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MAINTENANCE AND OPERATIONS

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The realization of the Bronx River Greenway is a magnificent achievement, made possible by years of creative collaboration among Bronx River Alliance's partners, especially the New York City Department of Parks & Recreation. The completion of each successive greenway segment creates a new asset that will yield ecological, social, and economic benefits for years to come. These assets also require mindful stewardship and a commitment of resources going forward if they are to continue to enrich the river, its watershed, and the communities along its banks.

This section of the Greenway Plan outlines the specific tasks that maintaining the greenway will entail, identifies the staffing and resources needed to accomplish them, and highlights the special challenges of carrying forward the vision for operating the greenway that has emerged from years of community-based planning and consensus building. Finally, this chapter explores strategies for funding this work and ensuring that the unparalleled accomplishment that the greenway represents will not only endure, but will become more beautiful, sustainable, and alive with each passing year.

STRUCTURE, STAFFING, & SCOPE OF ROUTINE MAINTENANCE

Structure and Staffing

The completion of the greenway will effectively create a new linear park traversing several existing NYC Park districts. Once projects creating major contiguous greenway segments are completed, a new Bronx River Greenway district will be created to facilitate consistent maintenance end-to-end (especially of pathways). In addition, a consolidated Bronx River district will enable coordination of regular maintenance practices with ecological restoration work, and the identification of dedicated funding sources to help underwrite the greenway's maintenance costs. Initial staffing could be small, growing as additional greenway segments open for use.

Staffing Levels and Supervisory Structure

A supervisor and crew would be responsible for tasks that are identified as "district-based."

Scope of Routine Maintenance

Routine maintenance of the greenway will include the tasks that are common to all of the City's parks and greenways. Some tasks are seasonal or will vary seasonally in the effort they demand. NYC Parks training for maintenance staff supports a holistic approach to maintenance within geographically-defined zones and enables a district-based crew to be responsible for all routine maintenance tasks, including cleaning, minor repairs, and care of plantings.

Daily greenway maintenance tasks will be carried out by district-based staff. This arrangement would deploy small crews to travel the length of the pathway each day in gator-type vehicles with trash cans, brooms, etc. A crew of four workers and a working supervisor could cover up to eight miles of path by starting at the north and south ends, and meeting mid-way.

Broken glass on paths will require extra attention because it poses a special danger to children on the greenway. In addition, for cyclists, glass can be a greater problem on pathways than it is on streets, where it is normally crushed by vehicles and swept up by mechanical sweepers.

Winter greenway maintenance will also require special attention. Developing practices for keeping paths free of ice, without using chemicals in ways that are ecologically damaging, will be a challenge. Alternatives to salt—such as potassium chloride—should be used on pathways. Major pathways, especially segments that are sloping, shaded, or located on bridges, will all need to be kept cleared and their drainage carefully maintained.

Routine Maintenance Tasks:

1. *Daily (7 days per week)*

– Path sweeping with hand brooms

– Snow removal
– Litter pick-up
– Emptying trash and recycling receptacles
– Comfort station cleaning and resupply

2. *Regular (Intervals TBD)*

– Lawn mowing
– Flower bed maintenance
– Native plantings need relatively little maintenance; district staff should notify the Bronx River Conservation Crew of any problems they observe in these areas

3. *As-needed, with Needs Identified in the Course of Daily Maintenance*

In the course of daily maintenance, staff will identify items that require specialized materials, equipment, or trades, and submit a work order to the NYC Parks Bronx Borough's Shops or Forestry Unit or other City agencies, as appropriate.

– Asphalt patching
– Pavement markings maintenance
– Painting and graffiti removal
– Signage repair and replacement
– Light fixture maintenance (New York City Department of Transportation—NYCDOT)
– Tree pruning and care
– Comfort station repair
– Playground equipment repair

4. *Periodic Maintenance Needs*

All bridges must be inspected annually by qualified engineers. Inspection of the greenway's bridges will be performed by NYCDOT and paid for by NYC Parks. There will ultimately be five greenway bridge spans—four over the river itself, one over Amtrak, and one over the Bronx River Parkway. Current plans call for the bridges to be made from weathering steel, which develops a permanent coating and does not require painting.

Floating docks planned for Hunts Point Riverside Park and Starlight Park will also require regular inspection and repair (see boat launch map on page **5.6** for a complete list of planned and existing boat launches). Buildings that are part of the greenway, including the boat storage building at Starlight Park, will require maintenance to be planned and budgeted into their normal operations.

