National Park Service
U.S. Department of the Interior

Natural Resource Program Center

Park Vital Signs Monitoring

A commitment to resource protection

As part of their Park Vital Signs Monitoring program, staff at Olympic National Park, Washington, are measuring concentrations of air pollutants in precipitation and monitoring their effects on water quality and other indicators of ecosystem health.

"Preserving our natural resources far into the future now requires active and informed management based on sound science."

—Robert Stanton,
15th Director of the National Park Service

The national parks are places of spectacular beauty, encompassing an enormous diversity of landscapes and living things. Imagine a range of natural communities that includes tundra where wolves chase caribou, desert lands forested with majestic saguaro cacti, and seashores where loggerhead turtles come to lay their eggs. However, beauty is not a sufficient indication of the condition and health of our national parks. Just like a physician monitors a patient's heartbeat and blood pressure for diagnostic purposes, National Park Service managers need accurate information about the resources in their care. They need to know how and why natural systems change over time, and what amount of change is normal, in order to make sound management decisions. Therefore, the National Park Service plans to undertake natural resource monitoring throughout the national park system to gather this information as part of the Natural Resource Challenge program.

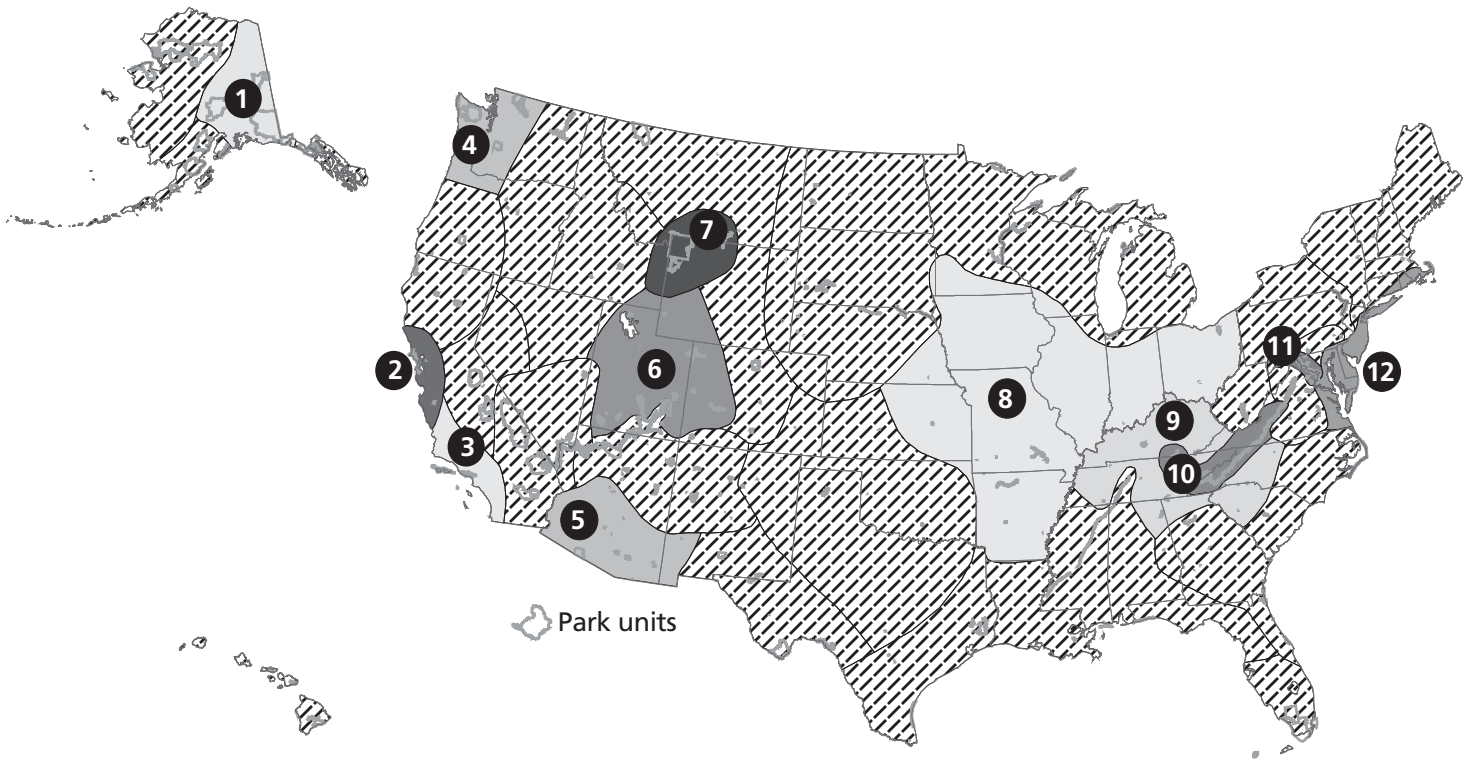
A key component of this effort, known as Park Vital Signs Monitoring, is the organization of approximately 270 park units into 32 monitoring networks that will conduct long-term monitoring for key indicators of change, or "vital signs." Vital signs are measurable, early warning signals that indicate changes that could impair the long-term health of natural systems. The early detection of potential problems allows park managers to take steps to restore the ecological health of park resources before serious damage can happen.

To facilitate collaboration, information sharing, and cost savings, individual networks link parks that share similar geographic and natural resource characteristics. Each network is tasked with designing a single, integrated program to monitor both physical and biological resources, such as air quality, water quality, soils, exotic species, and threatened and endangered species. The list of environmental vital signs selected for monitoring the health of these resources is expected to vary among networks, reflecting the needs and natural resources of the parks. The Service's Natural Resource Program Center is developing various guidelines, reference materials, and information management tools to help networks develop monitoring programs.

To ensure quality and accountability, a board of directors will guide each monitoring network, making decisions about the development and implementation of its monitoring program. Board members may include park superintendents, the regional inventory and monitoring coordinator, and the network monitoring coordinator. By 2005, the National Park Service plans to have initiated monitoring programs for all 32 networks.

Park Vital Signs Monitoring is a cornerstone of effective park management, providing managers with the scientifically sound information they need to safeguard the health and integrity of the landscapes and living things that make up our national parks.

Park Vital Signs Monitoring Networks



Monitoring networks funded as of FY 2002 for core park vital signs and water quality

1. **Central Alaska** monitoring network includes three parks located in interior Alaska.
2. **San Francisco Bay** monitoring network includes six parks located in the vicinity of San Francisco.
3. **Mediterranean Coast** monitoring network includes three parks located in southern California.
4. **North Coast and Cascades** monitoring network includes seven parks located in the Pacific Northwest.
5. **Sonoran Desert** monitoring network includes 11 parks in the Southwest.
6. **Northern Colorado Plateau** monitoring network includes 16 parks located in the intermountain West.
7. **Greater Yellowstone** monitoring network includes three parks located in the northern Rocky Mountains.
8. **Heartland** monitoring network includes 15 parks in the Midwest.
9. **Cumberland/Piedmont** monitoring network includes 14 parks located primarily in the Southeast.
10. **Appalachian Highlands** monitoring network includes four parks located in the Southeast.
11. **National Capital** monitoring network includes 11 parks located in the Washington, D.C., area.
12. **Northeast Coastal and Barrier** monitoring network includes eight parks located in New England.

Unfunded networks

Twenty monitoring networks are unfunded as of FY 2002, and are indicated by cross-hatching.

For more information
See *www.nps.gov/challenge/nrc.htm.*