



# 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.

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.

Unfortunately, beauty is not a sufficient indication of the condition and health of 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 has begun 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 to 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. Early detection of potential problems allows park managers to take steps to restore 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 National Park Service is developing guidelines, reference materials, and information management tools to help networks develop monitoring programs.

To ensure quality and accountability, a board of directors guides each monitoring network, making decisions about the development and implementation of its monitoring program. Board members 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 needed to safeguard the health and integrity of landscapes and living things that make up our national parks.

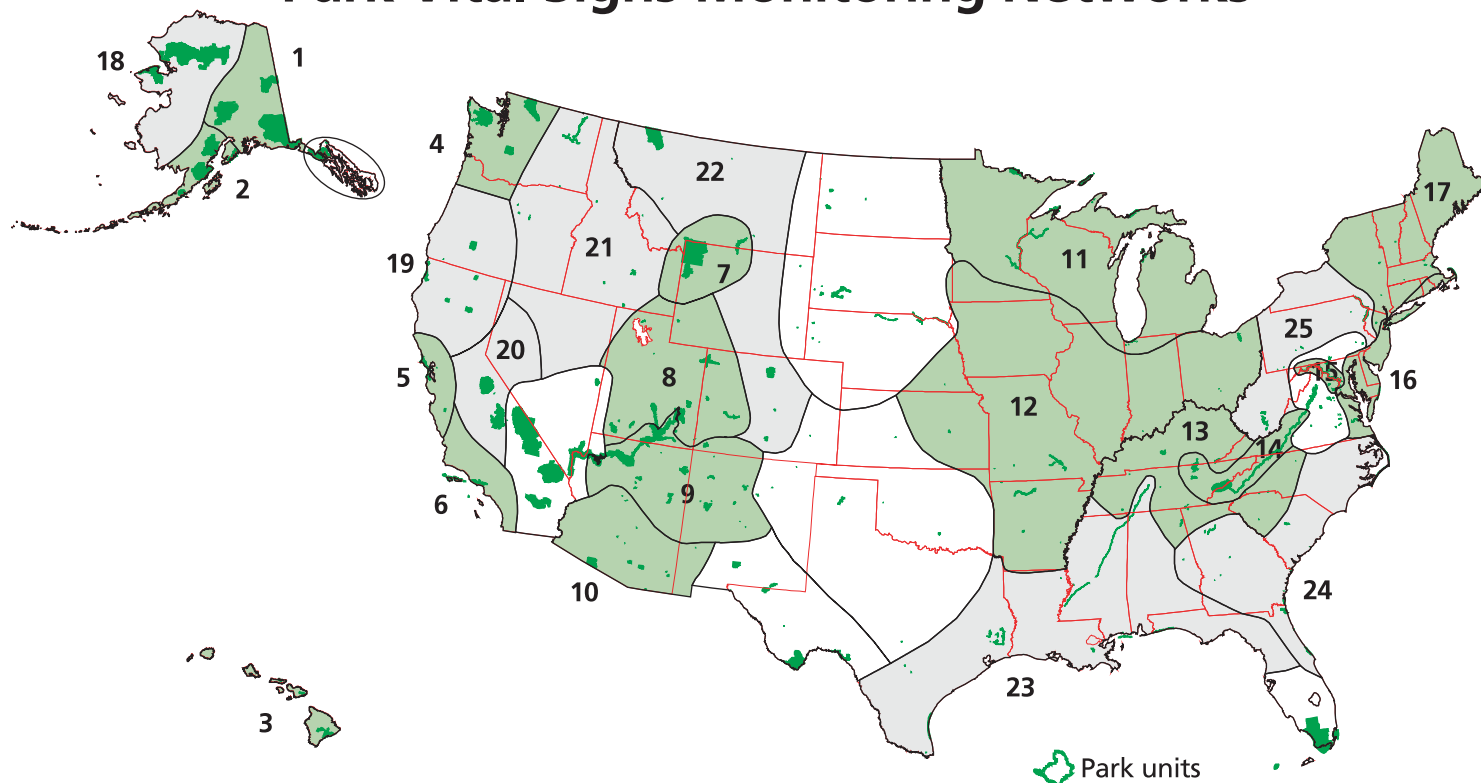
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*"Preserving our natural resources far into the future now requires active and informed management based on sound science."*

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

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# Park Vital Signs Monitoring Networks



Seven monitoring networks will not be funded as of FY 2005 and are indicated in white

Monitoring networks funded in FY 2001–2003 for core park vital signs and water quality monitoring

- 1 Central Alaska Network (three parks)
- 2 Southwest Alaska Network (five parks)
- 3 Pacific Island Network (nine parks located in Hawaii, American Samoa, Guam, and Saipan)
- 4 North Coast and Cascades Network (seven parks)
- 5 San Francisco Bay Area Network (six parks)
- 6 Mediterranean Coast Network (three parks)
- 7 Greater Yellowstone Network (three parks)
- 8 Northern Colorado Plateau Network (16 parks)

- 9 Southern Colorado Plateau Network (19 parks)
- 10 Sonoran Desert Network (11 parks)
- 11 Great Lakes Network (nine parks)
- 12 Heartland Network (15 parks)
- 13 Cumberland/Piedmont Network (14 parks)
- 14 Appalachian Highlands Network (four parks)
- 15 National Capital Region Network (11 parks)
- 16 Northeast Coastal and Barrier Network (eight parks)
- 17 Northeast Temperate Network (10 parks)

Monitoring networks proposed for funding in FY 2004 for core park vital signs and water quality monitoring

- 18 Arctic Network (five parks)
- 19 Klamath Network (six parks)
- 20 Sierra Nevada Network (three parks)
- 21 Northern Semi-arid Network (eight parks)
- 22 Rocky Mountain Network (six parks)
- 23 Gulf Coast Network (eight parks)
- 24 Southeast Coast Network (17 parks)
- 25 Eastern Rivers and Mountains Network (nine parks)

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