fresh perspectives

Fall 2007

a newsletter of fresh kills park

Past

Present

Future

PROGRESS CONTINUES WITH CREATION OF GENERIC ENVIRONMENTAL IMPACT STATEMENT

By GWEN HILL

Progress on the Fresh Kills Park project continues to gain momentum as gears are shifted from the design phase to creation of the Generic Environmental Impact Statement (GEIS). In March 2006, the landscape architecture firm Field Operations completed the "Lifescape" Draft Master Plan for the site and work has steadily continued as city planners, parks officials, and consultants focus on the completion of the GEIS required for future construction at the site.

The GEIS is an analysis of the proposed project's impacts on the natural and built environment. The GEIS for Fresh Kills Park is "generic" in the sense that the nature of this project in terms of size and time frame dictate that certain programmatic decisions have yet to be made. The potential impacts that the GEIS will focus on are broad and encompass 27 chapters of analysis, ranging from zoning, infrastructure, traffic, and public health concerns to issues of natural resources, and waterfront revitalization.

A key component of the GEIS consists of a proposal for viable alternatives to the proposed actions. While the GEIS may offer insight into how best to develop the park, it is above all a document of disclosure, allowing decision makers the opportunity to fully understand all the consequences of their choices.

The Fresh Kills GEIS will examine two "build years", or projections of proposed developmental impacts at two points in time: 2016 and 2036. The first build year will examine a list of well defined projects, including North and South Parks and the road network, while 2036 looks more generally at the overall site development.

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WATCH THE PARK OF THE MILLENNIUM UNFOLD WITH A RANGER GUIDED TOUR

By TRUDY GARBER

Public tours of Fresh Kills are an exciting way for visitors to view the area firsthand and learn about the natural, technical, and political processes of transforming a landfill into a public park. Tours run from March through November.

All tours are led by experienced New York City Urban Park Rangers and last about 1.5 hours. The tours are free of charge, but participants must sign up online at www.nycgovparks.org/freshkills. Participants meet at the Eltingville Transportation Center/Park & Ride on Staten Island, and board a bus that will lead them around the site.

The tours enter the Fresh Kills site through Muldoon Avenue and pass the Confluence, which is the center of the site and slated in the design master plan to be the highest use area, with proposed activities such as a market, restaurant, and boating rentals.

Here, the Urban Park Rangers explain the size and layout of the site. To help participants get a sense of scale, Rangers offer comparisons such as "the park will be 2.5 times the size of Central Park." Additionally, the Rangers make it clear that the entire site is not a landfill. In fact, only about 45% of the site houses trash and that area is divided into four mounds referred to as the North, South, East, and West Mounds.

Also during the drive past the Confluence, the Rangers talk about the history of the site. During the Robert Moses years, this historically marshy area was designated to become a landfill. Fresh Kills received municipal waste from all 5 boroughs of New York City from 1948 until

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Fresh Perspectives Mission

As Fresh Kills Park moves from the planning stages to implementation, we are launching this newsletter to keep community members informed of the progress in bringing this innovative project to reality. Building this park requires many coordinated activities including the planning and design of the park, engineering for roads and other technical aspects of the park design, and environmental assessment and regulatory permitting. This newsletter highlights the progress of bringing Staten Island a world-class park for the 21st century.

This is the first edition of a quarterly newsletter.

FRESH KILLS PARK TEAM

Parks & Recreation Commissioner: Adrian Benepe
S.I. Borough Commissioner: Thomas Paulo
Park Administrator: Eloise Hirsh
Capital Projects Manager: Angelyn Chandler
EIS Project Manager: Michael Marrella
ULURP Project Manager: Carrie Grassi
Public Tours Coordinator: Tim Stone
Interns: Gwen Hill, Trudy Garber

Printed on recycled paper.

CONSTRUCTION TO START AT OWL HOLLOW IN THE FALL

By TRUDY GARBER

Construction of Owl Hollow is scheduled to begin this fall.

