modify management objectives as needed to ensure it is making progress toward desired conditions.

Review and revise the final plan as necessary over time: The refuge staff periodically reviews the comprehensive plan to assess the need for changes. The USFWS revises the plan when new information becomes available, when ecological or social conditions change, or when an important need becomes evident. If major changes are proposed, public meetings may be held and a NEPA process initiated if required. Consultation with appropriate state agencies, tribal governments, and other organizations occur during revisions to the plan. The USFWS is mandated to review and revise comprehensive plans for refuges every 15 years. The refuge staff informs and involves the public throughout implementation and monitoring by reporting its activities at community meetings and by mailing updates and newsletters to its constituents. The final step in refuge planning is consistent with element 4 of the framework (implement, monitor, evaluate, and adjust).

USFWS Policies Related to Visitor Use Planning and Management

The Fish and Wildlife Service Manual contains several important sections that describe policies and procedures to implement the USFWS legislative mandates (table 7) (OLS 1979).

Table 7. Policy direction for visitor use planning and management on refuge lands and waters (Brooks and Massengale 2011; USFWS 2006)

TYPE OF GUIDANCE	MANUAL SECTIONS	KEY PROCEDURES AND DIRECTION
Build a foundation	602 FW 3: 3.4C1, 3.4C3	• Preplanning • Internal scoping • Public scoping • Identify planning issues • Vision statement • Appropriate visitor uses • Compatible visitor uses • Identify laws, agency mission, and refuge purposes
Desired conditions and objectives	602 FW 3: 3.4C4d 603 FW 2: 2.11B 605 FW 1: 1.6A-K; 1.13B	• Develop planning goals and objectives • Criteria for quality recreation programs • Standards and thresholds
Evaluate management actions	602 FW 3: 3.4C4e 603 FW 2: 2.12A8, 2.12A11 605 FW 1: 1.8C-D, 1.13B3	• Identify strategies to accomplish objectives • Identify and describe anticipated impacts of visitor uses • Identify detailed and specific stipulations/ terms/conditions on uses to ensure compatibility, resource protection, and quality experiences • Establish limits on use or use zones • Minimize/resolve visitor conflicts • Make closures
Monitoring	602 FW 3: 3.4C7 605 FW 1: 1.8B	• Implement plan, monitor, and evaluate • Monitor recreation programs • Perform station reviews and evaluations
Adjust management actions	602 FW 3: 3.4C7	• Implement strategies • Allocate funding/staff time • Monitor achievement • Describe sampling designs for replication • Modify objectives and strategies
Public review and comment on plans and compatibility determinations	602 FW 3: 3.4C2 603 FW 2: 2.11, 2.12A9	• Publish notice in Federal Register (NEPA) • Notify local media • Analyze and incorporate public comments

U.S. Forest Service
Specific Laws and Policies Related to Visitor Use Management

- Multiple-Use Sustained-Yield Act of 1960
- National Forest Management Act of 1976
- 36 CFR 219, Planning
- 36 CFR 220, National Environmental Policy Act (NEPA) Compliance
- Forest Service Manual 1900, Planning, Chapter 1920, Land Management Planning
- Forest Service Handbook 1909.12, Land Management Planning Handbook
- Forest Service Manual 1900, Planning, Chapter 1950, Environmental Policy and Procedures
- Forest Service Handbook 1909.15, National Environmental Policy Act Handbook
- Forest Service Manual 2300, Recreation, Wilderness, and Related Resource Management

Summary of the USFS Planning Framework

USFS planning occurs at three distinct levels: (1) national strategic plans; (2) land management plans (often referred to as forest plans) that provide integrated programmatic management direction to sustain all resources on an individual national forest or grassland; and (3) plans that provide direction for a specific project or activity. Land management plans and plans that provide direction for a specific project or activity are most applicable to the visitor use management guidance of the framework.

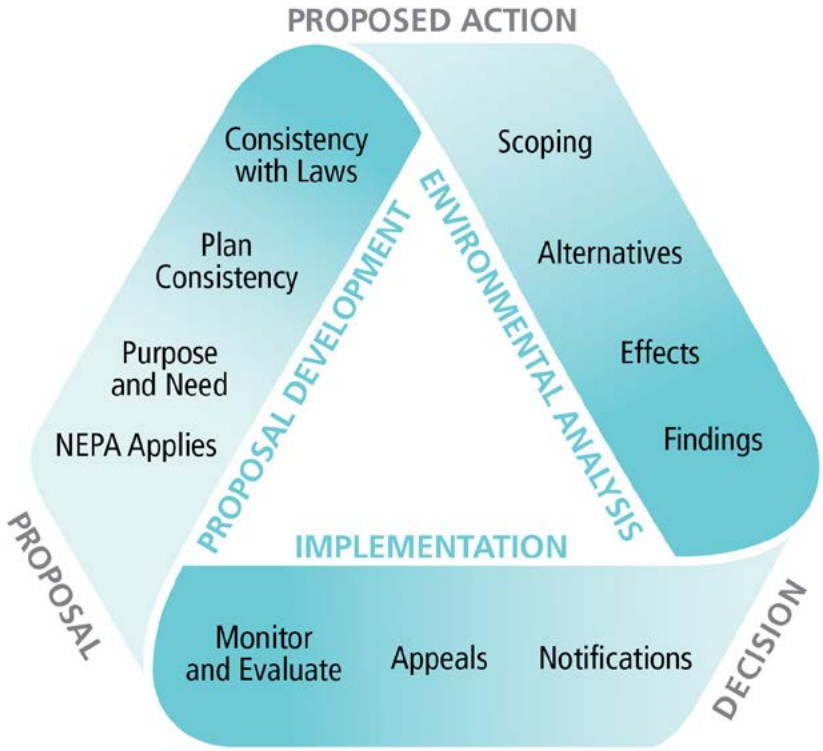
Land management plan: A land management plan sets desired conditions, objectives, standards and guidelines, and monitoring to govern what, where, and how future projects may be implemented, but this plan does not authorize specific projects or activities. Revising or amending a land management plan includes the following requirements (36 CFR 219, Subpart A):

PROCESS	PLAN CONTENT REQUIREMENTS
Public participation	Desired conditions
Assessment	Objectives
Develop proposed plan	Standards and guidelines
Analyze environmental effects	Suitability of lands
Opportunity to object	
Approve plan	

Project plan: A project plan is used to assess the gap between existing conditions and desired conditions and identify specific actions to make progress toward desired conditions. This plan authorizes specific actions to be implemented on the ground.

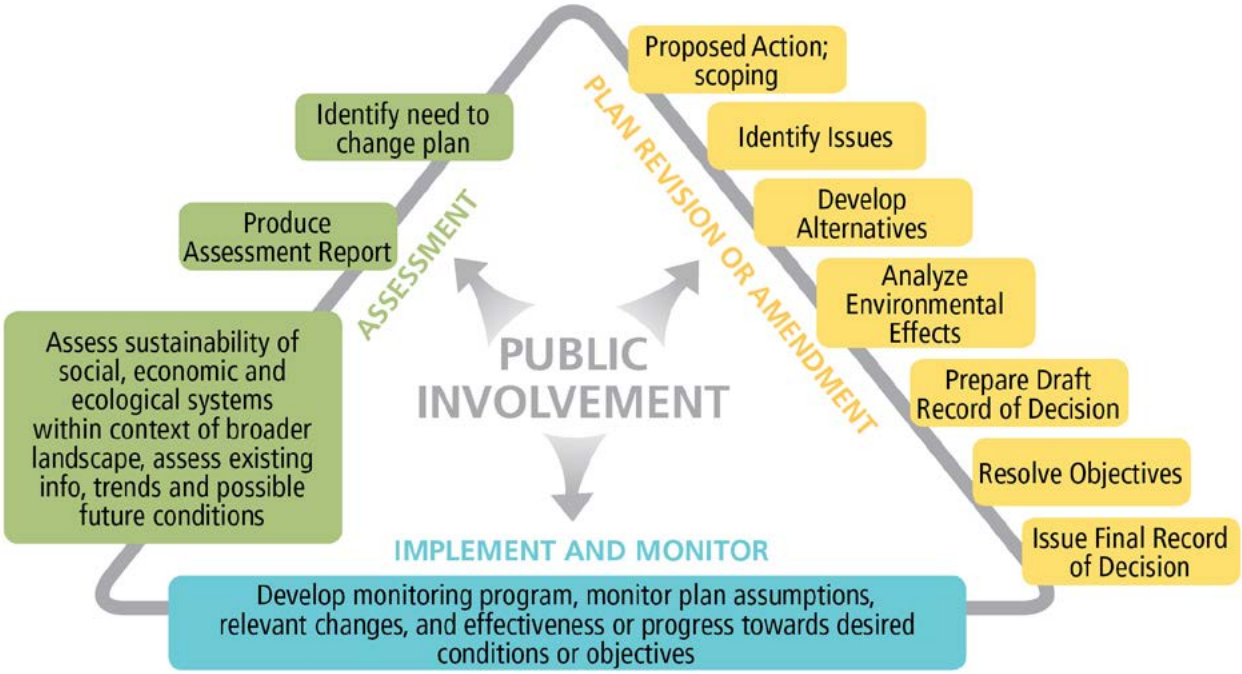
Element 1 (build the foundation) and element 2 (define visitor use management direction) of the framework are typically documented as part of the land management plan. Element 3 (identify management strategies) and element 4 (implement, monitor, evaluate, and adjust) of the framework are typically documented as part of the project plan. The Forest Service Planning Model is shown in figure 6 and applies to both the programmatic and planning levels.

