fresh perspectives



FreshkillsPark Newsletter — Fall/Winter 2009



Freshkills Park: Continuing a tradition

Freshkills Park will be 21st century New York's most significant contribution to an already rich and well loved network of parks. It will not only be a refuge for presentday New Yorkers, but also a landmark and a physical legacy left by today's City to the City of the future. It has now been a little more than a decade since the decision was made to close Fresh Kills Landfill, and the park project has reached a crossroads between planning and implementation. The first sections of Freshkills Park – the Owl Hollow Soccer Fields and Schmul Park – are expected to open within the next two years. The 30-year development period seems long, but viewed in the context of other large-scale improvements to the New York City parks system, it is just a moment in a rich and expansive timeline.

FLAGSHIP PARKS, THE LONG VIEW

The development of Freshkills Park shares a number of parallels with that of Manhattan's Central Park. A 1940s essay by Parks Commissioner Robert Moses hints at some of the similarities: "Central Park was a reclamation project. It was not, as most people think, a natural park. It was man-made. Its acquisition was enthusiastically advocated for more than a quarter of a century before anything happened."

The story of Central Park began in 1844 when *Evening Post* editor William Cullen Bryant and landscape architect Andrew Jackson Downing articulated the need for an oasis within the rapidly urbanizing island of Manhattan. The proposal gathered a groundswell of support, but many years of public and governmental debate about the park's location and size followed.

In This Issue

3

The Isle of Meadows, Staten Island's offshore natural oasis

4

Timelines of New York City large parks development

5

A primer on geothermal heating and cooling

6

National Poetry Month Haiku Contest Winners

7 Wildlife Spotlight: Osprey

7 Quiz: How many invasive species can you identify?

Above (from left to right): Central Park, Flushing Meadows Corona Park, Freshkills Park

CONTINUED ON PAGE 2

Freshkills Park: Continuing a tradition

FROM PAGE 1

The land for the project was finally purchased by the city between 1853 and 1856, and a landscape design competition was held in 1857 by the Central Park Commission, which had been appointed by the State. The Greensward plan, developed by Frederick Law Olmsted and Calvert Vaux, was selected as the winner. It incorporated several ground-breaking design components: a natural, rustic landscape; separate circulation systems for pedestrians, horseback riders and vehicles; and sunken roadways screened with dense plantings to hide commercial traffic in the pastoral scenery.

Olmsted validated the expense of time and energy, calling the project "...a democratic development of the highest significance."

Like Freshkills Park, Central Park was constructed in stages. Construction began in 1857. By 1860, the park below 79th street was largely finished; in 1863 the grounds, drives and walks below 102nd Street were opened to the public; the entire project was completed in 1873, almost 20 years after the design competition was announced. And improvements like the Great Lawn, which required filling in the site's lower reservoir, continued well into the 20th century, when they were eventually shepherded by Robert Moses. The park project was always envisioned as a long-term process requiring persistence of will over multiple generations. From the outset, Olmsted validated the expense of time and energy, calling the project "...of great importance as the first real park made in this country-a democratic development of the highest significance."

Another massive New York City park developed in the last century, Flushing Meadows Corona Park in Queens, shares similar origins with Freshkills Park—it, too, began as a waste landscape, the site of the great ash and garbage dump immortalized in F. Scott Fitzgerald's *The Great Gatsby* as "the valley of ashes."

In 1932, just as construction for the Triborough Bridge was beginning, Robert Moses was overseeing completion of the Grand Central Parkway, creating a new thoroughfare between New York City and Long Island. Realizing that the Corona Ash Dumps would be highly visible from the expressway, Moses proposed a park for the site.

The idea lacked sufficient political momentum until 1935, when a Belgian engineer named Joseph Shagden concocted the idea for a World's Fair at Flushing Meadows. Shagden sold the idea to Moses, who jumped at the opportunity to create his proposed park and improve the experience of the expressway. Still, it took 33 years and two World's Fairs before the actual park was completed in 1967. All of this development occurred in the absence of a comprehensive plan; in 2008, the Department of Parks & Recreation unveiled a long-awaited master plan that will be used to guide the site's further evolution.

ENTER FRESHKILLS PARK

In 1997, when Mayor Rudolph Giuliani and Governor George Pataki announced the forthcoming closure of the Fresh Kills Landfill, the Municipal Arts Society (MAS) took notice. MAS, a not-for-profit devoted to promoting intelligent urban planning, design and preservation, saw the end of landfill operations as the perfect opportunity to stage a design competition for a new city park.

