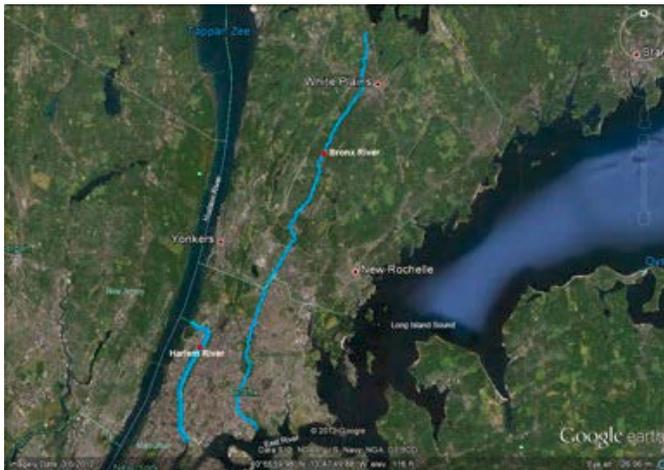


# URBANWATERS

## FEDERAL PARTNERSHIP

*Restoring Urban Waters, Revitalizing Communities*

## Bronx and Harlem River Watersheds (New York City, New York)



### Ambassador

**Sara Powell (Natural Areas Conservancy)**  
(212) 360-1480  
sara.powell@parks.nyc.gov

### Co-Leads

**Donna Myers (USGS)**  
(703) 648-5012

dnmyers@usgs.gov

**Vivian Nolan (USGS)**  
(703) 648-4258

VPNolan@usgs.gov

**Stephen Terraciano (USGS)**  
(631) 736-0783 x102  
saterrac@usgs.gov

## Overall Assessment of the Partnership Since the Beginning

The Bronx and Harlem River Watersheds have been part of the Urban Waters Federal Partnership (UWFP) since 2011, when the first seven pilot locations were selected. Led by the U.S. Geological Survey (USGS), this location faces the challenge of helping overburdened and underserved communities reconnect to their waterways, benefit recreationally and economically, and achieve their own waterfront vision. This vision includes new and improved open space, access to waterfront recreational opportunities, improved water quality, and promotion of economic development.

The Bronx and Harlem River Watersheds were once varied ecosystems covered by forests, meadows, and marshes, and, despite numerous challenges, still hold enormous potential to provide natural beauty, wildlife habitat, and recreational amenities, all of which improve the

quality of life of local residents. Today, however, much of the natural habitat in the area has been displaced by urban development, which has contributed to pollution and contamination of the watersheds. The South Bronx is home to the most economically disadvantaged congressional district in the country, and nearly all of the neighborhoods in both watersheds within the Bronx are recognized as environmental justice communities by the New York Department of Environmental Conservation. The Harlem River Watershed is also very densely populated and highly built-up, with very little green or open space along the river. The community is cut off from the Harlem River by a network of highways, streets, and railroads, and the only access points are difficult to find, noisy, and unsafe. Approximately 90% of the shoreline is constrained by highways, rail lines, and industrial land uses, all of which have significantly reduced access to the river for recreational use.

## Members of the Partnership

The partnership includes federal agencies and non-federal organizations. The Bronx River Alliance and the Bronx Council for Environmental Quality serve as lead community partners.

### *Federal Government*

- Department of the Interior, U.S. Geological Survey
- Department of the Interior, Fish and Wildlife Service
- Department of the Interior, National Park Service
- Environmental Protection Agency
- Federal Emergency Management Agency
- Department of Housing and Urban Development
- National Oceanic and Atmospheric Administration
- U.S. Army Corps of Engineers
- Department of Agriculture, U.S. Forest Service
- Department of Transportation
- Representative José Enrique Serrano's Office

### *State Government*

- Governor Andrew M. Cuomo's

### *Office*

- New York State Parks, Recreation and Historic Preservation
- New York State Department of Transportation

### *Local Government*

- New York City Department of Parks and Recreation
- New York City Department of Design and Construction
- New York City Economic Development Corporation
- Bronx Borough President's Office
- New York City Department of Environmental Protection
- New York City Department of Transportation

### *Non-governmental Organizations (NGOs)*

- Bronx Council for Environmental Quality
- Harlem River Working Group

- Bronx River Alliance
- NY-NJ Harbor & Estuary Program/Hudson River Foundation
- Friends of Van Cortlandt Park
- Riverkeeper
- Amtrak
- Rocking the Boat
- Urban Assembly New York Harbor School
- Waterfront Alliance

## Nature of the Partnership

Participation in the partnership is voluntary. Partners support the UWFP by providing knowledge, technical assistance, financial assistance, and connections to other potential partners. To date, the partnership has held several meetings in New York to reconnect the various members and discuss major issues and potential solutions. A significant portion of the partnership's work has been achieved through individual efforts. With an Ambassador now in place, the partnership location will provide more focused activities, greater communication, increased collaborative efforts, and an expanded partnership to achieve the mission and vision of the UWFP.