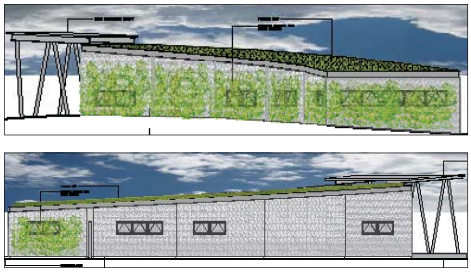
Owl Hollow is a 21-acre park adjacent to Fresh Kills Park and Arden Woods. It is designed to include four synthetic turf soccer fields (two of which will be lighted for evening recreation), a loop pedestrian path encircling the fields, a comfort station, parking, and landscaped lawn areas.

Construction of the soccer fields and landscaping will be completed by the fall of 2008, and construction of the comfort station will be completed by the spring of 2009.

The comfort station, designed by the New York based architecture firm, Sage + Coombe Architects, will be a LEED certified building. It will have a green roof and geothermal heating and cooling. The building will include public bathrooms, an office for Park Maintenance & Operations personnel, and a covered outdoor area with a built-in bench for waiting and picnicking.

As with many reclaimed sites in the New York Metropolitan area, the New York State Department of Environmental Conservation (DEC) has been intimately involved in the environmental assessment and pre-construction phases. As a result, the project will meet or exceed DEC's strict requirements.

The project is currently budgeted at just over $8 million, and will be funded by $8 million from the Mayor's Executive Budget, in addition to $150,000 from City Councilmember Lanza.



(above) Rendering of LEED certified Owl Hollow comfort station with a green roof. (right) Bird's eye view of the Owl Hollow site, including, from left to right, parking area, comfort station, playing fields, and natural watershed area.

UPCOMING PROJECT TIMELINE

SUMMER 2007

Public meeting for **North Park**, the first area within the landfill boundry to be designed and constructed.

FALL 2007

Begin construction of **Owl Hollow**, a 21-acre park site adjacent to Fresh Kills Park. It will include lighted ball fields, a comfort station, parking, landscaped lawn areas, and a loop path encircling the fields.

FEBRUARY 2008

Sustainability Plan, addressing energy, wastewater, economic and social sustainability, will be completed by consultant team.

APRIL 2008

Draft Generic Environmental Impact Statement (GEIS) completed by Environmental Consultant Team; **Uniform Land Use Review Procedure** (ULURP) application certification follows.

WILDLIFE SPOTLIGHT

This northern snapping turtle was found near the South Mound of Fresh Kills on May 31, 2007.

Northern Snapping Turtle

Chelydra serpentina serpentina

Range: Southern and Eastern Canada and throughout the Eastern 2/3rds of the United States

Size: shell length up to 19 inches, weight up to 70 lbs

Preferred habitat: slow-moving, shallow waters with muddy bottoms

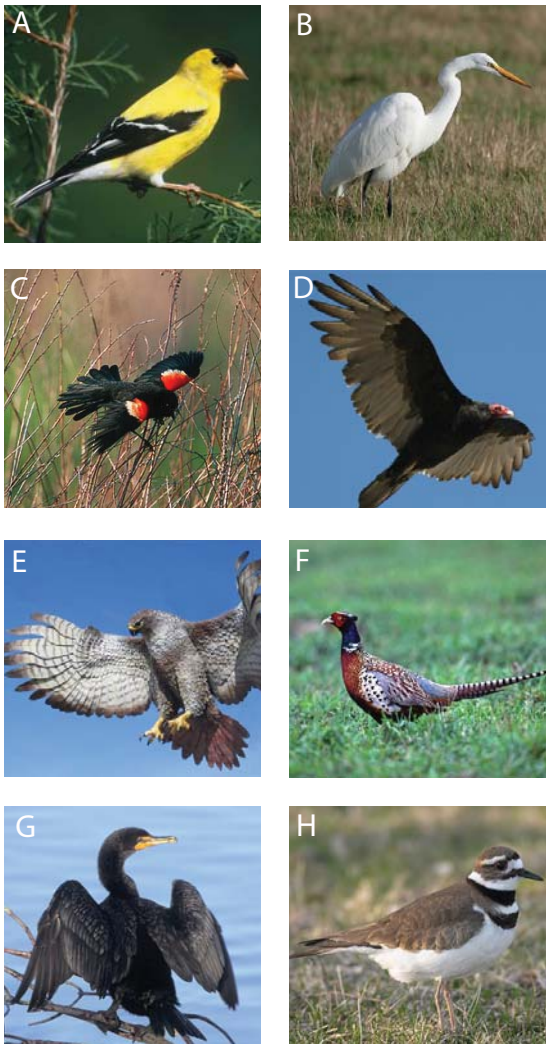
Lifespan: up to 30 years in the wild, although hatchlings are very vulnerable prey