Figure 6. Forest Service Planning Model



Programmatic versus plan level: At the programmatic level, the process to develop a land management plan involves (1) assessment, (2) plan revision or amendment (with accompanying environmental analysis), and (3) monitoring. At the plan level, the process involves (1) proposal development, (2) environmental analysis, and (3) a decision to implement an action. Developing a well-thought-out proposal is a critical phase for both levels of planning. See the left side of the Forest Service Planning Model (figure 6). Providing opportunities for public involvement throughout the process is required, including during proposal development. The "best available scientific information" must be used to inform the planning process, and an interdisciplinary team must be convened to develop the plan (36 CFR 219.3, 219.4, and 219.5). The plan components include desired conditions, objectives, standards and guidelines, and the suitability of lands for various multiple uses. Figure 7 shows how the planning model is used to revise or amend a land management plan.

Figure 7. Planning model for revision or amendment to a land management plan



Defining desired conditions is discussed in element 2 of the framework. Standards and guidelines are designed to support desired conditions and are components of the land management plan. Standards and guidelines should not be confused with thresholds tied to monitoring indicators. A standard is "a mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements" (36 CFR 219.7). A guideline serves a similar function, but adherence to the terms of the guideline is not mandatory as long as the purpose of the guideline is met. Examples of standards and guidelines include:

- Standard: Construct all trail structures within the wilderness area using native material.
- Standard: Special orders must require that pack-in feed is certified weed free.
- Guideline: Undeveloped campsites should be located a minimum of 50 feet away from streambanks to protect streamside vegetation and water quality.

The most applicable requirements for developing plan content for recreation and designated areas under 36 CFR 219 are found in the sections on sustainability and multiple uses (36 CFR 219.8 and 219.10). Sustainability is defined as "the capability to meet the needs of the present generation without compromising the ability of future generations to meet their needs," incorporating the spheres of ecological, economic, and social sustainability (36 CFR 219.19). Plan components (e.g., desired conditions, objectives, standards, and guidelines) must incorporate (36 CFR 219.10(b)):

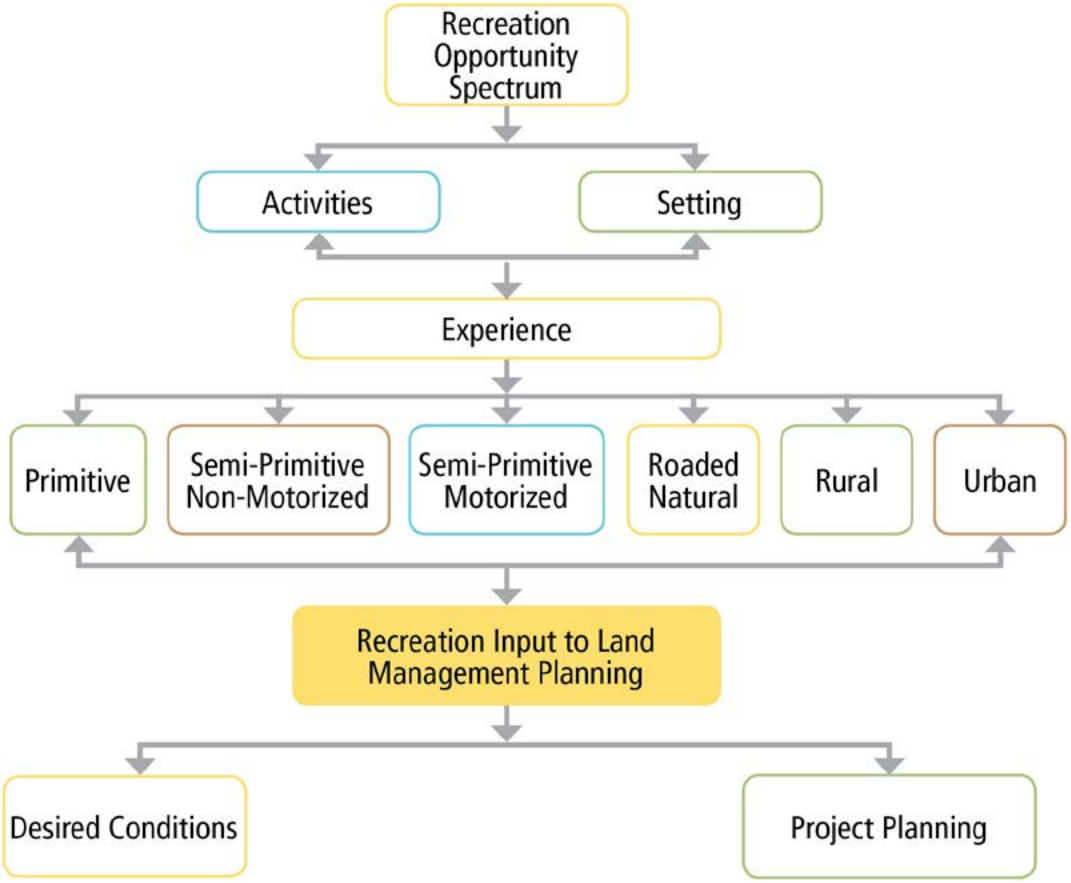
1. Sustainable recreation, including recreation settings, opportunities, access, and scenic character. Recreation opportunities may include nonmotorized, motorized, developed, and dispersed recreation on land, water, and in the air.
2. Protection of cultural and historic resources.
3. Management of areas of tribal importance.
4. Protection of congressionally designated wilderness areas as well as management of areas recommended for wilderness designation.
5. Protection of designated wild and scenic rivers as well as management of rivers found eligible or determined suitable for the National Wild and Scenic River System.
6. Appropriate management of other designated areas or recommended designated areas in the plan area, including research natural areas.

The USFS uses the Recreation Opportunity Spectrum to describe, map, and monitor recreation settings within six distinct classes: primitive, semiprimitive nonmotorized, semiprimitive motorized, roaded natural, rural, and urban (table 8). Subclasses within the six broad categories may be established, and describing and mapping seasonal variations are encouraged. Recreation settings are defined as the social, managerial, and physical attributes of a place that, when combined, provide a distinct set of recreation opportunities. Social attributes focus on visitor interactions (e.g., the number of encounters with other people). Managerial attributes focus on visitor management (e.g., the degree to which visitors are regulated or restricted) and site management (e.g., the degree to which the site is developed). Physical attributes focus on the degree of remoteness, naturalness, and scenic integrity (USFS 1982). Figure 8 illustrates the flow of information from the Recreation Opportunity Spectrum to land management planning and subsequently to desired conditions and project planning.

