Park Vital Signs Monitoring: A Commitment to Resource Protection

Americans expect the National Park Service to preserve and protect the nation’s heritage, including living and nonliving features of ecosystems. However, protection of national parks is an extremely complicated and difficult task. Park ecosystems are complex and constantly changing over time and space. Managers must be capable of determining whether the changes they observe in park resources are the result of natural variability or the effects of human activities. To sustain the health of these systems, to diagnose threats to their health, and to mitigate those threats, park managers need to identify and constantly monitor changes in vital signs of parks, just as physicians monitor the vital signs of their patients. The price for protecting our parks is constant vigilance.

As part of the Natural Resource Challenge, the National Park Service is implementing natural resource monitoring throughout the agency. This effort will ensure that all park units that contain significant natural resources will possess the basic resource information needed for effective, science-based managerial decision-making and resource protection.

Parks have been organized into 32 networks linked by geography and shared natural resource characteristics to facilitate collaboration, information sharing, and economies of scale in natural resource monitoring. The level of funding available through the Natural Resource Challenge will not allow comprehensive monitoring in all parks, but will provide a minimum infrastructure for initiating natural resource monitoring in all parks that can be built upon in the future.

Park networks will design a single, integrated monitoring program to monitor both physical and biological resources such as air quality, water quality, geologic resources, weather, fire effects, threatened and endangered species, exotic species, and other flora and fauna. Most of the funding will come through Park Vital Signs Monitoring funding, with supplements specific to water and air quality monitoring. The Natural Resource Program Center divisions for Air Resources, Biological Resource Management, Geologic Resources, Natural Resource Information, and Water Resources will provide technical assistance to park networks for developing these integrated monitoring programs.

Each monitoring network will be guided by a board of directors made up of park superintendents, the regional inventory and monitoring coordinator, and the network monitoring coordinator, who will specify desired outcomes and evaluate performance for the network’s monitoring program. The board will make decisions regarding the development and implementation of the monitoring strategy and will promote accountability for the monitoring program. Initiation of monitoring programs in all 32 networks is planned to be phased in over a four-year period.
The Natural Resource Challenge is increasing NPS scientific understanding in parks all around the nation, from Maine to Florida to Alaska and the Pacific Islands. For more information about the Natural Resource Challenge, visit www.nature.nps.gov/challenge/nrc.htm.