

# Appendix A. NPS Policies and Mandates Linking Park Monitoring and Management.

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## 1.1. Overview

This document clarifies who is interested in the information provided by monitoring and why. It is a synthesis of information summarized by the Inventory and Monitoring program and put into use in other Phase I reports (e.g., Southwest Alaska Network Report (Bennett et al. 2003)).

The enabling legislation establishing the National Park Service (NPS) and its individual park units clearly mandates, as the primary objective, the protection, preservation, and conservation of park resources, in perpetuity for the use and enjoyment of future generations (NPS 2006). NPS policy and recent legislation (National Parks Omnibus Management Act of 1998) require that park managers know the condition of natural resources under their stewardship and monitor long-term trends in those resources in order to fulfill the NPS mission of conserving parks unimpaired. The laws and management policies that follow provide the mandate for inventorying and monitoring in national parks. National park managers are directed by federal law and NPS policies and guidance to know the status and trends in the condition of natural resources under their stewardship in order to fulfill the NPS mission to conserve parks unimpaired (see [Summary of Laws, Policies, and Guidance](#)). The mission of the NPS ([National Park Service Organic Act, 1916](#)) is:

*"...To promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified by such means and measures as conform to the fundamental purposes of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."*

Congress strengthened the NPS's protective function and provided language important to recent decisions about resource impairment when it amended the Organic Act in 1978 to state that *"the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established...."*

More recently, the National Parks Omnibus Management Act of 1998 established the framework for fully integrating natural resource monitoring and other science activities

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into the management processes of the NPS. The act charges the Secretary of the Interior to “continually improve the ability of the National Park Service to provide state-of-the-art management, protection, and interpretation of and research on the resources of the National Park System,” and to “assure the full and proper utilization of the results of scientific studies for park management decisions.” Section 5934 of the act requires the Secretary of the Interior to develop a program of “inventory and monitoring of National Park System resources to establish baseline information and to provide information on the long-term trends in the condition of National Park System resources.”

Congress reinforced the message of the National Parks Omnibus Management Act of 1998 in its text of the FY 2000 Appropriations bill:

*"The Committee applauds the Service for recognizing that the preservation of the diverse natural elements and the great scenic beauty of America's national parks and other units should be as high a priority in the Service as providing visitor services. A major part of protecting those resources is knowing what they are, where they are, how they interact with their environment and what condition they are in. This involves a serious commitment from the leadership of the National Park Service to insist that the superintendents carry out a systematic, consistent, professional inventory and monitoring program, along with other scientific activities, that is regularly updated to ensure that the Service makes sound resource decisions based on sound scientific data."*

The 2006 NPS Management Policies updated previous policy and specifically directed the service to inventory and monitor natural systems:

*"Natural systems in the national park system, and the human influences upon them, will be monitored to detect change. The Service will use the results of monitoring and research to understand the detected change and to develop appropriate management actions."*

Further, *"The Service will:*

- *Identify, acquire, and interpret needed inventory, monitoring, and research, including applicable traditional knowledge, to obtain information and data that will help park managers accomplish park management objectives provided for in law and planning documents.*
- *Define, assemble, and synthesize comprehensive baseline inventory data describing the natural resources under its stewardship, and identify the processes that influence those resources.*
- *Use qualitative and quantitative techniques to monitor key aspects of resources and processes at regular intervals.*
- *Analyze the resulting information to detect or predict changes, including interrelationships with visitor carrying capacities, that may require management intervention, and to provide reference points for comparison with other environments and time frames.*

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- *Use the resulting information to maintain-and, where necessary, restore-the integrity of natural systems" (2006 NPS Management Policies).*

Additional statutes that provide legal direction for expending funds to determine the condition of natural resources in parks and specifically guide the natural resource management of network parks include:

- Taylor Grazing Act 1934;
- Fish and Wildlife Coordination Acts, 1958 and 1980;
- Wilderness Act 1964;
- National Historic Preservation Act 1966;
- National Environmental Policy Act of 1969;
- Clean Water Act 1972, amended 1977, 1987;
- Endangered Species Act 1973, amended 1982;
- Migratory Bird Treaty Act, 1974;
- Forest and Rangeland Renewable Resources Planning Acts of 1974 and 1976;
- Mining in the Parks Act 1976;
- American Indian Religious Freedom Act 1978;
- Archaeological Resources Protection Act 1979;
- Federal Cave Resources Protection Act 1988;
- Clean Air Act, amended 1990; and
- Wild and Scenic River Act 1990.

### **1.2. Applications of Information Gained from Monitoring**

The most widely identified application of monitoring information is that of enabling managers to make better informed management decisions (White and Bratton 1980, Croze 1982, Jones 1986, Davis 1989, Quinn and van Riper 1990). For example, monitoring the effects of park visitors trampling riparian vegetation can help to determine whether changes in visitor management strategies are needed to prevent streambank erosion and deterioration of water quality.

Broad-scale ecosystem monitoring, as proposed in this plan, builds a holistic view of park landscapes. The monitoring also provides a tool to address issues that occur at multiple sites in a park or multiple parks within a network, rather than individually addressing site-specific problems. From the holistic view, managers can develop general principles and guidelines that can be applied broadly to a particular type of issue or problem. For example, understanding how coastal shorelines are responding to sea level rise might allow managers to predict the fate of public-use cabins, vessel mooring buoys, biological, or cultural resources, and develop a network-wide strategy for taking a specific action or planning additional monitoring.

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In large wilderness park units, an important application of monitoring information is simply to gain insight into "how complex park ecosystems work" (Croze 1982). By gathering data in long periods, correlations between different attributes (such as predator and prey populations) become apparent and resource managers gain a better general understanding of the ecosystem. In turn, this knowledge may support future decisions concerning existing or proposed species harvest levels.

Similarly, some authors suggest that it is important to document changes just for the sake of familiarity with the resources (Halvorson 1984, Croze 1982). The responsibility of resource managers includes being aware of changes in resources under their stewardship even if no specific management decisions or actions are involved. For example, a park may want to monitor vegetation succession in areas where glaciers are retreating even if resource managers do not contemplate active management of the vegetation.

Another use of monitoring information involves convincing others to make decisions benefiting national parks (Johnson and Bratton 1978, Croze 1982). Some aspects of monitoring may focus on documenting specific internal or external threats. For example, parks and neighboring coastal landowners may monitor concentrations of hydrocarbons in benthic invertebrates to document the effects of offshore oil and gas activities on nearshore, intertidal communities. In that case, the information may convince skeptical local governments, Native corporations, industries, or even more skeptical courts of law to make decisions benefiting national parks.

Monitoring sensitive species, wilderness-dependent species, or entire communities in pristine wilderness park units can provide park managers, stakeholders, and the public with a kind of "canary in the mine"—an early warning of the effects of human activities before they become noticeable in less pristine areas (Davis 1989, Wiersma 1984). For example, locations free from local sources of pollution make recognizing the effects of long-range transport and deposition of air pollutants easier.

Finally, a monitoring program can provide basic background information that is needed by park researchers, public offices, interpreters, and those wanting to know a little more about the area around them (Johnson and Bratton 1978). Data such as basic weather information, plant phenology, and records of major disturbances (e.g., volcanic eruptions and landslides) are useful on a periodic basis to those working or visiting in the parks.

# Appendix A. NPS Policies and Mandates Linking Park Monitoring and Management (continued).

## 1.3. Literature Cited

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