

Gateway Pond: Ecosystem Revitalization

By John Tanacredi

Fires at Yellowstone would appear to have very little to do with the creation of a pond as an example of ecosystem revitalization. However, not unlike the restorative function and increase in biodiversity that fires bring to large ecosystems such as Yellowstone, a relatively small fire at Gateway National Recreation Area, in the heart of the urban milieu, was responsible for a series of small decisions leading to the creation of aquatic habitat on a reclaimed-to-nature portion of an abandoned military air field.

It all started in early April, 1983. The "North 40" of Floyd Bennett Field, so entitled due to its isolation from visitors use, had a fire encompassing about 40 acres. *Phragmites*, the predominant plant that burned, left bare the old and inhospitable landfilled surface of Floyd Bennett Field. Within two days of the fire a torrential downpour occurred, filling the fill depressions with water.

With summer heat lingering that year, the air temperature had contributed to a dramatic increase in the number of many resident bird species using the area. The "ponds" attracted even more waterfowl, so the thought occurred, "why not make permanent ponds there?"

From April to September the site was surveyed and photo-documented. Tests were made to determine soil consistency and whether any contaminants were there. The projected equipment, funding, staffing and maintenance needs were prepared. Sources of freshwater were noted. All abandoned electric, water, sewer lines were plotted so that none were within the boundaries of potential pond excavation. A trail was created on paper and signage was suggested.

All of this was documented, reviewed and approved in-house by late September, 1983. Then Fiscal Year 1984 Gramm-Rudman or its equivalent struck! No funding was available for implementation; cuts in staffing meant no long-term maintenance.

At a meeting in early 1984 with representatives from the New York State Department of Environmental Conservation (NYSDEC), I learned that projects could be funded under the New York State "Return-A-Gift to Wildlife" program. Taxpayers make a check in the right column of their New York State Income Tax Returns and a percentage of those returns is returned to NYSDEC for the preservation, protection and enhancement of wildlife through a variety of competitively sought project proposals. It appeared somewhat incongruous for a Federal Government entity to seek a

"State Grant" to conduct a habitat restoration project. However, there was no stipulation excluding the National Park Service from seeking funding as long as we maintained the project long-term, and provided some in-kind costs (i.e. staff time, signs, publicity, and security to the site activity), so we took the plunge.

On May 16, 1986, NYSDEC announced the transfer of \$20,000 through the Return-A-Gift Program to a special NYSDEC account to be utilized for the establishment of an urban wildlife management area in New York City. The approved proposal was the National Park Service-Gateway Floyd Bennett Field "North 40 Pond!"

The selection criteria noted is classic since both the mandates of our respective agencies were meshed in the right gears ... we could truly make progress toward increasing potential habitat for wildlife with commensurate increases in biodiversity in urban stressed ecosystems; the site had an active constituency using the Field for interpretative/education program through NPS cooperative agreements with the New York City Board of Education, New York City Chapter Audubon Society, Cornell Cooperative Extension and New York State Department of Recreation and Historic Preservation; the site was certainly accessible to the visitors of Gateway National Recreation Area; the site was one where a long-term commitment by the agency is provided for its maintenance and upkeep; and there would be only a one-time cost by NYSDEC to establish the area.

All the criteria were met. We were on our way! We even had a dedication date planned; September 1986!

In July 1986, we prepared a Site Development Plan which built on the Park's General Management Plan and Floyd Bennett Field DCP; both discuss "environmental zones" for research and education and wildlife preservation on the field. This Action Plan for the "North 40" called for the establishment of designated trails, closing off other roadways or trails to random vehicle or human access, initiating interpretive programs, and a number of wildlife enhancement demonstration projects.

Creation of the approximately one-acre freshwater pond was central to the plan. Proximity of the pond to the waters of Jamaica Bay would encourage birds seeking fresh water to use this pond. After excavation, revegetation of spoil berms around the pond would involve use of plants with wildlife support-capability, either for food or wind erosion control.

In the pond itself an assortment of freshwater spe-

cies ranging from deep-water submergents to shallow water emergents would be planted. Sago pondweed (*Potamogeton pectinatus*), Arrowhead (*Sagittaria latifolia*), and Smartweed (*Polygonum pennsylvanicum*) to name a few. One of the berms ground cover such as Wild Millet (*Schinochloa crusgalli*) and Birdsfoot Trefoil (*Lotus corniculatus*) will be utilized among others, to be established through cuttings and seeds started in the Park's Greenhouse/Nursery stock area. Nest boxes, native animal releases, and plantings to attract insects were all part of the "North 40 Pond Management Plan." The next step was to establish a Memorandum of Understanding between NYSDEC and the NPS. This was completed and officially signed by both parties in February 1988. NYSDEC began the solicitation of contractors to bid on the pond excavation and finally on March 16, 1989, a bulldozer began the excavation. It took only two weeks to complete the pond. By September 1989 the pond had bird-blinds, completed by the New York City Telephone Pioneers, a volunteer group of retired New York Telephone Company employees with extraordinary talents in carpentry and natural resource management support construction. The trail (over 1.5 miles) had been cut by NPS maintenance crews. The berm plants were established through joint efforts by an NPS agronomist, Cornell University, New York City Board of Education, New York City Chapter Audubon, and NPS Jamaica Bay District interpreters and the trail signs had been purchased.

On August 31, 1989, an official ribbon cutting took place. From inception to ribbon cutting the project took six years and five months!

We are now monitoring the reptiles, amphibians, plants and water of the pond, and the many organisms we have introduced. Barn owl boxes will be placed and the designated parking areas on the Floyd Bennett Field Runway will be established.

Progress is measured many times in levels of persistence, perseverance, and sheer desire. The way the venture unfolded created a multiplier effect. We captured an extra energy, enthusiasm, and extended participation that is enriching the overall impact of Gateway NRA on the urban community of which it is a part.

Tanacredi is a research ecologist and Chief of Gateway NRA's Office of Resource Management and Compliance.



Through the peephole in the observation blind, built by telephone company volunteers, the lake looks like this (right) and wildlife is undisturbed.