Responsibilities of the Bronx River Conservation Crew

NYC Parks district staff do not normally maintain waterways and other natural and restored areas. The Alliance has developed and continues to build the capacity of the Bronx River Conservation Crew to care for the river and to continue the work of ecological restoration. As is already the case, the Crew will have primary responsibility for:

– Maintaining the river and its banks (clearing blockages and removing debris)
– Maintaining natural vegetation areas
– Maintaining and monitoring restoration sites
– Additional restoration projects

With adequate training and equipment, the Crew may also have a role to play in maintaining upland restoration and stormwater management features, such as vegetated swales, infiltration basins, and green streets.

The Crew will continue to work with NYC Parks' Natural Resources Group (NRG) in the planning and execution of new restoration projects and ongoing maintenance of natural areas. Alliance staff, including the Crew, will also have an important role in implementing the Guildelines for Ecological Performance outlined in Chapter Three, particularly those addressing soil and stormwater management, pest management, and control of invasive species. The Crew, NRG, and district staff should all work to ensure that the best practices are applied in all greenway maintenance work, not only in restoration projects.

The Bronx River Conservation Crew pictured in 2004 with Congressman Serrano, a major supporter of the Bronx River Greenway and Bronx River restoration projects.

It will be important for the Alliance to map, monitor, and update the areas for which district staff, the Crew, and NRG are responsible, as greenway development progresses and as additional restoration projects are completed.

Equipment and Space Needs

A variety of equipment will be needed for regular maintenance and special projects. At minimum, basic tools and maintenance equipment need to be sited to allow coverage of the north, middle, and southern sections of the greenway. Since it will continue to be difficult to cross Bruckner Boulevard until the Bruckner-Sheridan Interchange study is completed and implemented by the NYSDOT, it will be necessary to base some equipment south of Bruckner for several years. Storage space for this equipment must be planned into the design of the greenway. Potential locations include:

- Fort Knox (existing—this facility has the potential to be expanded)
- Ranaqua (existing)
- Starlight Park (planned boat storage building, and potential Alliance headquarters building)
- Soundview Park (site to be determined)

Vehicles

In keeping with the Alliance's principles and to minimize intrusion and path wear, the smallest vehicle adequate for a given task should be used. The availability of zero-emissions and alternative fuel vehicles in all categories should be explored when future purchases are considered. Electric-powered gators are already available and should be used, if possible, to minimize environmental impact on the river and the greenway.

Routine maintenance will require a number of gator-type vehicles to allow maintenance staff to traverse the entire path system for daily cleaning and observation. Gators can be fitted with snowplows and are normally capable of clearing snowfall of less than eight inches. Path clearing after a major snowfall will require a combination of pickup trucks, mechanical snow blowers, and hand shoveling.

SAFETY AND SECURITY ON THE GREENWAY

The greenway's function as a transportation resource that will be open to year-round, 24/7 use for walking, running, and cycling, and the very nature of its design as an off-street path create challenges in maximizing safety for greenway users and its neighbors alike.

A body of research on "Crime Prevention through Environmental Design" supports the common sense observation that streets, parks, and other public spaces are safest when they are well-used. Active, legitimate uses discourage negative ones. In addition, direct sight lines from streets, residences, and businesses along the Bronx River Greenway, provide "eyes on the path" that will deter illegal activity.

The Lambert Houses provide "eyes on the path" just south of 180th Street.

Like other NYC parks, the greenway will be "closed" from dusk to dawn to activities other than travel along the pathways. This provides a basis for the New York City Police Department and Parks Enforcement Patrol (PEP) to challenge people who loiter or congregate in parks, and gives them the power to arrest people who refuse to leave. However, the discretion this policy requires of officers is open to misunderstanding and, at times, to abuse. Several of the Alliance's member organizations testify that police have unfairly targeted young people and adults of color for activities—sitting on a bench, smoking a cigarette, walking in a group—that arguably would not provoke a similar response in white and affluent communities.

The Alliance will promote communication between greenway users and NYPD and PEP and support efforts by community organizations to fight discrimination and profiling, while encouraging enforcement practices that make the Bronx River Greenway a welcoming and safe environment for all.

There are some portions of the greenway that will be relatively isolated from residential or other night-time uses that provide natural observation. Security cameras may be helpful in some locations and circumstances, but there are significant limitations on their application. Use of security cameras monitored by NYC Parks is generally limited to areas that are off-limits to the public (e.g. maintenance yards or city pools at night), and thus where there are no real privacy or civil liberty concerns.

The only example of cameras being used to monitor public park space in New York City is in Manhattan's Washington Square Park, where officers in an unmarked NYPD van parked near the park monitor the cameras and respond to illicit activity. The cameras were installed, after much public discussion, in response to a widely-recognized and severe problem of drug dealing in that park, and their use remains controversial.