## Major Accomplishments Since the Beginning of the Partnership

**Bronx River Shoreline Restoration** Multiple sites along the Bronx River have been restored, including Hunts Point Landing, Rodman's Neck Coastal Forest, and the Soundview Park Aquatic Ecosystem. Hunts Point converted old, abandoned space into a public park, and 10,000 trees were planted in Rodman's Neck Coastal Forest. Oyster reef restoration was completed in 2012 at the Soundview Park Aquatic Ecosystem.

**Bronx River Designated a National Water Trail** Coordinated efforts have improved the safety of the Bronx River for recreational activities such as canoeing and kayaking. The Bronx River Alliance (Alliance), with assistance from the National Park Service (NPS), developed a water trail for human-powered boating that incorporates best management practices and design features that are an example for urban waterways. The Secretary of the Interior and the NPS Director recognized these efforts and designated the Bronx River Blueway one of the first National Water Trails in 2012. The Alliance also received a \$25,000 Challenge Cost Share grant from NPS to expand their public canoe and kayak programming targeted at youth and their families.

**Youth and Community Engagement** Since 2011, USGS has been participating in the annual Harlem River Festival, an event which has grown into a week-long, borough-wide outreach effort that brings local communities together through educational and on-water recreational activities.

USGS and the Bronx Council for Environmental Quality (BCEQ) work with faculty and students from minority-serving institutions (such as Eugenio Maria de Hostos Community College, Lehman College [City University of New York] (CUNY), and Borough of Manhattan Community College) to help collect and interpret water-quality information and sustain green infrastructure projects.

**Community Service** The Bronx Helpers Youth Community Service and Leadership Development Program provided 60 teenagers the chance to learn about environmental issues and participate in related projects. The intensive summer program, organized by New Settlement Apartments and the U.S. Department of Agriculture Forest Service, gave youth a chance to develop leadership skills and participate in civic engagement and community service.

**Oyster Restoration in the Bronx River** The U.S. Army Corps of Engineers, National Oceanic and Atmospheric Administration (NOAA), U.S. Environmental Protection Agency (EPA), New York City (NYC) Parks Natural Resource Group, NY/NJ Baykeeper, Hudson River Foundation, Urban Assembly New York Harbor School, Rocking the Boat, and other local agencies constructed an oyster reef to provide a better place for oysters to live in the Bronx River.

**Bronx Zoo Kiosk** With support from NOAA, the Wildlife Conservation Society, and NYC Parks, USGS constructed a kiosk at the Bronx Zoo in 2013, complemented with PowerPoint and a scrolling display of current river conditions. River flows are available in near real-time through a USGS website.

**Harlem River Water Quality Assessment** USGS contributed \$50,000 in FY2012 to support the Harlem River Working Group's Watershed Protection and Partnership Action Plan. In cooperation with the New York City Department of Environmental Protection (NYCDEP), USGS led the effort to compile over 100 years of water-quality data and provide analysis of the current water-quality status and condition of the Harlem River Watershed. The associated report can be found at the USGS Publication Warehouse: <https://pubs.er.usgs.gov/publication/sir20165044>.

**Innovative Pop-up Wetland Runoff Treatment Project** In 2013, BCEQ, the Harlem River Working Group, and NYC Department of Parks and Recreation, with funding from a Wildlife Conservation Society-NOAA grant and Representative José Serrano, installed a pop-up wetland to capture stormwater runoff from an elevated roadway. With support from several USGS Water Science Centers, the quality and quantity of stormwater from adjacent roadways was assessed. Sampling results are intended to support construction of passive riverfront park features meant to treat stormwater before it enters the Harlem River. Other partners included: DLANDstudio; the Gaia Institute; Highbridge Community Life Center; Sustainable South Bronx; the NPS Rivers, Trails, and

Conservation Assistance Program; NYC Parks Greenbelt Native Plant Center; and New York Restoration Project.

