

# Managing the National Park Service in the Information Age

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## Introduction

IN 2008, THE NATIONAL PARKS CONSERVATION ASSOCIATION convened the National Parks Second Century Commission, which was charged with developing a 21st-century vision for the National Park Service. The commission's report, published in 2009 ([www.npca.org/commission](http://www.npca.org/commission)), recommended dramatic enhancements to the national park system and the National Park Service's ability to protect our breathtaking landscapes and historic and cultural treasures. As the commission report suggests, management of these landscapes and historic and cultural treasures will be dependent upon mastery of information systems:

Our nation is best armed to address the future with a public knowledgeable about its history, its resources, and the responsibilities of citizenship. The national park system encompasses an unparalleled range of educational assets, including distinctive land- and water-based ecosystems and cultural landscapes, historic sites and structures, artifacts, and primary source documents. . . . Successful management of park resources will require mastery of systems ecology and information systems.

To implement the recommendations of the National Parks Second Century Commission, the National Park Service will need forward-looking management, the creative use of modern technology, and a clear understanding of our past history and the importance of our information resources. As the commission report suggests, the National Park Service now stands at a crossroads where we will either miss opportunities to protect the legacy of the resources given to us by previous generations, or embrace the future. Modern information technology is now available to protect our parks, and to establish necessary partnerships with other organizations and our public to help forge a better world where these vital resources are protected and cherished for generations to come.

## Information the key to effectiveness

In today's environment, the National Park Service must make the most efficient and best possible use of its information. To do this, information must be available and easy to access for

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all of our employees and the public at large. The ability to find, analyze, and use information will determine the effectiveness of National Park Service management in the future and our success in meeting the challenges established by the National Parks Second Century Commission. The National Park Service will not be fully engaged with the modern age until we organize and make our vast library of information available to our employees and the public. To prepare for the future, we must understand what previous generations of park managers have done in the past.

### **Advent of the Internet**

The Internet is one of the most important new tools for National Park Service managers in the 21st century. Combining aspects of publishing, broadcasting, networking, teaching, interactive participation, resource-sharing, and even fund-raising, the Internet offers cultural resource managers exciting new opportunities and challenges.

In 1995, National Park Service Director Roger Kennedy decided there was no practical alternative to the Park Service's participation in this latest evolution of communications, the Internet. Kennedy decided that everybody in the future was going to be using the Internet and that this was the new medium of communication. The National Park Service had to embrace this new medium.

Since that time, the National Park Service has made immense progress with the Internet. Every park, program, and office now has its own Web site. Tens of thousands of Web pages can be accessed by the public with only a computer and a click of the mouse. With the possible exception of the invention of moveable type in the 15th century, this explosion of and ease of access to information has done more than anything else to change the way we operate, communicate, and work. New and old reports, studies, and data can now be found and put to work for the manager and the public. Special software now allows the visually impaired to "read" these electronic documents, enabling a new audience access to park information.

The advent of blogs; social networking sites like Facebook, Twitter, and other popular and useful sites such as YouTube and Flickr; and smart-phones and cell phone technology (like the iPhone) have sped our ability to find needed information. While many of these technologies are not used by federal agencies, the time is near when they will be incorporated into our gallery of electronic information sources.

More people now visit park Web sites than actually visit the parks. Visitors to our virtual national parks come from not only every state but almost every country in the world. Not only is information about our parks going out to the world, but emailed requests for more information are flowing back to the Park Service.

The computer and its access to the Internet are now essential to the management of our offices. Indeed, it is hard to imagine how we ever operated without this wonderful tool. When we lose access to the Internet, much of the work of the National Park Service comes to a halt.

### **Importance of information**

The resources available to manage our national parks are finite. Information is not. Informa-

tion can be used over and over again. Information can also be used to make up for limited resources. A historic resource study, an interpretive plan, or a natural resource management plan can be used repeatedly by anyone interested in or needful of this information. The time and effort required to complete the document has been paid for by the National Park Service. All that the researcher or park manager needs is to find and use this information without needing to regenerate it.

Our use and re-use of information not only makes common sense, but is also ecological, sound, and efficient. No information, however, can be useful if it remains in a file cabinet, unknown and unused by our managers and staff. It is only when we can quickly access our information and act on it that we contribute to the well-being of our parks and provide the best service to our visitors.

### **Wealth of information**

The National Park Service, established in 1916, is now nearly 100 years old (see Barry Mackintosh's *The National Park Service: A Brief History*, 1999, online at [www.nps.gov/history/history/hisnps/NPSHistory/briefhistory.htm](http://www.nps.gov/history/history/hisnps/NPSHistory/briefhistory.htm)). During these years, the Park Service has generated thousands of historical reports, drawings, photographs, letters, artifacts, and other archival material on every subject relating the history of the agency. By "historical," I mean any type of report or subject material covered for a report, including geological, biological, as well as cultural resource management reports.