The northern snapping turtle is one of only two species of turtles considered common throughout New York. The snapper has a distinct appearance. Its carapace, or top shell, has three pronounced ridges which become smoother with age, and can range in color from black, brown, and tan to olive. The turtle has a large head with strong jaws, and a very long neck and tail.

Northern snappers are commonly found in ponds, streams and lakes, and can live in both fresh and brackish water. Their strong leg muscles make them very capable swimmers. However, they prefer to hide on muddy bottoms among the vegetation where they can hunt on fish, frogs, snails, insects, small mammals and waterbirds. Despite their powerful jaws and menacing looks, water plants make up nearly 1/3 of the snappers' diet. As with all turtles in New York, snapping turtles hibernate during the winter, sometimes in the same place year after year.

Although snappers are known to be very aggressive when defending themselves, they are actually quite shy. Female turtles leave the water to nest in early summer, digging a hole with their hind legs and laying anywhere from 20 to 80 ping-pong ball shaped eggs. Their nests can be quite far from the water, a fact that contributes to a large number of pregnant females being killed each year while crossing roads.

BIRDS AT FRESH KILLS: how many do you know?



A - American Goldfinch; B - Great White Egret; C - Red-winged Blackbird; D - Turkey Vulture; E - Red-tailed Hawk; F - Ring-necked Pheasant ; G -Double-crested Cormorant; H- Killdeer

Signage designed by the consultant team will be placed at and around Fresh Kills.

SPRING 2008

A series of **Public Hearings** held by the City Council, Borough President and Community boards to take comments on the EIS and review the land use changes proposed in the ULURP.

SUMMER 2008

Final Environmental Impact Statement completed and released. **North Park** construction begins. Construction includes new playgrounds, native plantings, and infrastructure. This area will be completed and open to the public in summer 2010.

NOVEMBER 2008

Dept of Sanitation to complete capping of the **East Mound**, the 3rd of 4 mounds to be closed at Fresh Kills.

2010

GENERIC ENVIRONMENTAL IMPACT STATEMENT PROGRESSES

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Currently, engineering consultants ARUP and HDR Daniel Frankfurt are calculating the impacts of various road alignments on the site, focusing on a connection between 440/West Shore Expressway and Richmond Avenue. Other considerations for road alignments include technical feasibility, design aesthetic, impacts on natural resources, cost, timing, and jurisdiction. The uniqueness of the site presents challenges for the development of paved roads. This is due in part to the inevitable settlement of the mounds resulting from the decomposition of waste, as well as the presence of the sensitive infrastructure necessary for landfill maintenance and safety.

A rendering made by Field Operations, the lead consultant, illustrating a winding park drive with a soft shoulder and permeable drainage swale. Such a design would contribute to a Best Management Practice (BMP) for drainage by diverting water away from city sewer systems.

A thorough analysis of all possible road alignments, construction methods, and construction materials is crucial to the future viability of the park. The preliminary road analysis, anticipated for review in the fall of 2007, will aid in decision making. A draft of the EIS will be available in the spring, and the Final EIS will be completed and released in November of 2008. Construction of roads through Fresh Kills is anticipated to begin in 2009

ENVIRONMENTAL IMPACT STATEMENT:

A document required under the National Environmental Policy Act (NEPA) of 1969 to assess the potential impacts of a proposed development project on both the natural and human environment. This is a disclosure document, intended to foster informed decision making.

An EIS typically includes a statement of purpose and need of the proposed action, a description of the environment to be affected, a range of alternatives to the proposed action, and an analysis of the potential impacts for each alternative.

