

Research On a Shoestring? Gateway Finds the Answer In 'Research Networking'

By John T. Tanacredi

Few dollars! Fewer personnel! Even less time! Excuses we have become accustomed to during these times of reduced appropriations. With the completion of the Gateway National Recreation Area's Resource Management Plan, the magnitude of threats has not gone away. In order even to attempt to reduce or eliminate these threats to our natural and cultural resources, some innovative approaches to getting research work done must be contemplated.

While some progress has been made at Gateway in the ten years since the Park's creation to document and research impacts on our natural and cultural resources, the task of protecting, preserving and enhancing the remnant ecotypes that make-up this 26,000-acre park, within the largest metropolitan area in the world still awaits us. Since Gateway is a coastal park, much must be understood if we are going to protect effectively these fragile, remnant ecosystems. Traditionally, waterfront or coastal use runs in direct opposition to environmental protection.

Existing Park Service funding mechanisms usually have provided support for projects of very high priority or for highly visible problem areas. In light of the Park Service's basic mandates to "allow nature to take its course", few dollars are earmarked for monitoring programs unless some extraordinary circumstance exists or the monitoring is part of a major network. Thus, an attempt is underway at Gateway to tap the academic, research and regulatory institutions in the New York metropolitan region to form a network - an overall umbrella group geared toward the study of natural resources associated with this National Park unit.

Several things can be accomplished through this approach. First, Gateway will be able to manage more effectively its natural resources by having access to necessary data at considerably reduced cost to the federal government. Second, academic institutions and research facilities would be allowed to conduct a portion of their existing programs in a unit of the National Park system. Third, the Park will be the laboratory to explore, manipulate and observe developing natural systems in an urban context.

Therefore, Gateway NRA, in cooperation with other institutions in the New York metropolitan region, has established within the park, the *Gateway Institute for Natural Resource Sciences* (GINRS), dedicated to comprehensive research, maintenance and monitoring of our natural resources. Drawing on the talents and expertise of several institutions, the GINRS will coordinate the approaches of researchers into the study of significant resource management problems identified in the Park's Resource Management Plan. Individual investigators work separately in their own disciplines, but toward a common goal, integrating their knowledge in a systems approach. The primary initiatives can be summarized as follows:

1. To develop a core of academic and scientific institutions directing their cooperative research and monitoring efforts at the myriad of identified threats to natural resources of Gateway NRA.
2. To maintain a comprehensive inventory of natural resources in order to develop plans at the park level

for managing these resources.

3. To establish accurate baseline data on park resources and to conduct comprehensive monitoring programs designed to detect and measure changes in these resources and in the ecosystems within which they exist.

4. To identify and mitigate those threats which are associated with sources and activities both internal and external to the Park.

5. To improve our capability to better quantify and document the impacts of various threats, particularly those that are believed most seriously to affect important park resources and National Park values.

These objectives are to be accomplished by:

1. To gear research and monitoring projects toward increasing knowledge of our natural resources along with peoples' role in their protection, use and development both in an inventory and ecosystem dynamics manner.

2. To make complex scientific data and information palatable to the general public so that they may understand and participate effectively in decisions that are made regarding natural resources.

3. To emphasize the significance of our National Parks and how this research and monitoring activity will reduce or, at a minimum allow for greater understanding of the identified "threats" to our National Park System.

Presently, research and monitoring topics have followed the major headings under Natural Resource Preservation Program (NRPP's) listed in the Park's Resource Management Plan. A number of the natural resource research and monitoring activities are underway or at some stage in development by other research institutions or agencies. It is the purpose of the Institute to foster these projects within the jurisdictional boundaries of this National Park unit.

By no means however, will research be limited to the natural sciences. Social scientists at the GINRS

will be involved in sociological and planning aspects of Gateway, tying together many of the Institute's studies into long-term cost/benefit analyses and/or cause/effect relationship analysis. In addition to the natural resources research and monitoring, the Institute is anticipating conducting conferences, workshops, debates and other activities designed to explore the many approaches to reducing the many threats to the resources in National Parks. The GINRS will thus serve as a significant forum for those professionally interested in natural resource management issues and policy development.

The response to date has been excellent; more than 25 local institutions participated in our first all-day orientation/workshop. We have completed several projects and reports. For example, a detailed floral inventory and herbarium reference-filing system (over 375 species & plants) for the park was the first project under GINRS. Total cost to the Park Service was approximately \$7,000, supporting three Ph.D. researchers. Similar proposals, had they been submitted under a competitive contract awarding framework would, it has been estimated, have cost the Park Service in the neighborhood of \$75,000.

Of course, quality control is an important factor with all efforts, so that reliance on the individual researcher or professor must be coordinated closely. Within the purpose of the Institute, the Park's Natural Resource Management Specialist must work closely with the Institute participants and provide guidance, critical review of data and final evaluation of performance of the scientific investigation. When projects are "team projects", each individual researcher works in his/her area of expertise and always has the option to publish the work in a peer reviewable journal or proceedings. Already we have had several papers presented at International conferences and workshops.

It is hoped that should monies become more available in the future, longer-term, larger-scale ecosystem studies could be accomplished. Should the budgetary climate remain as it is presently, this Institute approach should go a long way to increase the level of scientific output required for effective management of our natural resources at Gateway National Recreation Area.

These projects have been completed to date and are available on written request to: Mr. John T. Tanacredi, NRMS, National Park Service, Gateway Institute for Natural Resource Services, Floyd Bennett Field, Brooklyn, New York 11234.

Researcher	Project Title	Date
Dr. Richard Stalter St. John's University	1. The Plant Communities for Four New York City Landfills	1983
	2. Plant Communities, Breezy Point Tip, Gateway National Recreation Area	1982
	3. <i>Ilex opaca</i> and Plant Community Dynamics, Sandy Hook, New Jersey	1980
Dr. A.M. Greller Queens College, CUNY	1. Forty-six plant species additions to Gateway Reference Herbarium File	1984
Dr. G.F. Rogers Columbia University	1. Vegetation Mapping and Repeat Photography of Terrestrial Habitat, Gateway NRA	1984
	2. Phragmites Fire Ecology (with E. Kracauer-Hartig)	1984
	3. A Large-Scale Application of a Physiognomic-Ecological Vegetation Classification System (with P. Grady)	1984

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