Table 8. The Recreation Opportunity Spectrum class descriptions

ROS	CLASS DESCRIPTIONS
Primitive	Opportunity for isolation from human sights, sounds, and management controls in an unmodified natural environment. Only facilities essential for resource protection are available. A high degree of challenge and risk are present. Visitors use outdoor skills and have minimal contact with other users or groups. Motorized use is prohibited.
Semiprimitive nonmotorized	Some opportunity for isolation from human sights, sounds, and management controls in a predominantly unmodified environment. Opportunity to have a high degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills. Concentration of visitors is low, but evidence of users is often present. Onsite managerial controls are subtle. Facilities are provided for resource protection and the safety of users. Motorized use is prohibited.
Semiprimitive motorized	Some opportunity for isolation from human sights, sounds, and management controls in a predominantly unmodified environment. Opportunity to have a high degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills. Concentration of visitors is low, but evidence of other area users is present. Onsite managerial controls are subtle. Facilities are provided for resource protection and the safety of users. Motorized use is permitted.
Roaded natural	Mostly equal opportunities to affiliate with other groups or be isolated from sights and sounds of people. The landscape is generally natural with modifications moderately evident. Concentration of users is low to moderate, but facilities for group activities may be present. Challenge and risk opportunities are generally not important in this class. Opportunities for both motorized and nonmotorized activities are present. Construction standards and facility design incorporate conventional motorized uses.
Rural	Area is characterized by a substantially modified natural environment. Opportunities to affiliate with others are prevalent. The convenience of recreation sites and opportunities are more important than a natural landscape or setting. Sights and sounds of man are readily evident, and the concentration of users is often moderate to high. Developed sites, roads, and trails are designed for moderate to high uses.
Urban	Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. High levels of human activity and concentrated development, including recreation opportunities, are prevalent. Developed sites, roads, and other recreation opportunities are designed for high use.

Figure 8. The Recreation Opportunity Spectrum in relation to land management and USFS project planning (USFS 1982)



National Oceanic and Atmospheric Administration

Summary of NOAA Visitor Use Management in Marine Protected Areas

The NOAA's mission encompasses understanding and conserving the nation's oceans and coastal resources for this and future generations. Within that broad mandate, the NOAA uses a variety of legal authorities to manage and conserve special ocean places and the resources they contain that are of ecological, cultural, and economic significance to communities around the United States. These place-based conservation programs reflect a wide spectrum of agency roles and engagement in visitor use management, ranging from exercising direct management authority over recreational and other human uses in specific marine protected areas (such as national marine sanctuaries) and other waters under federal jurisdiction, to collaborating with other federal or state agencies sharing similar goals and cooperating through formal or voluntary partnerships.

In that context, the framework applies most directly to the NOAA's national marine sanctuaries, which are established and actively managed by the agency under the National Marine Sanctuaries Act to sustain appropriate ocean uses including recreation. In addition to sanctuaries, in which the NOAA has a direct management role, several other NOAA place-based ocean conservation programs, including a variety of federal or state conservation partnerships, may benefit from applying relevant principles and tools in the framework.

In all of these cases, the framework may provide useful insight into strategies to meet common challenges and opportunities posed by recreational uses in these areas, even though the varying authority and roles of the specific NOAA programs may sometimes fall outside the technical scope and purview of the Interagency Visitor Use Management Council. Examples of both categories of NOAA roles in the place-based management of ocean recreation follow.

Direct Management Role in Marine Protected Areas

Mandate: Authorized by the National Marine Sanctuaries Act of 1972, the NOAA has established and actively manages a growing system of federal marine protected areas covering 170,000 square miles of U.S. ocean and coastal waters, including the Great Lakes. Currently comprising 13 sanctuaries and 3 national marine monuments, the National Marine Sanctuary System protects some of America's most treasured ocean ecosystems and maritime cultural landscapes, including coral reefs, rocky shores, sea-grass beds, Great Lakes habitats, and shipwrecks. New sanctuary sites may be established by the NOAA or by direct congressional designation. In 2014, a new sanctuary nomination process was initiated that empowers coastal communities to identify valued ocean areas they believe warrant protection through sanctuary designation. That open-ended process may result in the addition of several new sites in the coming years.

Recreational uses in sanctuaries: Fundamental to the purpose of the National Marine Sanctuaries Act, and to the implementation of the National Marine Sanctuary System itself, is an explicit requirement to "facilitate to the extent compatible with the primary objective of resource protection, all public and private

uses of the resources of these marine areas not prohibited pursuant to other authorities." Sanctuaries are often designated, in part, due to their special national significance as areas for ocean recreation. As a consequence, sanctuaries are often destinations for a wide variety of human uses, including commercial/industrial activities (e.g., commercial fishing, underwater cables, and shipping) as well as a rapidly expanding suite of recreational activities. Depending on the site's location, these may include swimming, snorkeling, diving, surfing, photography, paddling, boating, sport fishing, and whale watching. Some, but not all, recreational uses are actively managed by the individual sanctuaries or by cooperating agencies using a combination of activity-based regulations, special use zones, and education and outreach programs. In general, specific recreational uses are managed at the site level, consistent with and guided by the National Marine Sanctuary System's statutory mandates and program policies. Each site has a local citizen advisory council made up of diverse stakeholder representatives, including the recreational sector, who provide advice on management issues. Presently, the National Marine Sanctuary System does not have comprehensive, programmatic regulations governing ocean recreation or visitor use management.

Framework applicability to sanctuary planning and management: The National Marine Sanctuaries Act statutory requirement to facilitate and sustainably manage compatible human uses shapes many aspects of the design and implementation of national marine sanctuaries. As a result, the principles and approaches provided by the framework also reflect important phases of sanctuary processes, including:

1. **Site designation**: New sanctuaries may be established in ocean and coastal areas that are nationally significant and in need of additional management of human uses or other threats. Assessments of a proposed sanctuary site in support of designation typically include an evaluation of the value, impacts, and status and trends of recreational activities. Specific management measures for recreational uses (e.g., prohibitions, restrictions, special use zones) may be incorporated into the new site's designation document or addressed in the subsequent development of the initial site management plan and implementing regulations.

2. **Management planning**: Every national marine sanctuary is required to develop a site management plan. Typically developed after designation, the plan articulates the site's goals and objectives and specific management approaches to ensure that current and emerging human uses are both appropriate and ecologically sustainable over time. Shaped from the outset by stakeholder input and using approaches consistent with the framework, this collaborative process examines and develops effective measures to manage recreational and other human uses.

3. **Adjust management actions**: As required by the National Marine Sanctuaries Act, each sanctuary undertakes a periodic review and revision of its site management plan. This structured process relies heavily on input from stakeholders and users to evaluate management effectiveness and identify needed adjustments. New management measures may involve enhancing or replacing existing management regulations or programs or creating new

approaches to meet emerging threats or conflicts among users. In many cases, the issues that surface in the site management plan review process stem from expanding ocean recreation in these and other marine protected areas and are, thus, directly relevant to the issues addressed by the framework.

The framework broadly reflects the goals and visitor use management approaches of NOAA national marine sanctuaries and provides useful support for the designation, planning, and adaptive management of existing and new marine protected areas over time.