THE HISTORY OF THE LANDFILL-TO-PARKS MOVEMENT

By TRUDY GARBER

Turning a landfill into an urban park is not a new idea. Today, the landfill-to-parks movement is gaining momentum as environmentalists and city officials look for ways to remediate and reuse closed landfills, with Fresh Kills being one of the largest projects to date.

While an official count has not been done, the Trust for Public Land, the nation's second largest land conservation group, estimates that there may be as many as 1,000 recreation sites built on former landfills worldwide.

These landfill parks date as far back as 1916, when the city of Seattle turned the Rainier Landfill into the Rainier Playfield. In 1936, the City of New York closed the Corona Dumps in Queens and converted this parcel into Flushing Meadows Park, which is famous for hosting the World's Fair from 1939-40 and 1964-65.

Following World War II, the amount of trash Americans produced grew exponentially, thus increasing the need for landfill capacity. In reaction to this increase of garbage, Robert Moses, then-NYC Parks Commissioner, slated the marshy area on the northern edge of Staten Island to become a landfill. Fresh Kills received municipal waste from all five boroughs until 2001.

Designers and planners for Fresh Kills Park have learned many lessons by looking back on past landfill-to-parks precedents. Eloise Hirsh, Administrator for Fresh Kills Park, says that many community members have programming requests based on their knowledge of former landfills-to-parks projects. "At a meeting with a Staten Island Community Board, the members requested a golf course in Fresh Kills, citing the successful development of the Bayonne, NJ golf course as an example."

Another precedent that Fresh Kills planners might look to is the East Shore Park, an 8.5-mile long park covering 2,002 acres along the San Francisco Bay, which opened in 2006. This park, which sits on a former garbage dump, is today a series of tidelands, marshes, beaches, and trails. Additionally, Boston's 100-acre Millennium Park, which opened in 2000, is built on top of the former Gardner Street Landfill. The mounds of garbage have been capped and turned into playing fields, outdoor classrooms, and miles of walking and biking trails.

Turning landfills into parks does, as one would expect, come with many challenges. Compared to clean "greenfield" sites, converting old landfills poses issues relating to toxicity of soils and waters, liability, and ground settlement. Despite these challenges, the movement provides a unique opportunity for creating public open space and restoring habitats.

"KILL":

Derived from the Dutch word "kille" meaning riverbed or water channel.

Fresh Kills is the stream in the western part of Staten Island with two major branches — Main Creek to the North and Richmond Creek to the South.

The term "kill" is used primarily in New York State.

URBAN PARK RANGERS LEAD PUBLIC TOURS OF FRESH KILLS

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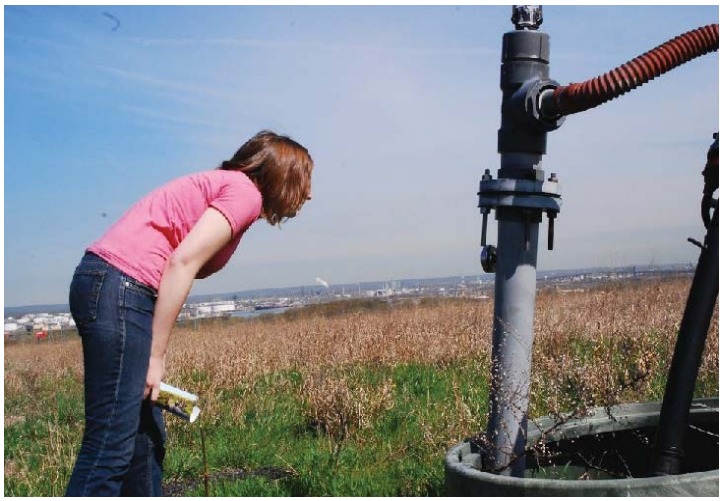
2001 when the last barge carrying refuse landed on the site. The Rangers also talk about the transformation from a landfill to a public park, beginning with the public design competition held in 2001, and concluding with a discussion of the current environmental review process.

The bus proceeds to the pinnacle of the South Mound, where participants dismount the bus and look around. Rangers point out notable landmarks visible from this mound, including the Staten Island Greenbelt, four Staten Island bridges, the New Jersey shoreline, and Manhattan skyline.