Parks does not have the resources to maintain and monitor security cameras in public areas and does not have policies in place that would govern their widespread use. Some Parks properties, including Ranaqua, do have cameras and monitors in place to monitor vehicle storage lots and other facilities. In these locations, the placement of additional cameras on adjacent portions of the greenway may be possible. In any case, the use of cameras for greenway monitoring requires active involvement by NYPD and assurances from them that they would be able to respond to any crimes caught on tape.

Other entities able and willing to monitor the cameras (i.e. property owners and public agencies whose properties adjoin the greenway) could be identified, such as Phipps Houses along the West Farms segment of the greenway, Hunts Point Market at Hunts Point Riverside Park, and Parks cameras for the future segment of the greenway that will run adjacent to Ranaqua. The Alliance would first need to work with Parks to clarify what responsibilities monitoring would

entail for such owners. Agreements would need to address liability, as well as responsibility for camera maintenance.

Users of any park must ultimately decide whether to enter spaces which may be isolated or lightly used. The greenway's signage system will enhance user safety and comfort by clearly indicating both the greenway route, and on-street alternatives, entry and decision points.

CARRYING THE VISION FORWARD

The greenway represents a new kind of park, in which harmonizing ecological, recreational, and social values will require new approaches to design, maintenance, and management. The Alliance has developed statements of principles addressing:

- Soil and stormwater management
- Use of chemicals (fertilizers, pesticides, paints and coatings, cleaning chemicals, ice melters, etc.)
- Landscaping – practices within and outside of identified natural areas
- Minimizing energy consumption, fossil fuel use, solid waste, and air pollution
- Community ownership and stewardship
- Maximizing opportunities for local residents

As the greenway comes into being, the Alliance will need to work closely with NYC Parks to operationalize those principles, recognizing that achieving consistency in practice involves more than simply writing and then following a set of rules. There are situations in which design for maximum recreational use may need to be reconciled with design for stormwater capture (e.g., should open areas be graded flat to allow play, or contoured to detain stormwater?). There can even be conflict among priorities within the framework of our ecological principles; the question of using herbicides to control invasive plants is an example.

Decisions about the structure and supervision of maintenance and operations also bear on the Alliance's emphasis on inclusion and maximizing opportunity. These decisions will continue to be important to the Alliance in providing living-wage jobs and professional development opportunities for Bronxites. For example, the ways that the Bronx River Conservation Crew works with NYC Parks district and borough level staff can open points of entry for local residents into a range of NYC Parks and conservation career opportunities.

From the Alliance's emphasis on inclusion, collaboration, environmental justice, responsiveness, communication, ecological restoration, it follows that :

- Greenway maintenance and operations decisionmaking is accountable to the Bronx River Administrator;
- The Alliance learns from and builds on its experience over time;
- Design, construction, and maintenance planning are integrated, allowing for integration with Alliance goals and objectives.

The Alliance's sustainable maintenance practices are included in Chapter Three (**3.6**).

FUNDING

Ensuring that maintenance of the greenway is adequately funded will be a long-term challenge for New York City and the Alliance. Citywide, total acreage of parkland increases year-by-year, even as maintenance budgets have declined. Establishing a Bronx River Greenway district would allow the Alliance and Parks to benchmark maintenance of the greenway to citywide

standards, such as those included in the Mayor's Management Report.[1] At the same time, the Alliance can use its status as a public-private partnership, as well as the profile that it has created for the Bronx River, to secure additional resources.

Maintenance of many parks in New York City is partially funded by dedicated maintenance endowments. These may have been established from donations and bequests, as well as through settlements or other agreements with private entities. While few philanthropies are willing to fund ongoing maintenance and operation for any organization, some donors are willing to capitalize endowments whose future income helps to underwrite these costs.

The establishment of an endowment would enable the Bronx River Alliance to maintain a high quality resource and to protect the investment that has gone into the design and construction of the greenway, and support NYC Parks and the Alliance in the implementation of innovative maintenance practices that the greenway will demand. A critical issue is identifying potential sources of funding: identifying maintenance endowments as an aspect of project capital budget planning, as well as potential settlements negotiated by the New York State Attorney General or regulatory agencies with river polluters are possibilities. The experience of other partnerships in assuring that their endowments supplement basic maintenance budgets, rather than supplanting them, will be valuable.

To date, most public-private partnerships have been formed in locations where affluent user constituencies can be recruited, or where added real estate value created by parks can be captured. Because the Bronx River Greenway will serve the diverse low-and moderate-income communities through which the river flows, the Bronx River Alliance itself must be a new model for collaboration between communities and Parks. Advocacy for adequate public funding for park maintenance, and against the institutionalization of a two-tiered park system, will continue to be a priority for the Alliance.

1. To view the Mayor's Management Report, visit www.nyc.gov/html/ops/html/mmr/mmr.shtml.