NOAA Partnerships for Place-Based Ocean Management

The NOAA plays key roles in several partnerships with federal and state agencies working collaboratively to conserve important areas in the U.S. Exclusive Economic Zone. Chief among these partnerships are:

- **National System of Marine Protected Areas:** Authorized by Executive Order 13158 and coordinated by the NOAA and the Department of the Interior through the National Marine Protected Areas Center, the national system is a voluntary partnership of federal, state, local, and tribal marine protected areas working collaboratively to effectively manage some of the nation's most treasured ocean and coastal areas.
- **National Estuarine Research Reserves System:** Authorized by the Coastal Zone Management Act, this system of coastal marine protected areas is managed by states in partnership with the NOAA and provides funding, guidance, and technical assistance for the long-term conservation of coastal ecosystems and the development and testing of innovative coastal zone management approaches.
- **Marine national monuments:** The NOAA's Marine National Monument Program implements the January 2009 Presidential proclamations that established three Pacific marine national monuments: Marianas Trench, Pacific Remote Islands, and Rose Atoll. The program also co-manages the Papahanaumokuakea Marine National Monument, which was created in 2006. The Marine National Monument Program coordinates the development of management plans, scientific exploration, and research programs within the marine national monuments in the Pacific Islands Region. Under existing NOAA authorities and the Antiquities Act, the Marine National Monument Program works with federal and regional partners and stakeholders to conserve and protect the marine resources in these large marine protected areas.
- **Area-based fisheries management:** Authorized by the Magnuson-Stevens Fishery Conservation and Management Act, the regional fishery management councils and NOAA establish place-based regulations to manage sport fishing in order to ensure long-term viability of recreational fisheries stocks.
- **Protected species conservation areas:** Authorized by the Marine Mammal Protection Act, Endangered Species Act, and Magnuson-Stevens Fishery Conservation and Management Act, the NOAA has established several ocean and coastal areas intended to protect marine mammals and sea turtles by restricting certain potentially harmful human activities, which could include some forms of recreation (e.g., fishing, approaching wildlife).

Conclusion

All of these NOAA endeavors, whether statutorily mandated or based on formal or informal partnerships, share a focus on conserving natural and cultural resources within special places in U.S. waters. Further, all may to varying degrees address patterns, amounts, and types of visitor use (recreational activities) in waters in which the NOAA and other federal agencies have an interest and role. As such, all of these NOAA programs and partnerships may benefit from the approaches and tools provided by the framework.

U.S. Army Corps of Engineers

Specific Laws and Policies Related to Visitor Use Management

- Engineer Regulation 1130-2-550, Recreation Operations and Maintenance Policies, Chapter 2, Recreation Management
- Engineer Regulation 1130-2-550, Recreation Operations and Maintenance Policies, Chapter 3, Project Master Plans and Operational Management Plans
- Engineer Regulation 1165-2-400, Water Resources Policies and Authorities - Recreational Planning, Development, and Management Policies, Chapter 6, Program Objectives

Summary of the USACE Planning Framework

The master plan is the basic document guiding USACE responsibilities pursuant to federal laws to preserve, conserve, restore, maintain, manage, and develop the project lands, waters, and associated resources. The master plan is a continuing and dynamic document, unlike the feasibility study and the general design memorandum, which also plan for the development of resources. The master plan is a planning document anticipating what could and should happen and is flexible based upon changing conditions. Design functions are handled in the feature design memorandums and in contract plans and specifications. The master plan creates concepts, not details, of design or administration. Detailed management and administration functions are handled in the operational management plan, which translates the concepts of the master plans into operational terms.

Following approval of the master plan, the operations element initiates preparation of the operational management plan for natural resources and park management. The operational management plan is prepared as a separate document and outlines in detail the specific operation and administration requirements for natural resources and park management, consistent with the approved master plan.

The master planning process encompasses a series of interrelated and overlapping tasks involving the examination and analysis of past, present, and forecasted future environmental and socioeconomic conditions and trends. Within a generalized conceptual framework, the process focuses on three primary components: (1) regional or ecosystem needs, (2) project resource capabilities and suitabilities, and (3) expressed public interests and desires. The master plan ensures that economy and quality are given equal attention in the development of new recreation facilities.

The framework can be used to inform and establish the visitor capacity called for in the master and operational plans. It can also be used to implement management strategies to provide opportunities for all visitors, reduce conflicts, and improve management efficiencies. Because this framework includes monitoring and adjusting management strategies when thresholds are not being met, it can be used to support and maintain Engineer Regulation 1165-2-400, Paragraph 6, Program Objectives.

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Appendices

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Appendix A: History and Limitations of Previous Visitor Use Management Frameworks

EARLY VISITOR USE MANAGEMENT CONCEPTS AND FRAMEWORKS

The Visitor Use Management Framework is an evolution of earlier efforts, modified to reflect lessons learned. Originally, visitor use management techniques were based largely on common sense and personal experience. Managers tried strategies, and if problems arose, they tried something different. It was not until the late 1950s that agencies recognized that managers needed help with visitor use management and began to devote more resources to it.

Among the first ideas that fledgling recreation management programs developed were concepts and analytical frameworks to help managers make decisions to protect resources and experiences, while allowing for recreation use. Visitor capacity was perhaps the first such concept. The concept of visitor capacity had been around since at least the 1930s, when National Park Service biologist Lowell Sumner wondered "how large a crowd can be turned loose in a wilderness without destroying its essential qualities"; he went on to conclude that recreational use should be kept "within the carrying capacity" (Sumner 1936). Since too much visitation can degrade resources and visitor experiences, it was assumed the key to protecting resources and experiences was to ensure a certain level of visitation never occurred. The capacity concept was being used by some of the more established land management professions, range and wildlife management in particular. Capacity was included in several legal requirements in the 1960s and 1970s.

However, the first scientific exploration of the visitor capacity concept made it clear this concept was far from a panacea (Wagar 1964). First, managing use levels to a visitor capacity is one of many strategies for dealing with visitor use management issues. Changing visitor behavior, modifying where and when use occurs, or building facilities that can accommodate heavy use are critical strategies for protecting desired conditions. So, capacity is one piece of the framework needed to manage visitor use and in some instances is legally required. Second, capacity can only be estimated once decisions have been made about desired conditions and other management actions to be taken in the area. Consequently, capacity must be embedded in a larger framework that includes making decisions about desired conditions and other management actions.

Defining desired conditions is central to visitor use management, as capacities and appropriate management are dependent on them. Wagar (1964) pointed out that management objectives or desired conditions are needed for biophysical resources and the social environment as well as the managerial regime to be employed. Frissell and Stankey (1972) went on to suggest that biophysical and social objectives are needed that define the "limits of acceptable change." How stringently should biophysical resources be protected? What level of impact to resources is acceptable

given a desire to provide different types of opportunities for recreation use? Regarding the social environment, objectives specify appropriate types and degrees of social interaction. The managerial regime describes the developments themselves, including the level of development, density of development, core activities the infrastructure was constructed to accommodate, and the degree to which the facilities will dominate the landscape (visually and otherwise).

Another concept that emerged early on is the importance of diversity in visitor use management. Different people have different interests regarding recreational activities and the settings in which those activities occur. Moreover, people's interests change over time (Burch 1966). Consequently, management agencies striving for quality in their visitor use management programs provide a system of recreation areas that support a diversity of opportunities. This led Bob Marshall (1933) to recommend that the U.S. Forest Service provide seven different types of recreation areas, each with its own standards for conditions to be provided and how the area should be managed. In the late 1970s, this concept was formalized into the Recreation Opportunity Spectrum (Driver et al. 1987).

By 1980, these concepts were combined into the first comprehensive visitor use management framework, the Limits of Acceptable Change process (Stankey et al. 1985). This framework emphasized the need for management objectives, incorporated diversity concepts, and included visitor capacity as just one of a number of visitor use management strategies that might be needed to achieve objectives. In the decades that followed, similar ideas and concepts were incorporated into related frameworks that largely varied in terms of procedural details and the situations to which they were to be applied. These included Carrying Capacity Assessment Process (Shelby and Heberlein 1986), Visitor Impact Management (Kuss et al. 1990), and Visitor Experience and Resource Protection (NPS 1997).

LIMITATIONS OF PREVIOUS FRAMEWORKS

Although these frameworks did much to improve visitor use management (McCool and Cole 1997; McCool et al. 2007), they had their limitations, whether real or perceived. First, the frameworks were perceived as not fully integrated into current planning processes. The frameworks were developed for particular agencies and situations. For example, although broadly applicable, the Limits of Acceptable Change framework was developed for U.S. Forest Service wilderness. The Visitor Experience and Resource Protection process was developed for the National Park Service and designed to be applicable to a diversity of settings. Some steps were needed in some situations but not in others. There was also confusion on when and where identification of visitor capacity fit in these frameworks. This suggests the value of developing a universal framework that can be applied across the entire breadth of visitor use management situations and provide consistency, regardless of agency. The application of the Visitor Use Management Framework to different types of projects and the use of the sliding scale to guide implementation are described throughout the document. In addition, each agency's planning policies

and procedures are described in terms of their applicability to the framework in chapter 4. Finally, this framework includes clarification of when and where visitor capacity is addressed (element 3, step 10).