Participants frequently get a special glimpse of wildlife from the South Mound. "3 weeks ago," said tour organizer Tim Stone, "I spotted a ring-necked pheasant. Also, there is a beautiful view of the Richmond Creek, which sometimes is teeming with egrets and herons as the tide is going out."



Student from the New School examines a methane monitoring device during a tour.

From there, the tour does a spiraling descent of the South Mound and drives to the North Mound, along the way passing wetlands inundated with phragmites, an invasive plant that has taken over this habitat. The bus passes a flare station, and the Rangers take this opportunity to explain the infrastructure associated with the landfill.

At the top of the North Mound, participants again get off the bus. From this vantage point, they see expansive views of tidal flats and braided channels adjacent to the William T. Davis Wildlife Refuge. Here, the Rangers talk about the potential for renewable energy on the site, as this was the former location of a research project that studied the potential for wind-generated electricity at Fresh Kills.

The Rangers direct the participants' attention toward the East Mound, which is currently undergoing final closure, and continue the discussion of the landfill closure requirements. They explain how the garbage is sealed within an impermeable membrane and capped with several feet of clean soil. The mounds are then seeded with native grasses and wildflowers to combat erosion and create a grassland habitat.

Most participants are intrigued by the closure process. "Huge cylinder rolls of geotextile fabric lie covered with tarps or unfurl before our very eyes, as ant-like hordes of construction workers clamber about," said Tim Stone.

Just like the rest of the site, however, the views from the North Mound are as much about the natural habitat as they are about the landfill closure process and history. Visitors have spotted kestrels, red tailed hawks, and turkey vultures flying around the North Mound. Along the paths on the North Mound, participants have observed deer tracks in dried mud.

As the tour nears its end, the bus weaves out of the site and back to the Park & Ride. The Rangers answer questions and also take the time to explain the planning process. Multiple agencies are involved in the conversion of this area from a landfill to a park, with the Department of Parks & Recreation as the lead agency working closely with the Department of Sanitation and the Department of City Planning.

Tour goers gain a better understanding of what is happening at Fresh Kills currently and acquire a sense of the landscape. "There is an interesting juxtaposition between the unnatural shape of the mounds, and the abundance of wildlife and natural plants" said a visitor after taking a tour.

TOURS RUN BETWEEN APRIL AND NOVEMBER AND LAST APPROXIMATELY 1.5 HOURS

SIGN UP ONLINE; RESERVATIONS REQUIRED; FREE

WWW.NYCGOVPARKS.ORG/FRESHKILLS

TOURS DEPART FROM ELTINGVILLE TRANSPORTATION CENTER/PARK & RIDE ON STATEN ISLAND

PRIVATE TOURS ARE AVAILABLE UPON REQUEST.

MOUND CLOSURE:

The process by which the mounds of refuse are covered and sealed with several layers, including an impermeable geomembrane, several feet of clean soil, and a crop of seeds to prevent erosion. Final closure of all mounds at Fresh Kills is slated to be finished by 2010.

LANDFILL GAS :

The gas produced from the decomposition of organic waste materials in a municipal landfill, composed primarily of methane and carbon dioxide.

Instead of allowing landfill gas to escape into the air, the Department of Sanitation (DSNY) is capturing the methane, and converting it into an energy source for households on Staten Island.

GREENBELT NATIVE PLANT CENTER SPEARHEADS NATIVE

URBAN ECOLOGY STUDY ENTERS FINAL YEAR AT FRESH KILLS:

JOINT STUDY BETWEEN GNPC, BROOKLYN BOTANIC GARDEN AND RUTGERS UNIVERSITY

By GWEN HILL

Despite the ongoing closure of the East and West Mounds at Fresh Kills, the site is already providing scientists with a prime setting to advance study in the field of urban restoration ecology. Researchers from Rutgers University, the Brooklyn Botanic Garden and the Greenbelt Native Plant Center teamed together in the hopes of identifying plants that had adapted to the harshness of city life.