The Fresh Kills site was already thought to have great potential as parkland due to its rolling hills, abundant bird life, gorgeous wetlands and rambling creeks. In coordination with MAS, the Department of City Planning, supported by Environmental Protection Fund money granted by the New York State Department of State, undertook a feasibility study to assess reclaiming the land for recreational use and in 2001 CONTINUED ON PAGE 4

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Mission

As Freshkills Park moves from the planning stages to implementation, we strive 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. The purpose of the Fresh Perspectives newsletter is to provide updates about the project's progress as well as information about its history and some of the unique features, resources and complexities of the site.

An untouched oasis off Staten Island's west shore



The Isle of Meadows is a 100-acre marsh island located at the mouth of the Fresh Kills estuary. Though it is part of the Freshkills Park site, it has been designated by the city as a Forever Wild Nature Preserve due to its valuable wetlands and wildlife. It will remain off-limits to the public even when the park is fully developed. Originally targeted for landfilling in the 1940s, the Isle of Meadows has remained untouched, a testament to the marshland that once dominated Western Staten Island.

The island has survived many eras and identities. The earliest documented mention of the site was in 1768, when it was known as Deadman's Island. As the story goes, a ferryboat on the Arthur Kill River was swept off course by inclement weather and forced to dock on the island. Many of the 12 men on board became frostbitten, and two died of exposure, giving the island its morbid name. The island's identity morphed when, during the Revolutionary War, colonial forces surprise-attacked British sentries stationed on the island. Soon after, a fire swept through the underbrush and drying stands of marsh grass, earning it the new moniker, 'Burnt Island.' Since then, it has also been referred to as Noah's Island, Ye Island of Meadow, and Island of Salt Meadows.

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Until the end of the 19th century, the Isle of Meadows was harvested for its abundant Salt Hay (Spartina patens), an economical alternative to conventional hay sources. It was most likely also used as a site for sheep and cattle grazing. Nevertheless, it has somehow resisted all attempts at human habitation. In 1928, a small, wooden footbridge between the mainland and the island was destroyed in a storm. A 1940 proposal by the Department of Sanitation to connect the Isle of Meadows to the mainland never came to fruition, leaving its 100 acres relatively untouched by landfilling. The one significant, manmade alteration to the island occurred in 1912, when a low berm was built to hold excavated soil from the Arthur Kill channel-dredging operation. This would ultimately result in the creation of an upland habitat adjacent to the low-lying marsh.

Due to the lack of public access, the Isle of Meadows and nearby Prall's and Shooters Islands continue to be focal points of avian activity on the western shore of Staten Island. Historically, the Isle of Meadows has served as a refuge for more herons, egrets and ibis than any other island in the New York/New Jersey Harbor Estuary. Various long-legged wading birds have nested on the island, the most CONTINUED ON PAGE 6 The Isle of Meadows, situated along the shore of the Arthur Kill with oil tanks in Carteret, NJ in the distance, as seen from the West Mound at the Freshkills Park site.

Forever Wild

The Forever Wild Program is an initiative of the New York City Department of Parks & Recreation to protect and preserve the most ecologically valuable lands within the five boroughs. The city's 51 Forever Wild Nature Preserves include more than 8,700 acres of forests, wetlands and meadows. These vital open spaces are home to thousands of animals and rare plant species. Though the Isle of Meadows is not publicly accessible, many Forever Wild sites allow New Yorkers and visitors to navigate paths, woods and streams. Timelines of large park development in New York City



FROM PAGE 2

organized a design competition to reimagine it as parkland.

From an international pool of submissions, the competition panel selected a proposal by landscape architecture firm Field Operations. Between 2003 and 2006, Field Operations and the Department of City Planning gathered community input on the proposal at a series of public meetings, which was ultimately integrated into the Draft Master Plan, released in March 2006. Since then, the project has been transferred to the Department of Parks & Recreation for implementation, and the City team working on the project has proceeded with a number of regulatory processes, including ongoing comprehensive land use review and the creation of an environmental impact statement.

Part of the vision of Field Operations' original proposal was to "grow a park"—to let the transformation of the site occur in stages and to allow the public to witness and be part of that transformation. The Freshkills Park team has already begun engaging the public with the site's past, present and future through a series of tours and special onsite events. As Central Park represented the ideals of burgeoning democracy to Olmsted, so does Freshkills Park represent to the many people responsible for its implementation the reconciliation of a wasteful past and a renewed sense of hopeful responsibility.

A PARK FOR THE 21st CENTURY

A park begins with a need. It can be a need for refuge in an overcrowded metropolis, for more recreational space and capacity or for reclaiming and regenerating a degraded landscape. After that need has been identified, a vision must be created and finally willed into being. In the past, iconic figures like Olmsted and Moses were able to supply powerful momentum to their projects, which carried through to future generations.