A second limitation was the perceived complexity and costliness of working through the frameworks. To be clear, applying these frameworks (including the Visitor Use Management Framework set forth by the Interagency Visitor Use Management Council) does require more time and resources than the ad hoc, intuition-based management that was the norm. However, there was a misperception, for example, that one could not implement the frameworks without extensive public involvement or that visitor survey research was required. This limitation was more perceived than real and occurred as a result of how each framework was described; the case examples and early applications of the frameworks were for highly complex situations. This emphasizes the need to show how one universal framework can be applied flexibly across a spectrum of complexity and available resources. In the Visitor Use Management Framework, chapter 2 describes the application of a sliding scale of analysis and includes a decision support tool for selecting the location of a project on the sliding scale. Also, many examples with different degrees of complexity are included throughout chapter 3 to demonstrate the application of the sliding scale to each element and step of the framework.

A third limitation was that it was not always well emphasized that these frameworks were intended to be implemented in a proactive rather than reactive manner. This can be addressed by making it clear that the identification of management actions is a matter of predicting what is necessary to meet management objectives before unacceptable impacts occur. Monitoring data can help refine the understanding about what actions are necessary to maintain and/or achieve desired conditions and improve the understanding and use of indicators and thresholds. The Visitor Use Management Framework, particularly chapter 3 (element 2, step 7), and a subsequent guidebook on indicators, thresholds, and monitoring emphasize the importance of setting thresholds at acceptable levels of impact and being responsive to trends in changing conditions as identified by monitoring.

In summary, this Visitor Use Management Framework takes the best of the previous frameworks and incorporates lessons learned from years of implementation. It is intended to be applied flexibly and integrated fully into each agency's existing planning processes. Illustrative examples and relevant guidance from agency policies and procedures are included to guide the practitioner in application of the framework. The Interagency Visitor Use Management Council will continue to learn from implementation of this new framework and update the guidance accordingly.

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Appendix B: Hypothetical Example of the Application of the Visitor Use Management Framework

MOOSE CREEK WATERSHED RESTORATION PROJECT

ELEMENT 1: BUILD THE FOUNDATION

Determine where the project falls on the sliding scale. This Moose Creek Watershed Restoration Project is highly complex because there is a high risk to the threatened trout population and its habitat, high stakeholder interest, and high potential for controversy. Thus, the project is on the high end of the sliding scale of analysis. See table B1.

Table B1. Decision support tool for the Moose Creek Watershed Restoration Project

Decision Support Tool

	RATING QUESTIONS	RATIONALE	HIGH MODERATE LOW
Moose Creek Watershed Restoration Project			
1	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **natural** resources?	There are threatened fish in the project area.	High
2	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **cultural** resources?	A partial trail reroute will involve removing and rehabilitating a historic trail.	High
3	What is the likelihood of imminent and significant changes to the natural or cultural resources?	There is an imminent threat to fish habitat and loss of fish.	High
4	What is the likelihood of imminent and significant changes to **visitor experience?**	There will be some imminent changes to the visitor experience with the trail reroutes. It's important to continue to allow hiking, mountain biking, and motorized use in the area.	Moderate
5	How will the issue affect other aspects of land management in the area or surrounding areas?	The issue will not likely affect other aspects of management in the surrounding areas because the types of recreation uses allowed will be the same.	Low
6	What is the geographic extent of the issue's impacts? Scales of impacts include: national, regional, state, local/county, and site or project.	The scale of impact involves the site at the project level and also adjacent local/county land.	Moderate

Table B1. Continued

	RATING QUESTIONS	RATIONALE	HIGH MODERATE LOW
Moose Creek Watershed Restoration Project			
7	What is the relative interest of stakeholders affected by the action? Stakeholders may include: local communities, general public, special interest groups, recreational visitors, commercial users, traditional-subsistence users, tribes, and others.	There is significant stakeholder involvement; a roundtable has been meeting for nearly 4 years on this issue.	High
8	Is the impact temporary (low) or long lasting (high)?	The impact is long lasting, with permanent trail reroutes and protection of fish habitat and sediment erosion controls.	High

CRITERIA - Use the ratings assigned to questions 1-8 to evaluate the following 4 sliding scale criteria. Combine those criteria into a single qualitative rating (high, moderate, or low) of the project's appropriate location on the sliding scale.

	CRITERIA	RATIONALE	HIGH MODERATE LOW
A	**Issue Uncertainty**	We have a lot of information and know what the problem is. Rerouting the trail is one answer.	Moderate
B	**Impact Risk**	A threatened species and a historic trail are involved. We must act quickly to not lose resources. There are several significant issues to deal with; many people visit the area.	High
C	**Stakeholder Involvement**	There are several involved publics in the roundtable on this issue with many different ideas.	High
D	**Level of Controversy**	This project is highly controversial among different recreation user groups.	High
	Location on the Sliding Scale	**This project is on the high end of the sliding scale because of the impact to the spotted trout habitat, rerouting of a historic trail, significant stakeholder involvement, and many ideas of possible solutions.**	**High**

STEP 1. CLARIFY THE PROJECT PURPOSE AND NEED

STEP 1

The original trail leading to the top of Jagged Peak goes through a portion of the Moose Creek watershed. The sole known remaining population of genetically pure spotted trout inhabits Moose Creek, a tributary of Flicker Creek, itself a tributary of the Carolina River. The trail crosses lower Moose Creek multiple times, and there has been continuous motorized and nonmotorized use in this area throughout the 1900s. The Moose Creek watershed is receiving increased recreation pressure likely because of closures of trails in Joseph Canyon and the Blue Forest areas. Continued trail-use crossing of Moose Creek may degrade fish habitat through human-caused erosion of sediment, introduction of noxious weeds, and diseases carried by humans, animals, or equipment. There is a need to decrease the human-caused sediment flow into Moose Creek to improve habitat for the threatened spotted trout. The purpose of the project is to:

- Protect the genetically pure spotted trout and its habitat.
- Provide a motorized and nonmotorized recreational experience.
- Prevent sediment from recreational activities from flowing into Moose Creek.

STEP 2. REVIEW THE AREA'S PURPOSE AND APPLICABLE LEGISLATION, AGENCY POLICIES, AND OTHER MANAGEMENT DIRECTION

STEP 2

Two pieces of legislation guide the management of use and activities in portions of the analysis area. The first, an act of Congress on February 27, 1913, designated 14,843 acres in the Kona National Forest to be "reserved from all forms of location or entry and set aside as a municipal water supply reserve for the benefit of the nearby city." This legislation covers a small portion of the western end of the watershed. The second is an agreement, dated January 9, 1924, for the purposes of conserving and protecting the water supply of the nearby city. This agreement covers the remainder of National Forest Service (NFS) lands in the watershed not covered by the 1913 act. The forest plan provides programmatic management direction for NFS lands on the Kona National Forest. Through its goals, standards and guidelines, and management area direction, the forest plan provides the overall guidance for management of NFS land.

The forest-wide standards and guidelines in the forest plan that apply to this project are primarily those regarding cultural resources, recreation, fish and wildlife, water resources, special uses, rights-of-way, lands, soil resources, transportation, and fire and fuels. The forest plan divides the Kona into individual management areas and establishes specific direction, goals, standards, and guidelines to be used in the management of each area. Applicable direction for the five management areas in the analysis area is summarized next.

Semiprimitive Motorized Recreation (MA 2A)

This management area covers 4,067 acres (50 percent) of NFS lands in the analysis area. MA 2A emphasizes semiprimitive motorized recreation opportunities, such as snowmobiling and off-highway vehicles, on roads and trails. Motorized travel may be restricted or seasonally prohibited to protect physical and biological resources. Use of motorized vehicles is prohibited off roads and trails to protect soils, vegetation, and special wildlife habitat.