Staff at Parks & Recreation's Native Plant Center made over forty collections of seed from five native plant species at highly disturbed sites throughout the tri-state region. These collection sites included places known to have poor soils, such as brownfields and old landfills, and were generally inhabited by very aggressive nonnative weeds and native plants, some of which appeared to be doing quite well. The presence of these native plants led scientists to believe that perhaps evolution was occurring on a local scale, with plants developing specific tolerances for poor conditions.

Native grass seedlings awaiting planting at a Greenbelt Native Plant Center greenhouse.

In the summer of 2005 these urban seeds were planted alongside their rural cousins at four degraded sites including a plot at Fresh Kills, a brownfield in New Jersey, a filled marshland and along a highway in Brooklyn, as well as one non-degraded plot at New Jersey's Duke Farms. The performance of both the urban and rural ecotypes has been monitored closely.

Currently in its third and final year, this study has not yielded to date the results anticipated at the start of the project, but does seem shed new light on the importance of biodiversity when restoring a degraded urban site. The data generated from the first two years of the study has not highlighted individual urban "super plants"—species that have developed to cope with specific harsh conditions such as saline soils, rampant weeds, heavy runoff or drought, as expected. Rather, the data seems to point to the need to collect seeds from as many plants and at as many urban sites as possible when creating seed mixes for the restoration of neglected, degraded sites. The variability and unpredictability of urban conditions make it necessary to have the greatest genetic diversity possible, so that those plants best suited to the site-specific conditions might establish themselves and thrive. In the future the results of this study may shed light on how best to revegetate Fresh Kills Park, as well as other land reclamation projects throughout the city.

Funding for this project was made possible by the New York Community Trust, New York City Environmental Fund, and the Gibson Family Foundation.

ECOTYPE:

A distinct entity of an animal, plant, or other organism that is closely linked (in its characteristics) to the ecological surroundings it inhabits.

For example, the appearance of the common milkweed varies greatly depending on the local ecotype.

An urban ecotype has adapted to one or more of the harsh conditions of city life, such as degraded soils, heavy runoff, or drought.

FOUNDER SEED:

An increased quantity of seed produced from local plant materials.

Founder seed is collected from local, wild populations. Production of founder seed is carefully supervised to maintain specific local genetic identity and is the basis for further seed production

Production of founder seed is the first step towards producing sufficient quantities of genetically appropriate seed for large scale restoration projects, like Fresh Kills Park.

GREENBELT NATIVE PLANT CENTER MAKES PROGRESS ON FOUNDER SEED PILOT PROJECT

AIMS TO GROW NATIVE SEEDS TO COVER MOUNDS AT FRESH KILLS

By TRUDY GARBER

One challenge currently facing Parks Department staff is the question of how best to revegetate the four mounds at Fresh Kills as part of the final closure. The Department of Environmental Conservation specifies that the mounds must be covered with a seed crop in order to provide stability and prevent erosion. The Greenbelt Native Plant Center (GNPC), located on 13 acres of farmland in Staten Island, is heading a pilot project to demonstrate how to produce founder seed.

Ed Toth, Director of the GNPC, and Lauren Stewart, the Bulk Seed Production Supervisor, are setting up a process to demonstrate how to produce founder seed to revegetate the mounds and still retain the native specification, by using protocol well-established in the seed production industry. They are currently learning the best way to "produce bulk seed materials from genetically appropriate, local plant populations," according to Ed.

A farmer at the GNPC uses a thrasher to clean seed (switchgrass - panicum virgatum) for the Founder Seed project.

The Greenbelt Native Plant Center is eager to make sure the seed cover used on the mounds at Fresh Kills comes from native species and local populations. What does native mean? There are many different interpretations of the word native. Ed and Lauren define native as coming from "local populations" meaning the species are indigenous to the New York City area and the founder seeds were actually collected and grown in the area.

Ed and Lauren are developing this process as part of the Founder Seed Pilot Project. For two years, Lauren has been collecting "wild, local seed" from a variety of locations on Staten Island and the environs. Lauren says it is important that the seeds to be used at Fresh Kills are collected locally because these seeds are already genetically adapted to the Staten Island environmental conditions. Lauren has made at least nine collections from local sites, ensuring that the seed specimens include the most genetic variability possible.