These days, the creation of a large park relies on the cooperation

and dedication of many parties, not just a few key figures. In the case of Freshkills Park, a diverse array of partners including the New York City Departments of Sanitation and Parks & Recreation, the New York State Department of Environmental Conservation, Mayor Bloomberg, design and engineering consultants and many community groups and individuals have had the opportunity to collaborate in this massive land reclamation effort. This has resulted in a unique convergence of a number of interests, agendas and ambitions, but luckily, the site is large enough to accommodate them.

In a recent essay, James Corner, Principal of Field Operations, wrote: "Large parks will always exceed singular narratives. They are larger than the designer's will for authorship." In responding to the 21st century need for a new paradigm of sustainable public space, Freshkills Park, in turn, is interweaving its many narratives into the historical context of large-scale park development in New York City.

Geothermal heating and cooling: a primer on thermal energy

Construction of the Owl Hollow comfort station, located at the southwestern edge of the Freshkills Park site, is scheduled to begin within the next year. The facility will house public restrooms and an office for the park's maintenance and operations personnel, but that's not all. The building, designed by New York-based Sage + Coombe Architects and mechanical engineering consultants IP Group , has some pretty cool elements-literally. In addition to a green roof and a wind turbine, the LEED Gold-certified comfort station will use geothermal technology in its heating and cooling, reducing the building's energy costs. The implementation of geothermal resources is part of a multi-faceted strategy to bring a variety of renewable energies into play at Freshkills Park.

HOW IT WORKS

Under the Earth's crust is a layer of magma, or molten rock, where heat is continually produced, mostly from the decay of naturally radioactive minerals. The earth's surface also absorbs heat from the sun's radiation. The two sources together keep temperatures just four to six feet below the earth's



surface relatively constant all year approximately 50°F to 60 °F.

At its simplest, a geothermal system circulates water through a loop system buried underground, passing the water through the ground's almost constant temperatures, either warming it or cooling it along the way. That water, in turn, is used to heat or cool buildings. Because the water is brought to the moderate temperature of about 55°F, the energy that would have been required to raise or lower its temperature to 55°F is saved. Conventional energy sources can then be used to bring the water to A rendering of the Owl Hollow Comfort Station, designed by Sage + Coombe Architects.

the desired temperature. For example, water that is 40°F when piped in can be heated to 55°F using geothermal systems, and then boosted to 80°F with a more modest amount of conventional energy.

In the summer, cold water circulated through below-ground pipes is brought into the heat pump, where it comes in contact with warm air drawn in from the building. The air is cooled and CONTINUED ON PAGE 6

WINTER MONTHS



During the winter months, water circulates through a loop system extracting heat from the ground. The heat energy is transferred to the heat pump The pump compresses the extracted heat to a high temperature and distributes it through a normal duct system air into the building. The heat energy can also be used for a radiant heat system or hot water heating





burning the summer months, the process is simply reversed. Instead of extracting heat from the ground, the geothermal system extracts heat **①** from the building and moves it into the ground loop **②** (or uses it for hot water heating **③**). Once the water is cooled again by ground temperatures, it is brought into the heat pump **④** to cool the warm air that is recirculated into the building.



April Haiku contest winners

To celebrate National Poetry Month in April, we held a Haiku contest for our readers to share their ideas, impressions, thoughts, and experiences of Freshkills Park. We received more than 100 entries, from which our judges selected four winners. Thanks again to everyone who participated!

ADULT WINNERS:

Seen from outer space Freshkills undergoing change Refresh Google Earth

-Lorelei DeMesa

a park in my mind landfill scarred islanders' hearts reclaimed, restored land

-Lindsay Campbell

From trash to treasure As from rubble to ramble We grow; we evolve

-Jessica Kratz

YOUTH WINNER:

30 Years

The fresh air, boat rides On the swings, flying your kite 30 years be there

-Shade, Esmeralda, Alexus

Geothermal heating and cooling, continued

FROM PAGE 5

returned to the building, and the water, now warm, is returned to below ground pipes, where it cools down again. Heat absorbed by the water can also be used to heat the building's water tank before flowing back underground, conserving additional energy needed to conventionally heat the water supply.

In the winter, water is still circulated below ground at about 55°F, which is warm relative to freezing temperatures above ground. The water's relative heat is captured and increased through air compression by an above-ground heat pump. The resulting warm air is vented into the building. The water, cooled down after transferring its heat, is returned below ground to be warmed to 55°F again.

A special geothermal heat pump is often used in this type of system. The design for the HVAC (heating, ventilating, and air conditioning) system at the Owl Hollow Comfort Station, for example, will use high-efficiency water-source heat pumps connected to a horizontal geothermal closed-loop system. In other circulation systems, antifreeze liquid is sometimes substituted for water.

In the northern and southern United States, where the temperatures can reach extremes, heat pumps provide some of the most energy efficient and emissions-free systems available. The U.S. Environmental Protection Agency has found that heat pumps are up to



A rendering of the Owl Hollow Comfort Station, designed by Sage + Coombe.