Rural and Roaded Natural Recreation (MA 2B)

This management area covers 277 acres (3 percent) of NFS lands in the analysis area. MA 2B emphasizes rural and roaded natural recreation opportunities. Motorized and nonmotorized recreation activities, such as driving for pleasure, viewing scenery, picnicking, fishing, snowmobiling, and cross-country skiing, are possible. Motorized travel may be restricted or seasonally prohibited to protect physical and biological resources. General direction for visual resources is to manage activities to maintain or improve the quality of recreation opportunities. Management activities are not evident, remain visually subordinate, and harmonize and blend with the natural setting.

Riparian Area Management (MA 9A)

This management area covers 396 acres (5 percent) of NFS lands in the analysis area. MA 9A emphasizes management of all ecological components of riparian areas. These components include the aquatic ecosystem, riparian ecosystem, and adjacent ecosystems within 100 feet of perennial streams, lakes, and other water bodies. Each of these components is managed together as an integrated riparian area. The 9A management areas were not mapped at the time of the forest plan release. For this project, the 9A management area was mapped as 100 feet from all second-, third-, and fourth-order streams. The goals of management are to provide healthy, self-perpetuating plant communities, meet water quality standards, provide habitats for viable populations of wildlife and fish, and provide stable stream channels. General direction for transportation system management is to locate roads and trails outside riparian areas unless alternative routes have been reviewed and rejected as being more environmentally damaging.

Municipal Watershed (MA 4D)

This management area covers 78 acres (1 percent) of NFS lands in the analysis area. MA 4D emphasizes maintaining and improving aspen sites. Other tree species, if present, are de-emphasized. Aspen is managed to produce wildlife habitat, wood products, visual quality, and plant and animal diversity. A variety of ages, sizes, and shapes of aspen are maintained. Recreation opportunities are semiprimitive nonmotorized and motorized or roaded natural. Some temporary or seasonal road and area use restrictions are implemented to prevent disturbance of wildlife or improve hunting and fishing quality.

Municipal Watershed (MA 10E)

This management area covers 3,339 acres (41 percent) of NFS lands in the analysis area. MA 10E emphasizes protecting or improving the quality and quantity of municipal water supplies. Management practices vary from use restrictions to water resource improvement practices, with the primary objective of meeting water quality standards established for the individual watershed. A secondary objective is to manage 10E to improve the yield and timing of water flows consistent with water quality requirements. Use of motorized vehicles is prohibited off roads and trails to protect soils, vegetation, and special wildlife habitat. The forest can order the watershed closed to all travel when the road or trail surfaces are damaged to a degree that degrades water quality.

STEP 3. ASSESS AND SUMMARIZE EXISTING INFORMATION AND CURRENT CONDITIONS

STEP 3

Location

The proposed Moose Creek project is within the Jagged Peak Range ecological subsection. The project area is within the Flicker Creek sixth-level watershed.

Watershed and Soil

The Moose Creek watershed is in montane and subalpine climate zones. Elevation is between 6,500 and 11,000 feet. All aspects are present in the watershed, and slopes vary from nearly level to greater than 60 percent. This area is underlain by rocks of the Jagged Peak batholith. Soils are derived from the weathered Jagged Peak granite. With the decomposed granite soil type throughout the project area, there is a normal background level of sediment that naturally flows into Moose Creek. Roads and trails add more instability to side slopes and riparian areas, increasing the sedimentation. Bare soil is erosive, and increased sedimentation accumulates in the stream channel and reduces pool depth, impedes spawning, and limits food production.

Vegetation Type

The vegetation in the watershed is fairly diverse and includes stands mapped as limber pine, spruce-fir, quaking aspen, mixed conifer, ponderosa pine/Douglas-fir, grasses, and forbs.

Fish

Spotted trout is native to the east side of the Continental Divide. Historically, it was thought to have occupied the Carolina and Branch River watersheds; however, recent genetic analysis indicates it naturally occurred only in the Branch River watershed. Spotted trout is currently listed as threatened under the Endangered Species Act. Extensive surveys have failed to identify any extant populations of the spotted trout in the Branch River watershed.

Visitor Use

Recent large wildfires have affected much of the local area used for recreation. Several trails have been closed as a result of the Joseph Canyon and Blue Forest fires. As a result, the Moose Creek trails are seeing more use. Currently, there are 2.6 miles of motorized system trails, 1.2 miles of nonmotorized system trails, and 3.9 miles of nonsystem (user-created) nonmotorized trail within the water influence zone of Moose Creek. Not only are these trails in the water influence zone, but there are also several creek crossings along the trail.

The biggest concern in the Moose Creek watershed is sediment loading from the existing road and trail network and the subsequent effect on the threatened spotted trout habitat. This concern was aggravated by a large storm event that occurred in September 2013, bringing nearly 12 inches of precipitation and stream flows in excess of 200 cubic feet per second, which washed out portions of the roads and trails.

STEP 4. DEVELOP A PROJECT ACTION PLAN

STEP 4

Organize the Team

The team leader formed a project team consisting of a hydrologist, wildlife biologist, recreation specialist, and cultural resource specialist. As a group, the team identified whether more resource specialists were needed to complete the project and invited them to join. The leader kept track of the project timeline, gathered resource information from the team in a timely manner, wrote the environmental assessment, and kept the decisionmaker informed of progress.

Project plan/timeline:

- Spring 2014: Organized the interdisciplinary team and performed public scoping of the environmental assessment.
- Fall 2014: Drafted the environmental assessment.
- Spring/Summer 2015: Made a decision on the project, which was a finding of no significant impact; began to mitigate sediment entering the stream, build the new trail, and decommission the nonsystem trail.
- Spring 2016: Continued with necessary trail work and installed interpretive signs.
- Summer 2016: Began any necessary instream work.

Public Involvement Strategy

The appropriate compliance documentation was an environmental assessment. It was not required to publish a notice of intent in the Federal Register. Public involvement included notifying interested parties through a scoping letter and providing an opportunity to comment on the proposed action. Further detail on levels of involvement is discussed next.

Levels of Involvement

There were different levels of involvement. Throughout, multidirectional communication was emphasized. The purpose of multidirectional communication was to transmit and receive information among many stakeholders. It was up to the responsible official to determine the level of public involvement/communication with input from staff.

Level 1 – other government agencies: Other government agencies with overlapping, concurrent, or adjacent jurisdiction had an immediate interest and were a great help to the project. These agencies (native corporations; cities; and regional, state, and other federal agencies) were involved in detailed roles. This included individual or joint meetings to evaluate ways to coordinate and collaborate. In subsequent hosted sessions, agencies identified mutual goals and developed strategies to achieve them together.

Level 2 – private organizations (e.g., nongovernmental organizations, chambers of commerce, service clubs, and user groups): While the federal government is constrained from convening advisory work sessions with these groups, their input and understanding is nonetheless very important to the success of the project. Interdisciplinary team representatives were placed on agendas of regularly scheduled meetings of groups, such as the chambers of commerce and the environmental organizations, to share information about the public process and to elicit comments and concerns. The agency also scheduled one-on-one informal meetings with key individuals and nongovernmental organizations to provide information and listen to concerns and suggestions. These meetings were open to the public, and comments were recorded.

Techniques for Communication with the General Public

Media relations: Press releases and advertisements were used to promote participation.

Public or stakeholder workshops/charrette: Public workshops helped maximize the exchange and understanding of information. The workshops were designed to accommodate many different communication styles and personalities. Rather than the traditional speaker and response format, meetings followed an open-house format. The team leader gave a brief presentation at 6:30 p.m. He and others were available for questions and discussion. Attendees were also able to comment in writing, in facilitated small group discussions, on comment forms, on a graffiti wall, and using the computer terminals. The room was arranged into stations. Each station had a topic. People were encouraged to join any small group. When in small groups, attendees listened, asked questions, or gave comments. They could leave a group whenever they liked to join another group. Comments were recorded on flip charts. Everybody was given a comment form and encouraged to fill it out before leaving the meeting.

Traveling briefings: A presentation was prepared for each milestone. This included a PowerPoint or slideshow presentation and handouts. Team members were on the agendas of regularly scheduled meetings and gave the latest information about the project, as well as received comments and ideas.

Websites: The website was updated as the planning process proceeded, recording new information and key decision points. The team coordinated the content placed on the website. The team used an electronic database to collect and respond to comments from the public, such as comment analysis and response application (CARA).