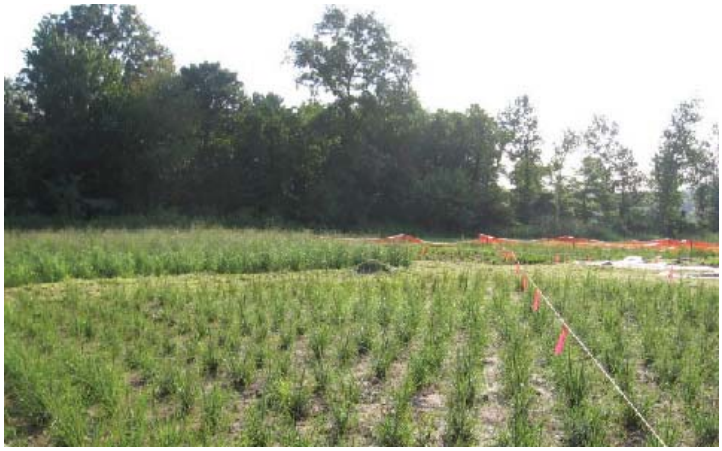
After Lauren harvests the seeds (which must be done when they are ripe), she processes the seeds back at the Greenbelt Native Plant Center. This process involves separating the seed from the other plant matter, cleaning the seeds, drying the seeds, and placing them in a humidity-controlled refrigerator. The seeds are then placed in small growing containers and put in another refrigerator to mimic the winter season. Next, the germinating grasses are transferred to a greenhouse, under a controlled environment.

Finally, the seedlings are planted in the Founder Seed plots at the GNPC. Currently, there are four plots, each covering approximately 1,000 square feet. Each plot contains only one species but encompasses plants from many populations.

Because of the enormity of the Fresh Kills site, a large quantity of seed – bulk seed – needs to be grown to cover all the mounds. The quantity required for revegetation far exceeds what can be grown at the GNPC.

In the near future, the GNPC staff hopes to expand the number and locations of the pilot founder seed production plots in the pilot program. Lauren is working on opening a plot at Fresh Kills and is looking into establishing several others on Staten Island.

With the necessary funding to expand the program, the seed produced by the GNPC could then be made "available to commercial companies for contract growing of bulk seed products," according to Lauren in the memorandum she wrote to the Department of Sanitation. This would create a mechanism to promote seed production while ensuring the local genetic integrity of the products. Ed Toth mentioned that there are bulk seed companies on the East Coast that would be appropriate for work of this magnitude.



One of four founder seed plots at the GNPC. This one is planted with Little bluestem, schizachyrium scoparium, a plant native to Staten Island.

All work done by the GNPC on the Founder Seed Pilot Project occurs on a "shoestring budget," according to Ed Toth. He has been able to purchase farm equipment, such as a tractor for plowing the seed plots, and hire personnel through a grant.

Ed is trying to demonstrate the principle of gathering and growing founder seeds. By working hard to demonstrate that this is a feasible way to get seed for the mounds at Fresh Kills, he believes they are creating a model that will be used not only for Fresh Kills, but that could be used on other large-scale park restoration projects.

"We must take an active role in the landscape and push native plants so it isn't just weeds blowing around" said Ed Toth.

READ MORE AND GET INVOLVED

Links about the Project and Consultants

• Department of Parks & Recreation Fresh Kills Info and Tours
www.nycgovparks.org/freshkills

• Department of City Planning- Fresh Kills Park Project
www.nyc.gov/freshkills

• Department of Sanitation
www.nyc.gov/html/dsny

• Field Operations, Landscape Architecture
www.fieldoperations.net

Composting, Recycling and Ecological Resources

• Lower East Side Ecology Center
http://www.lesecologycenter.org/

• The New York City Compost Project
http://www.nyccompost.org/

• NYC Green Apple Map
http://www.greenapplemap.org/page/home

• NYC WasteLe$$
http://www.nyc.gov/html/nycwasteless/html/recycling/recycling_nyc.shtml

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Adrian Benepe, Commissioner

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