



# Resource Inventories

Discovering America's natural heritage



An NPS resource manager and U.S. Geological Survey scientist at Prince William Forest Park identify amphibian larvae as part of an extensive survey of park amphibians.

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*“We will lose the wildness, the very nature of our parks, if we don’t understand them. If we don’t truly understand them, we won’t be able to speak authoritatively for them, and we won’t know how to restore them.”*

—Michael Soukup, Associate Director,  
Natural Resource Stewardship and Science

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Preserving the unimpaired splendor of the national parks for the enjoyment of future generations is the fundamental purpose of the National Park Service. This mission includes protecting the clear, star-filled skies over places like the Grand Canyon and ensuring that creatures like the grizzly bear and black-footed ferret grace our lands in perpetuity.

The safekeeping of the awe-inspiring natural wonders in our national parks requires the identification of their key components, including living things, natural processes, and landscape features. Natural resource inventories allow managers to account for park resources, such as the presence and distribution of plants, animals, and nonliving resources such as water, landforms, and climate in the parks. This type of baseline information is needed to make scientifically sound management decisions that ensure the future health of the parks.

The National Park Service is undergoing a comprehensive inventory effort under the Natural Resource Challenge program. The goal is to help every park with

significant natural resources complete basic inventories, documenting such things as soils, vegetation, biological diversity, geologic resources, and water quality.

In order to reach this ambitious goal, the National Park Service has organized parks into 32 networks. Individual networks will link parks that share similar geographic and natural resource characteristics to facilitate collaboration, information sharing, and cost savings. Each network will develop systematic approaches for inventorying the plants and animals found in its parks.

To ensure that inventories result in the highest-quality scientific information possible, the National Park Service is working with scientists from other agencies with expertise in specialized areas. Additionally, inventory efforts are being closely coordinated to ensure that they satisfy the following important criteria.

- Inventories produce the “core” or baseline information that park



(Top) In Cabrillo National Monument, California, the National Park Service has teamed up with the U.S. Geological Survey to conduct field inventories of reptiles, amphibians, and other animals.

(Bottom) An inventory in the Great Smoky Mountains National Park revealed an amphibian species not previously recorded in the park, the eastern spadefoot toad.

managers need to effectively manage and protect park resources.

- Inventories are being conducted in accordance with specified protocols and quality assurance standards.
- Data obtained through the inventories are compatible, allowing for synthesis and analysis at broader levels.

Inventories not conducted by networks, including partnership efforts with other state and federal agencies, are being coordinated by the Natural Resource Program Center in Colorado. For example, the National Park Service is working cooperatively with state geologic agencies to produce geologic maps and assessments. Similarly, the National Park Service has partnered with the U.S. Geological Survey to develop vegetation maps that will be used for resource management activities, including fire management. Partnerships allow the National Park Service to acquire inventory data in an efficient, timely, and cost-effective manner.

Through the inventory process the National Park Service will begin to realize its potential as a major force in fundamental research on biological diversity, ecology, and conservation.

#### **Basic Natural Resource Inventories and Tools**

- **Automated Bibliographies**  
Bibliographies of existing research are being made available to all parks to help them identify inventory needs.
- **Base Cartography Data**  
Cartographic products that park managers need to prepare maps and perform spatial analyses and assessments are being acquired.
- **Species Occurrence Inventory**  
Lists of the vertebrates and vascular plants currently known to occur in parks have been and continue to be compiled and verified. New field inventories are documenting additional species, especially those in plant and animal groups left out of previous inventories.
- **Species Distribution Inventory**  
New field inventories are also focusing on the distribution of species of concern to managers, including

threatened and endangered species and exotics.

- **Vegetation Maps**

All parks will be provided maps of their vegetative communities based on recent aerial photography and following a standard classification.

- **Soils Maps**

Soils maps are being created for parks through a partnership with the Natural Resource Conservation Service.

- **Geologic Maps**

Geologic maps for parks are being completed through partnerships with the U.S. Geological Survey and state geologic agencies.

- **Water Resource Inventory**

The locations of streams, lakes, and wetlands are being documented digitally.

- **Water Chemistry Inventory**

Water quality information is being collected for all “key” water bodies found in the parks.

- **Air Quality Inventory**

Where the National Park Service does not have its own monitoring stations, data from U.S. Environmental Protection Agency air quality monitoring stations near parks are being summarized into an air quality atlas to assess air quality conditions in parks.

- **Air Quality-Related Values Assessment**

Basic air quality-related information includes identification of visibility and other park resources that may be affected by air quality. The information will be available through a Web-based computer program.

- **Meteorological Data Inventory**

Basic meteorological parameters such as precipitation and daily temperature are being collected.

#### **For information**

[www.nature.nps.gov/challenge/nrc.htm](http://www.nature.nps.gov/challenge/nrc.htm).