Newsletters: Newsletters were produced at major milestones. The newsletters contained a mail-back comment form.

ELEMENT 2: DEFINE VISITOR USE MANAGEMENT DIRECTION

STEP 5. DEFINE DESIRED CONDITIONS FOR THE PROJECT AREA

STEP 5

Erosion and sedimentation are natural processes, but many land use activities can accelerate these processes leading to water quality impairment, stream channel instability, land loss, habitat loss, and other adverse effects. Implementing mitigation measures and making management changes that balance sediment supply and improve channel stability can improve fish habitat and meet the desired conditions of the area.

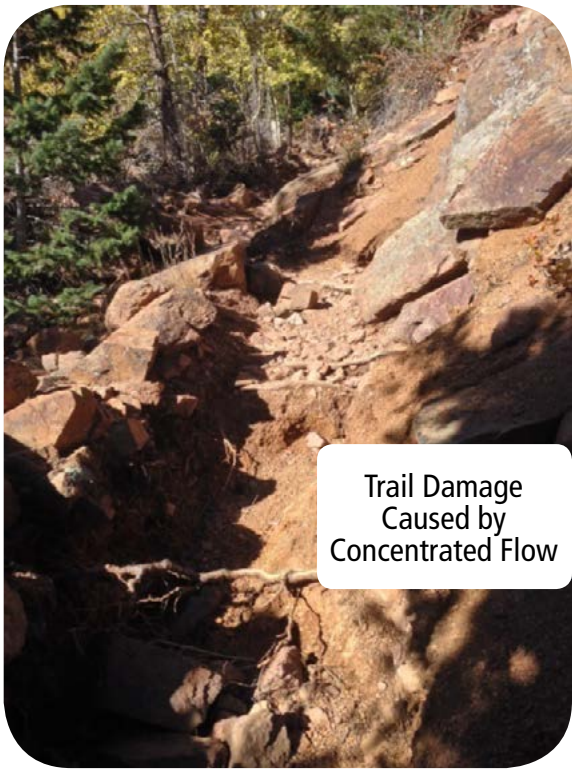
Desired Condition: The area is predominately natural with evidence of human development only along the trail system. Moose Creek is free flowing with well-developed riparian vegetation and largely intact streambanks. Plant, animal, and aquatic populations represent the full diversity of native, indigenous species. A well-defined trail network is provided to concentrate visitor use and visitor impacts and is designed to be fully sustainable with minimal erosion. In general, the project area reflects semiprimitive motorized characteristics. Onsite management is apparent to ensure resource protection and public safety. Specifically:

- Manage the transportation system to reduce trail-related hydrologic connectivity, minimize human-caused soil erosion and sedimentation, and maximize riparian vegetation.
- Improve habitat quality of the spotted trout to sustain the only remaining genetically pure population.
- Reduce contributing hillslope/rill/gully erosion from disturbed areas.
- Restore Moose Creek to a stable stream dimension, pattern, and profile that transports sediment without unnaturally aggrading or degrading.
- Improve water quality to meet the State Department of Public Health and Environment and forest plan water quality standards.
- Reduce sedimentation from disturbed tributaries.
- Protect populations of golden columbine from visitor use along the system trail; plants should be robust and expanding.

STEP 6

STEP 6. DEFINE APPROPRIATE VISITOR ACTIVITIES, FACILITIES, AND SERVICES

- Motorized and nonmotorized use, as well as horseback riding, is an appropriate use on designated system trails/routes.
- People, dogs, and livestock entering or being in Moose Creek is not an appropriate use.
- Dogs are appropriate with leash restrictions within the Moose Creek basin.
- Open fires, recreational shooting, fishing, and camping in the Moose Creek basin are not appropriate uses.



Trail Damage Caused by Concentrated Flow

STEP 7. SELECT INDICATORS AND ESTABLISH THRESHOLDS

STEP 7

Indicators are based on desired conditions.

1. Indicator: Number of nonsystem trail stream crossings per mile of stream.

   Threshold: Of the existing nonsystem trails, none leads to stream crossings in the lower third of the drainage/creek where the fish spawn.

2. Indicator: Hazard rating for soil erosion into Moose Creek at marked sections along the entire trail.

   Threshold: Soil erosion hazard rating will not exceed "Low" in 80 percent of the water influence zone.

   Trigger: An observed increase in bank instability over 1 year's time.

3. Indicator: Measurement of water quality level in Moose Creek.

   Threshold: Water quality will not come within 5 percent of the listed State Department of Public Health and Environment and forest plan water quality standards.

4. Indicator: Population sampling of spotted trout at marked places in Moose Creek during project implementation and following implementation.

   Threshold: No downward trend for more than 3 consecutive years.

   Trigger: Deaths of more than 5 fish in 1 year during project implementation.

ELEMENT 3: IDENTIFY MANAGEMENT STRATEGIES

STEP 8. COMPARE AND DOCUMENT THE DIFFERENCES BETWEEN EXISTING AND DESIRED CONDITIONS, AND, FOR VISITOR USE-RELATED IMPACTS, CLARIFY THE SPECIFIC LINKS TO VISITOR USE CHARACTERISTICS

STEP 8

- Existing condition: There are 3.9 miles of nonsystem trails, and the nonsystem trails cross streams in six locations along Moose Creek.

  Desired condition: Of the existing nonsystem trails, none cross streams along Moose Creek.
- Existing condition: The location of much of the trail is in the water influence zone and is more prone to release sediment because of visitor use. About 97 percent of the Moose Creek watershed area soils are in a high soil erosion hazard rating.
- Desired condition: Restore the soil hazard rating to low, and maintain that rating.

STEP 9. IDENTIFY VISITOR USE MANAGEMENT STRATEGIES AND ACTIONS TO ACHIEVE DESIRED CONDITIONS

STEP 9

- Decommission nonsystem trails.
- Limit the time/season of visitor use in the area during fish spawning in an effort to protect the fish and the habitat they need for the fry to survive.
- Reroute system trails outside of the water influence zone, and decommission the original trail near Moose Creek to improve soil erosion hazard.
- Close portions of the trail system to help stabilize the trail and reduce sediment transport into the stream.
- Build bridges and install fish-passable culverts in areas where the trail must cross the creek.
- Document the historic aspect of the trail, and install interpretive signs to educate visitors about the important resources in the area.

STEP 10. WHERE NECESSARY, IDENTIFY VISITOR CAPACITIES AND ADDITIONAL STRATEGIES TO MANAGE USE LEVELS WITHIN CAPACITIES

STEP 10

Visitor capacities are not legally required, and the unit felt that it was unnecessary to identify visitor capacities. It was anticipated that the design and construction of sustainable trails and rehabilitation of system trails near the creek would improve the habitat quality and sustain the population of spotted trout. The project design was expected to allow for the predicted amount and timing of visitor use in the future. However, if visitation continued to increase and led to development of more nonsystem trails, overwhelming the efforts of staff to maintain system trails in a timely manner, it would be necessary to identify and implement visitor capacities.

STEP 11. DEVELOP A MONITORING STRATEGY

STEP 11

A variety of monitoring methods (e.g., visual inspection, photo points, foot patrols, trail cameras) were used to determine effectiveness of trail rehabilitation and compliance with the requirement to remain on the system trail.

- Monitor for creation of nonsystem trails every year for the first 3 years and then every 2 years thereafter. If monitoring reveals nonsystem trails, employ measures to alter visitor behavior to protect resources and spotted trout habitat.
- Monitor the fish population according to the standards set for threatened species.
- Monitor the number of visitors using the trails every year for the first 3 years and then every 2 years thereafter.
- Monitor stream sediment delivery every year.
- Monitor the soil erosion hazard rating every year for the first 3 years and then every 5 years thereafter.

ELEMENT 4: IMPLEMENT, MONITOR, EVALUATE, AND ADJUST

STEP 12. IMPLEMENT MANAGEMENT ACTIONS

STEP 12

Management actions were identified in element 3, step 9. These management actions were selected to achieve desired conditions and help ensure that thresholds would not be exceeded.