**Closing the Greenway Gap – Construction of a Bronx River Pedestrian Bridge** In 2012, Representative Serrano asked the Secretary of the Interior if the U.S. Department of the Interior (DOI) would help jumpstart discussions between NYC, New York state, and Amtrak to help complete the final section of the Bronx River Greenway. DOI convened meetings and facilitated discussions among the New York State Department of Transportation, the Office of Representative Serrano, Amtrak, NPS, and NYC Parks over a three-year period. These talks successfully led to the resolution of legal issues. DOI was instrumental in getting a \$10 million award through the U.S. Department of Transportation’s Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant program in 2015. The TIGER award will help construct the final link needed to safely connect South Bronx residents over Amtrak rail lines, nine acres of improved parkland, as well as the river itself, and mark the completion of a one-mile bike and pedestrian link in a trail system that will run for 23 miles. Partners also provided funding for the project: Amtrak waived design review fees and air rights, the city contributed \$14 million, the state provided \$8.6 million, and DOI provided \$4.4 million from Hurricane Sandy funding—all as a match for the successful \$10 million TIGER proposal. With the completion of the Greenway, Bronx residents will no longer be cut off from the river and from new parks and playgrounds. Greenway travelers will have a safe, continuous north-south route through the Bronx. This project will ensure better access to roughly 400,000 South Bronx residents—and 30,000 residents in the immediate vicinity.

**Creating a Greenprint for the Harlem River Waterfront** In 2012, the Harlem River Working Group, the Trust for Public Land, Pratt Institute, and the Pratt Center for Community Development led a community visioning project to create a “greenprint” for the Harlem River Waterfront. The vision and a greenprint map are available online:

<http://harlemriverworkinggroup.org/greenway/map/>.

## Major Actions Planned in the Future

**Harlem River Watershed Plan** With funding from the New York State Department of State Local Waterfront Revitalization Program, NYC Parks is developing a Harlem River Watershed Natural Resources Management Plan for the Bronx. When completed in 2019, this plan will serve as a guiding document for agencies, community groups, and other stakeholders to implement actions that will protect and restore watershed resources. The plan will also identify priorities as a focus for future funding, generate typical design concepts for key projects, and build on priorities already identified through other community-based planning efforts.

**A Continuous Greenway along Both Sides of the Bronx and Harlem Rivers** Through America's Great Outdoors and the UWFP, NPS and EPA are working closely with NYC and community groups to create a new waterfront greenway along the Bronx side of the Harlem River, connecting the river to neighborhoods.

**Flood Remediation Plans** USGS will work with the New York Department of Design and Construction to map bedrock elevations in the Bronx and the rest of NYC to inform green infrastructure design.

**Bronx River Shoreline Restoration at Starlight Park** This project, conceived as part of Hurricane Sandy proposal restoration efforts, proposes to renaturalize armored waterfront, improve habitat and flood storage, create new wetlands, remove contaminated soils, and enhance stormwater management along 11 acres. The restoration project intends to reduce the vulnerability of Bronx communities from future coastal storms and contribute to the ecological restoration of the Bronx River.

**Reducing Trash in the Bronx River** In 2016, the Bronx River Alliance's "Project WASTE" (Waterway and Street Trash Elimination) received a grant from EPA Region 2 (Trash Free Waters) to reduce the amount of plastic trash entering the Bronx River from upstream sources. Working with the NYC Parks Natural Resource Group and the New York Botanical Gardens, the Bronx River Alliance will conduct floatable trash assessments at trash collection booms and at accumulation hot spots in upstream, midstream, and downstream locations, and will analyze the data to determine the sources of the trash. Outreach will be conducted with businesses identified as sources to explore options for reducing disposable trash generation. The project will include working with two Bronx and two Westchester County High Schools to educate students about the impact of loose trash on the environment, and encourage students to generate and carry out their own public awareness projects.

**Citizen Science & Water Quality Monitoring** In 2016, Sarah Lawrence College’s Center for the Urban River at Beczak received funding from the Urban Waters Small Grants program to implement a project to improve water quality and increase community engagement in four urban watersheds in the Lower Hudson River region, including the Bronx River. All of the target communities in these watersheds suffer from remnants of their industrial legacy and rapid growth, namely combined sewer systems and lack of access to the riverfront. The project will seek to gain a better understanding of the severity and sources of pollution, and will engage citizen stewards in hands-on science and empower local communities to become proactive advocates for pollution reduction.

**Harlem River Water Quality Monitoring** During summer 2017, USGS will provide NYC Parks with preliminary water- and sediment-quality data to help inform the Harlem River Watershed Plan and a future living shoreline restoration project planned for Bridge Park South/Depot Place—the next portion of the Harlem River waterfront slated for development into public parkland. Working with the Ambassador, NYC Parks, EPA, the Interstate Environmental Commission, and NYCDEP, an assessment of the Depot Place water and sediment quality will be conducted by City College of New York (CCNY Harlem Campus) student interns at USGS and with the support of the UWFP.

## **Major Challenges in the Future**

Reconnecting the community to the Bronx and Harlem rivers can bring economic and health benefits. Realizing further progress on this common vision will require a significant amount of time and effort to coordinate the work of NGOs, academia, federal agencies, state and local agencies, and industry. The recent arrival of the Ambassador will facilitate the coordination of this location’s partner initiatives and activities, and enable sustained forward motion toward achieving these shared goals.