



New York City Urban Field Station at Fort Totten A “Center for Excellence in Urban Natural Resource Stewardship”

Background: The Forest Service Northern Research Station (NRS) and the New York City Department of Parks and Recreation (NYC Parks) have jointly created the New York City Urban Field Station, which is a rising Center for Excellence in Urban Natural Resource Stewardship. The Center develops and applies adaptive management, technology transfer, and science to improve human well-being and the environment in urban metropolitan areas.

The Center is both a physical place to conduct research *and* a network of relationships among a growing number of scientists, practitioners, university cooperators and facilities focused on urban ecology. It is located at the Fort Totten Urban Field Station in Bayside Queens, NY. Recognizing their mutual interest and expertise in urban forestry and habitat conservation and restoration, NRS and NYC Parks signed a Memorandum of Understanding in 2006 to establish a long-term research partnership to deepen our understanding of urban ecosystems and strengthen urban natural resource stewardship. Since its founding, the Urban Field Station has engaged over 30 non-profit, academic, and government partners creating innovative “research in action” programs to support urban ecosystem management.

New York City has a wide variety of built environments and natural habitats, including over 5.2 million trees, half of which are managed by NYC Parks. NYC Parks’ foresters, ecologists, wetland scientists and restoration specialists manage over 29,000 acres of parkland, 11,000 acres of which are still natural, ranging from beaches and rocky shorelines to freshwater wetlands, salt marshes, meadows, and forests.

Selected Projects and Accomplishments:

- **Completed the \$2.8 million renovation of the Fort Totten Urban Field Station**, led by NYC Parks. The facility features shared lab, office space, and residential units for visiting scholars and students of urban ecology from across the country and around the world.
- **Selected to receive a National Science Foundation Urban Long Term Research Area-Exploratory grant for 2 years at \$150,000/year** for the project “Understanding the Dynamic Connections Among Stewardship, Land Cover, and Ecosystem Services in New York City’s Urban Forest”, in partnership with Dana R. Fisher, Columbia University; Christopher Small, Lamont Doherty Earth Observatory; and Gareth J. Russell, New Jersey Institute of Technology.
- **Provided \$2 million of USDA Forest Service funding** through the Research and State & Private Forestry mission areas for “Restoring Community Ecosystems in New York”, a program **to create green jobs in urban forestry, horticulture, and ecological restoration** for 18-24-year-old graduates of the Million Trees Training Program (a joint program of NYC Parks and the New York Restoration Project) and to conduct research on green jobs as pathways out of poverty.



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- Co-hosted a 4-day **workshop for more than 80 researchers and practitioners on “Million Trees NYC, Green Infrastructure, and Urban Ecology: Building a Research Agenda”**, under the auspices of the MillionTreesNYC Research and Evaluation Subcommittee, with core partnership from PlaNYC 2030, NYC Parks, New York Restoration Project, Cornell University, and the New School.
- **Conducted and funded research which directly led to the development of PlaNYC 2030**, New York City’s long-term sustainability plan. These projects included an analysis of existing and potential Urban Tree Canopy; the loss of vegetative cover in NYC since 1984; and quantification of the ecological services provided by New York City’s urban forest and street tree population using the FS-developed models UFORE and STRATUM.
- **Published *Restorative Commons: Creating Health and Well-being through Urban Landscapes*** in partnership with the nonprofit, Meristem, to share lessons learned from the fields of urban natural resource management and design with other practitioners, policymakers, and the general public. The 18 articles span theory, case studies, and practitioner interviews and the book is designed for a wide audience with full color illustrations and graphics. The first printing of 2,700 was “sold out” within two months (the second printing is now available). Thousands downloaded the electronic version.
- **Supported local environmental literacy program and partnerships** with the Harlem Link Charter School, a K-5 public elementary school; Bronx Helpers – New Settlement Apartments, a teen leadership and service program; New York City Housing Authority; Trees New York; Horticultural Society of New York; and Council on the Environment of New York City. Funding has been received through FS More Kids in the Woods program in 2007 and 2008 and the FS Civil Rights Program.
- Launched a **research partnership with the Fresh Kills Park, a 2,300 acre landfill-to-park conversion project**, engaging NRS scientists from Rhinelander, WI; St. Paul, MN; and Chicago, IL to research phytoremediation on landfill sites as well as attitudes and perceptions towards visiting converted landfill sites.
- **Developed the Young Street Tree Mortality Study** with partners from Columbia and Rutgers University to examine the biophysical, social and built environment factors affecting the mortality rates of young street trees planted throughout the five boroughs.