There are at least three steps in implementation:

Prepare for implementation: Made sure that the resources necessary for implementation were available. Ensured that the funding, training, staffing, and other resources were available to initiate the new action.

Implement the new management action: Gathered and prepared staff or other entities to initiate the action. Made sure all relevant staff members knew about the implementation. Trained staff on the new action; purchased supplies, equipment, and products; and hired contractors. Made sure staff knew how to care for changed facilities and what the desired conditions were for the area. Informed the public with announcements so people knew change was coming. Developed a communication plan with the sliding scale in mind.

Watch for immediate reactions: Looked for the visitors' immediate reactions to change and had support on the ground and in the office when the new management action was implemented. This was done for a period of time (which was determined by the sliding scale assessment). This was essential and increased the chances of success because it increased the agency's ability to address concerns and respond appropriately. The length of time depended on the magnitude of the change, the reaction of visitors, and where the project was on the sliding scale. Whatever the action was, agency presence was ensured so physical and site problems were addressed immediately and so visitors' questions and concerns were answered and noted.

STEP 13. CONDUCT AND DOCUMENT ONGOING MONITORING, AND EVALUATE THE EFFECTIVENESS OF MANAGEMENT ACTIONS IN ACHIEVING DESIRED CONDITIONS

Monitoring data will be recorded initially after project implementation and then annually for the first 3 years. The resource specialists on the team will be responsible for writing a brief report analyzing the results of monitoring data. The interdisciplinary team will meet on an annual basis to review the monitoring data to determine whether the management actions and project implementation has moved the area toward the desired conditions. The team will also review implementation activities and document compliance with the biological opinion.

STEP 14. ADJUST MANAGEMENT ACTIONS IF NEEDED TO ACHIEVE DESIRED CONDITIONS, AND DOCUMENT RATIONALE

If rerouting the trail and moving visitors outside the water influence zone begins to show improvement to water quality, fish habitat, and soil hazard ratings, then continue to monitor according to the monitoring schedule, and meet annually with the land owners. This demonstrates a trend toward meeting the desired conditions.

If project implementation does not improve water quality, fish habitat, and soil hazard ratings within 3 years of completion of implementation, implement other management actions. Determine from monitoring data whether there is evidence that thresholds are being approached. Before adjusting management actions, ensure the probable cause of the issue has been identified and whether or not previously identified management actions would address the issue. Also, ensure that changes in management actions would not adversely affect another resource. In particular, consider whether managing use levels may be necessary if new user-created trails are developing. Document the rationale for adjusting management actions. Greater agency presence or new signs in the area would likely not need further NEPA analysis, but decisions on visitor capacity and other management actions not considered in the original compliance documentation would likely require additional NEPA analysis and further public involvement.

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Appendix C: Sliding Scale Decision Support Tool

The decision support tool is a simple high, moderate, or low rating system that can help inform the level of analysis needed for a project. If the overall responses to the questions are "high," then the level of analysis is likely high. If the overall responses are "low," then the level of analysis is likely low. However, if some of the responses are high, some are low, and some are moderate, the level of analysis is likely somewhere in the middle. When only one guideline rates out as high, carefully decide the overall level of analysis. For example, a high risk of controversy may mean that the level of analysis is also high or that the level of analysis is moderate and accompanied by a robust public involvement process. Document the rationale for any determination, regardless of the level of analysis.

The decision support tool's list of questions is undoubtedly incomplete; the decisionmaker must consider other factors and variables in cases in which regulatory standards must be met. While the decision support tool can help determine where the project falls on the sliding scale, the decisionmaker ultimately decides the necessary level of analysis. See the Interagency Visitor Use Management Council's website for a blank decision support tool: http://visitorusemanagement.nps.gov/VUM/Resources.) See table C1.

Table C1. Blank decision support tool

Decision Support Tool	RATING QUESTIONS	RATIONALE	HIGH MODERATE LOW
Project:			
1	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **natural** resources?		
2	What is the likelihood that the situation involves sensitive, rare, or irreplaceable **cultural** resources?		
3	What is the likelihood of imminent and significant changes to the natural or cultural resources?		
4	What is the likelihood of imminent and significant changes to **visitor experience?**		
5	How will the issue affect other aspects of land management in the area or surrounding areas?		
6	What is the geographic extent of the issue's impacts? Scales of impacts include: national, regional, state, local/county, and site or project.		

Table C1. Continued

	RATING QUESTIONS	RATIONALE	HIGH MODERATE LOW
Project:			
7	What is the relative interest of stakeholders affected by the action? Stakeholders may include: local communities, general public, special interest groups, recreational visitors, commercial users, traditional-subsistence users, tribes, and others.		
8	Is the impact temporary (low) or long lasting (high)?		

CRITERIA - Use the ratings assigned to questions 1-8 to evaluate the following 4 sliding scale criteria. Combine those criteria into a single qualitative rating (high, moderate, or low) of the project's appropriate location on the sliding scale.

	CRITERIA	RATIONALE	HIGH MODERATE LOW
A	**Issue Uncertainty**		
B	**Impact Risk**		
C	**Stakeholder Involvement**		
D	**Level of Controversy**		
	Location on the Sliding Scale		

Glossary of Key Terms

Characteristics of visitor use include the amount, type, timing, and distribution of visitor activities and behaviors.

Desired conditions are statements of aspiration that describe resource conditions, visitor experiences and opportunities, and facilities and services that an agency strives to achieve and maintain in a particular area.

Indicators are specific resource or experiential attributes that can be measured to track changes in conditions so that progress toward achieving and maintaining desired conditions can be assessed.

The sliding scale of analysis is used to ensure the investment of time, money, and other resources for a project is commensurate with the complexity of the project and the consequences of the decision.

Thresholds are minimally acceptable conditions associated with each indicator.

Triggers reflect conditions of concern for an indicator that are enough to prompt a management response to ensure that desired conditions continue to be maintained before the threshold is crossed.

Visitor capacity is a component of visitor use management and is the maximum amounts and types of visitor use that an area can accommodate while achieving and maintaining the desired resource conditions and visitor experiences that are consistent with the purposes for which the area was established.

Visitor experience is the perceptions, feelings, and reactions that a visitor has before, during, and after a visit to an area.

Visitor use refers to human presence in an area for recreational purposes, including education, interpretation, inspiration, and physical and mental health.

Visitor use management is the proactive and adaptive process for managing characteristics of visitor use and the natural and managerial setting using a variety of strategies and tools to achieve and maintain desired resource conditions and visitor experiences.

The **Visitor Use Management Framework** provides the analytical elements necessary to address visitor use management opportunities and issues, consistent with applicable law, within existing agency management processes.

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Glossary of Key Terms

Characteristics of visitor use include the amount, type, timing, and distribution of visitor activities and behaviors.

Desired conditions are statements of aspiration that describe resource conditions, visitor experiences and opportunities, and facilities and services that an agency strives to achieve and maintain in a particular area.

Indicators are specific resource or experiential attributes that can be measured to track changes in conditions so that progress toward achieving and maintaining desired conditions can be assessed.

The sliding scale of analysis is used to ensure the investment of time, money, and other resources for a project is commensurate with the complexity of the project and the consequences of the decision.

Thresholds are minimally acceptable conditions associated with each indicator.

Triggers reflect conditions of concern for an indicator that are enough to prompt a management response to ensure that desired conditions continue to be maintained before the threshold is crossed.

Visitor capacity is a component of visitor use management and is the maximum amounts and types of visitor use that an area can accommodate while achieving and maintaining the desired resource conditions and visitor experiences that are consistent with the purposes for which the area was established.

Visitor experience is the perceptions, feelings, and reactions that a visitor has before, during, and after a visit to an area.

Visitor use refers to human presence in an area for recreational purposes, including education, interpretation, inspiration, and physical and mental health.

Visitor use management is the proactive and adaptive process for managing characteristics of visitor use and the natural and managerial setting using a variety of strategies and tools to achieve and maintain desired resource conditions and visitor experiences.

The **Visitor Use Management Framework** provides the analytical elements necessary to address visitor use management opportunities and issues, consistent with applicable law, within existing agency management processes.

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