

U.S. Department of the Interior National Park Service

Natural Resource Information Division



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I&M Base Program

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The Natural Resource Inventory and Monitoring (I&M) Program established to gather information and develop techniques for maintaining the integrity of the ecological communities in the approximately 250 National Park System units with significant natural resources. The details of the program are outlined in Natural Resource Inventory and Monitoring in National Parks, available from the address listed below

Since its inception in 1992, the I&M Program has funded mapping of vegetation, soils, and geologic features; collection of base cartographic data; and compilation of automated parkbibliographic databases: based of several prototype initiation monitoring programs; and development of data management standards and protocols. The series of fact sheets provides updated information on the progress in each of these areas.

The servicewide Inventory Monitoring (I&M) Program provides baseline natural resource data sets and ecological monitoring approximately 250 National Park System units with significant natural resources. The data sets and the ecological monitoring are foundation for dealing with the myriad threats and adverse effects on natural ecosystems throughout the service. The I&M program is funded by annual line-item appropriations from the Congress.

An I&M Program Coordinator and two support staff members of the Natural Resource Program Center in Colorado coordinate the Program goals and objectives. National Advisory Committee--which consists of **NPS**

superintendents, natural resource management specialists, program managers, and **NBS** research scientists--develops strategic policies and makes programmatic, technical, and budget recommendations to the program coordinator who refers them for approval to the Deputy Associate Director for Natural Resource Stewardship and Science. Ad Hoc working groups of technical experts from the field convene as necessary to address specific policies and technical issues. Natural resource personnel in system support offices provide coordination between parks and the national program office.

Program Structure

The I&M Program includes inventories, monitoring, and data management.

Natural Resource Inventories Twelve natural resource data elements are the core set of the minimum information for park management, planning, resource and natural protection. The I&M Program must complete the basic resource data sets for each natural resource park unit. For cost effectiveness and quality control, most of the inventories are done by national-level contracts and cost-sharing arrangements with other agencies. Specialized inventories of, for example, invertebrates or fossils are the responsibility of parks.

Long-Term Ecological Monitoring Long-Term Ecological Monitoring (LTEM) will be conducted to test monitoring at different spatial scales and to develop field sampling methods and accuracy assessment protocols for parks in each of 10 major biomes. LTEM is expected to advance the understanding of national park ecosystem dynamics and ecological integration and to improve current techniques. The information and techniques will be transferred to the remaining I&M park units.

Data Management

The I&M Program must manage the gathered information and must therefore develop policies, standards, and software to document and describe the collected data: to exchange and distribute data to others in and outside the service; and to archive and store data for ready access. The service must also make its spatial databases accessible on the information superhighway (i.e., on the Internet). Therefore, the Program, the service's GIS Program, and others are jointly developing standards and guidelines to document natural resource data sets (i.e. metadata) and to acquire the hardware, software, and technical expertise for maintaining the data sets and making them available on the Internet.

Current Budget

The Fiscal 1996 I&M Program budget is \$2.92 million of which 12 % is used salaries and program administration, 67 % for inventories, and 21 % for LTEM. An additional \$1.05 million and 13 FTE are available in park base accounts to operate prototype LTEM. In Fiscal 1996, the National Biological Service is providing \$1.18 million to map vegetation communities in parks throughout the United States, except in Alaska, \$878,000 to support and research development prototype LTEM, and \$180,000 for inventory protocol development.

Program Status

Since 1992, the I&M Program has funded approximately 380 inventories and verified species lists from 95 park units. Significant progress has been made bibliography, base cartography, vegetation, and soils Baseline inventories. assessment reports of water quality and geology in all natural resource parks also were funded. The baseline water quality reports were funded jointly with the Water Resources Division

Seven LTEMs, including 13 in separate park units, were initiated in the Pacific Coast, the Arctic/Subarctic, Grassland and Prairie, Tropical/Sub-tropical, Atlantic Gulf Coast, and Deciduous Forest biomes. Three of the LTEM programs are fully operational.

Underway is the coordination of the NPS Prototype Monitoring with the National Environmental Monitoring and Research Framework sponsored by the National Science and Technology Council's Committee on Environment and Natural Resources. The intent is to develop a framework for the integration of environmental monitoring and research networks and programs across the federal government.

The National Park Service and eight other federal agencies recently signed an MOU for the development of a spatial framework for defining ecological units of the United States. Personnel from the I&M Program serve on the Interagency Steering Committee for that task and will coordinate the activities of NPS with those of the other federal agencies.

Park priorities for each separate resource inventory were initially developed during 1993. Plans are now underway to reconsider and update those priorities because of, for example, the completion of some inventories by some parks; the need for more explicit information about sensitive species and geological data; a better understanding of the linkages among inventories; new activities,

threats, and issues that increased the urgency of some inventories; and new opportunities for leveraging to complete more inventories with existing funds.

The Natural Resources Inventory and Monitoring course was given again in 1996 and is expected to be given also in future years.

For further information contact:

Dr. Gary Williams
Inventory and Monitoring Program
Coordinator
National Park Service
1201 Oakridge Drive, Suite 350
Fort Collins, Colorado 80525
Telephone (970) 225-3539
e-mail: Gary_Williams@nps.gov
cc: Mail: Williams, Gary

You may also consult our worldwide web page on the I&M Program at: http://www.aqd.nps.gov/nrid/im/bintro1.htm