72 percent more efficient than electric heating and air conditioning systems. A computer-based simulation has projected the Owl Hollow Comfort Station to save 18 percent in energy costs when compared to a nongeothermal, code-compliant building.

THE FUTURE OF GEOTHERMAL ENERGY

Costs for geothermal technology will continue to decrease as the practice becomes more widespread. New geothermal facilities can produce heat for between 4.5 and 7.3 cents per kilowatt-hour, making it competitive with new, conventional, fossil fuel-fired heating plants. At present, only 2,800 megawatts of geothermal power are currently generated in the United States, but according the U.S. Geological Survey, new projects slated to come online over the next decade will increase that capacity by three to five times.

An untouched oasis, continued

FROM PAGE 3

populous being the Black-crowned Night Heron followed by the Glossy Ibis, Great Egret and Snowy Egret. In the last 20 years the wading birds have relocated their nesting colonies elsewhere due to natural habitat changes, but they still frequent the island.

The north end of the island has undergone natural succession from

grassy, sandy plain to maritime forest. The upland areas of the site are populated by groves of Bayberry, Sumac, Black Cherry, Sassafras and Gray Birch. In some places, the canopy reaches over 30 feet. In the middle of the island, a clearing provides an ideal nesting ground for Herring Gulls. In recent years, a Red-Tailed Hawk nest was discovered in a mature Black Cherry tree. The Isle of Meadows has been a boon to surrounding natural areas, forming ecological connectivity between New Jersey and western Staten Island and ensuring the conservation of a key Harbor Heron nesting habitat. Through its resilience over the years, the Isle of Meadows has remained an example of the power and tenacity of nature's perseverance in an industrial landscape.

Wildlife Spotlight: Osprey



Osprey Pandion haliaetus

Range: Found worldwide in temperate and tropical regions of all continents except Antartica. In North America, it breeds from Alaska and Newfoundland south to the Gulf Coast and Florida. In winter, it travels farter south, from the southern United States to Argentina.

Size: 20-26 inches long, with a wingspan of 4.2 to 6 feet. Weighs 2.0 to 4.6 lbs. Adult males have slightly slimmer bodies and narrower wings.

Lifespan: Up to 15-20 years in the wild, though many young do not survive more than three years due to natural predators.

At the Freshkills Park site, an osprey family has taken up residence atop a constructed wooden platform on Main Creek. The osprey is one of the most widely distributed birds of prey in the world, found in all continents except Antarctica. There are more than 230 breeding pairs in lower New York State.

The osprey has a deep, glossy brown upper body and a white breast that is sometimes streaked with brown. A dark mask on a white head reaches across the eyes to the sides of the neck. The eyes are golden yellow to brown, the bill is black, and the feet are white with black talons. The narrow wings have four long, fingerlike feathers, and a shorter fifth, giving them a very distinctive appearance.

Fish are a major part of the osprey's diet. An osprey notices its prey from a height of 32 to 130 feet, then hovers momentarily before plunging feet first into the water. It can dive to a depth of 3.3 feet and needs considerable effort to become airborne again after catching a fish. Osprey are well adapted for hunting in water, with closable nostrils and reversible outer toes for better grip.

The osprey breeds by freshwater lakes and sometimes by brackish coastal waters, making Freshkills Park an ideal habitat. Their nests are made of huge piles of sticks and plant materials built in forks of trees, artificial platforms, and other tall, open structures. Ospreys usually mate for life and raise their young in partnership.

Invasive species found at Freshkills Park: How many do you know?

Left to right: First row: Phragmites, Purple Loosestrife, Stinging Nettle, Tree of Heaven. Second row: Japanese Knotweed, Mugwort, Bittersweet Vine, Poison Ivy.



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There's a lot more going on related to Freshkills Park online. Check out our newsletter archives and recent press coverage on the official website. Read about other interesting projects and upcoming talks on our blog. Become a fan on Facebook to browse photos and connect with other supporters of the park project.

WEBSITE // nyc.gov/parks/freshkillspark BLOG // freshkillspark.wordpress.com FACEBOOK // Freshkills Park

Project Partners

Department of Sanitation www.nyc.gov/dsny

Department of City Planning www.nyc.gov/dcp

Related City Initiatives PlaNYC 2030 http://www.nyc.gov/planyc2030/

MillionTreesNYC http://www.milliontreesnyc.org Composting, Recycling and Ecological Resources Council on the Environment of NYC http://www.cenyc.org/

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

NYC Green Apple Map http://www.greenapplemap.org/

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

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FreshkillsPark

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City of New York Parks & Recreation Michael R. Bloomberg, Mayor Adrian Benepe, Commissioner