The eight volumes in the George Wright Series, and other volumes in our Popular and Scientific Monograph, Source Book, Transactions & Proceedings, and Urban Ecology series, are all now on the Internet, facilitating quick access by managers, staff, and the public. For the National Park Service Handbook Series, see [www.nps.gov/history/history/online\\_books/handbooks/index.htm](http://www.nps.gov/history/history/online_books/handbooks/index.htm); for the National Park Service Publications Series, see [www.nps.gov/history/history/online\\_books/series/index.htm](http://www.nps.gov/history/history/online_books/series/index.htm).

Our goal should be for everyone in the National Park Service to create, share, and collaborate in information management. All employees in the National Park Service have computer access and can quickly link to the Internet. This gives the Park Service family the ability to create large economies of scale.

Since 1999, the National Park Service History Program has been creating electronic editions of our paper studies and placing them on the Internet ([www.nps.gov/history/history/index.htm](http://www.nps.gov/history/history/index.htm)). With more than 4,000 items on the Internet, this History E-Library is open and available to the public 24 hours a day. This information ranges in dates from the second half of the 19th century to new material published this year. Some are published in the private sector with the permission of the publisher; others are studies directly created by the National Park Service personnel.

Other offices in the National Park Service have Web sites relating to education, travel, and children, and to professional disciplines, including archeology, anthropology, geology, biology, and other subjects. Most of this material is new and created for the Internet, but a portion of it is not and reflects the inherited knowledge base of the Park Service.

## Databases and search engines

To manage and find this information, the National Park Service has more than 20 distinct databases and search engines. Servicewide, we have NPS Focus, the Voyager Library Program, the Technical Information Service, and the Natural Resources Information Portal, to name a few.

Many of our individual offices and programs have their own databases, including those of the National Register of Historic Places, Historic American Buildings Survey, Historic American Engineering Record, and Historic Architecture Program. Some of these databases link to each other, but most do not. These stand-alone databases make it difficult to find information across the many programs, parks, and platforms. All of these databases need to be linked with one comprehensive search engine that will access all of these sources of information.

## The future

Among the recommendations of the National Parks Second Century Commission, one is that the Congress “affirm in Legislation that education is central to the success of the National Park Service mission.” The commission also stresses the need for the National Park Service to promote greater partnership opportunities among the national parks and educational institutions, to invite all Americans to build a personal connection with the parks, to engage diverse audiences, and to break down internal barriers between Park Service offices to encourage the agency’s preservation, research, and educational functions.

The best way to accomplish all this is for the National Park Service to make a commitment to give the public greater accessibility to our information by placing all non-sensitive agency reports and documents online. The National Park Service needs to begin a comprehensive program to digitize all of our records ranging from 1916 to the present.

All new records should be made immediately available to the public. All of this material should be accessible through one portal which searches across park and program boundaries. Information deemed sensitive should be placed on intranet servers and only be accessible to National Park Service employees or program managers.

The technology to do this is getting cheaper and easier all the time. With the availability of portable computers, tablet devices, and even smart phones, information should be no more than a few clicks away anywhere in the world.

To facilitate this ease of access, we in the Park Service have to consolidate our information sources and coordinate our Internet efforts servicewide. We need to do the following:

- Ensure that our many offices operate with the same information systems and have the ability to link to each other;
- Cooperate and pool resources and systems;
- Create a common search engine, a Web-based archive, which will access all of our information resources at the same time;
- Invest in a concerted effort to locate, scan, and place our vast library of information on the Internet; and

- Make use of blogs, social networking sites, smart-phone applications, and other emerging technologies, as appropriate, to better share Park Service resources and information, and invite the public to participate in the Park Service idea.

Energy should not be wasted in re-doing electronic documents simply to adhere to the latest format that is currently in vogue; limited resources would best be invested in adding new electronic content. Archived material should not be deleted, but any relevant information should be preserved, as-is, as long as browsers can still view this data (and only then converted to the latest format). New formats must be able to access historical formatted data.

We need to do this so we can better communicate with our employees and public and manage our information resources in a timely and cost-effective manner. We need to do this to meet the stated goals of the National Parks Second Century Commission. Our library of information represents a vast databank containing the intellectual capital that has been deposited by past generations of Park Service employees. We need to take advantage of this capital to manage the issues of today and the future. We need to facilitate leading-edge technologies now available to us to serve our customers—both public and private—and manage our resources.

It is essential that we also obtain the cooperation of other governmental and private agencies to both use their information resources and make our information resources available to the widest possible audience. If we can do this, we will have taken one important step toward advancing the national park idea into the 21st century.

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