

fresh perspectives



FreshkillsPark Newsletter — Spring/Summer 2010



A history of settlement, agriculture and industry, before the landfill

Images of the Fresh Kills Landfill have had a powerful effect. It can be difficult for some people to imagine the Freshkills Park site as anything other than a landfill, but the strength of that impression tends to eclipse the fact that the site underwent many incarnations before landfill operations began in 1948.

Like landfill operations, previous uses of the Fresh Kills site capitalized on natural features of the landscape: fertile land, adjacency to waterways, rich clay deposits. The story of human presence in the area begins 12,000 years ago, toward the end of the last glacial period.

PALEOINDIANS AND ARCHAIC INDIANS (10,000 B.C. - 1,000 B.C.)

Some background is required to understand early settlement. Archaeologists believe that the first people to populate the Americas, the Paleoindians, came to North America from Asia via the Bering Strait land bridge. From there, they moved southward in the Americas as nomads following the movement of herds of large animals. In this way, populations were dispersed across North America, living in small tents that could easily be set up and dismantled.

Archaeologists have found several pieces of evidence suggesting that Fresh Kills served as a camp for Paleoindians. Clovis points, a specialized tool for hunting large mammals, have been found where the West Mound currently sits. Mastodon teeth

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Above: (Left) A northwest view across the Fresh Kills marshes, with the Arthur Kill and Carteret, New Jersey in the left distance; **(Right)** Part of the Dunn & Dolan brick factory. Photos courtesy of the New York Public Library.

Many uses, populations preceded landfill operations

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have also been found in the area, though there is no evidence yet to confirm that these large animals were present at the same time as the Paleoindians. (Some artifacts from this era and others—"Pre-Contact" eras—might still be buried underneath the landfill mounds. Future park projects will consult with archaeologists on the handling of potentially historically sensitive areas.)

By 8,000 B.C., temperatures were warming, and a more diverse ecology was developing in the Fresh Kills area. Deer, bears, foxes and other small animals began settling in. Oyster beds formed along the shore, and fish communities grew in the rivers. This increased supply of food was attractive to the hunter-gatherer Archaic Indians. They, too, migrated depending on the seasons. Remnants of seasonal camps on Lake's Island (now no longer an island as it is connected to the West Mound of the Freshkills Park site) suggest that the Archaic Indians spent spring, summer and fall in the Staten Island area and moved to more western points in New Jersey during the winter.

The gradual sophistication of hunting and gathering methods eventually allowed larger populations to survive, and between 3,000-2,000 B.C., more permanent settlements were established.

WOODLAND PERIOD, CONTACT AND COLONIZATION (1,000 B.C. - 1600 A.D.)

Agriculture developed in Mexico and Central America, and the practice spread northward. During the Woodland Period, a people that would eventually be called the Lenape (which, for them, literally meant "the common men") built permanent settlements and began growing crops in the Fresh Kills area. There were three major tribes of the Lenape living in Staten Island: Tappans, Raritans and Cannarsies, with each

sustaining larger settlements than was previously possible thanks to their increasing ability to grow and store food.

Life was stable for the Lenape until the arrival of European explorers in the 16th and 17th centuries. Dutch explorer Henry Hudson was the first to make contact with the Lenape, in 1609 or 1610. Relationships between the Dutch and the Lenape were at first centered only on trade, but conflicts arose—many based on differing concepts of land ownership—that escalated into bloodshed.

The Dutch purchased Staten Island from the Lenape around 1626 in exchange for cloth, kettles, axes, hoes and other wares. The island's European colonization proceeded, with the Lenape being displaced farther and farther westward, out of Staten Island, and eventually as far as the Great Lakes and Oklahoma.

AGRICULTURE AND INDUSTRIALIZATION (1600s-1948)

European settlement on Staten Island brought together primarily English, French and Dutch populations (the name "Fresh Kills" appears in documents as early as 1676—"kill" is Dutch for "stream"). A French Huguenot church, the first church on the island, was constructed in the southern section of the Fresh Kills site from 1680 to 1695. Richmondtown (originally called Cuckold's Town), a mile east of Fresh Kills, became the county seat in 1710, and in turn, the political and religious center of the island. Chief industries on the island were farming and oystering. Salt hay was the island's main crop, and the Fresh Kills area—then an expanse of salt hay marsh and small cultivated fields—was an agricultural center.

The site's waterways, including Great and Little Fresh Kills and Richmond and Main Creeks, carried

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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.



Now more to experience on Freshkills Park tours

The Department of Parks & Recreation (DPR) began operating public bus tours of the Freshkills Park site in 2006. Over the first three tour seasons, from April through November, we welcomed more than 4,000 people onto the site. We remain eager to show off its combination of natural and engineered beauty, its enormous scale and its state-of-the-art landfill infrastructure. Last year, to encourage repeat visitors and to attract new people—even in advance of opening the site as public parkland—we began to diversify the types of programs we have to offer.

We started a partnership with the Staten Island Museum, with whom we now lead bird-watching tours of the site every other month, throughout the year. We hosted two participatory reading events on North Mound with local arts group Staten Island OutLOUD: passages from the writings of Staten Island naturalist William T. Davis (for whom the adjacent wildlife refuge is named) and the poems of Robert Frost. From

the same vantage point, overlooking the wetlands and absorbing the expansive views of the city around us, we also welcomed a performance by musician and package designer Randy Ludacer, who played and distributed a new album of songs loosely centered on disposable packaging and recycling; we hosted a lecture from Department of Sanitation Anthropologist-in-Residence and NYU professor Robin Nagle on what it means to identify with our trash; and we organized a composting workshop led by the Staten Island Compost Project.

This year, we will continue to schedule a unique menu of programs and events that the public can enjoy along the tour route of the Freshkills Park site. Some of these are already in the works. We are open to your proposals for others. DPR has issued a Request for Proposals for Expanded Tour Programs, which you can request by e-mail at freshkillspark@parks.nyc.gov. We are excited about this next year of programs at the site, and we hope you will join us.



Top: Musician and package designer Randy Ludacer performs selections from his album "Songs About Packaging" atop North Mound in September 2009.

Middle: Freshkills Park Administrator Eloise Hirsh (left) welcomes a crowd gathered by Staten Island OutLOUD in May 2009 to read from the writings of naturalist William T. Davis, overlooking the wildlife refuge named after him.

Above: Staten Island Museum Program Associate Seth Wollney (left) co-leads bi-monthly birdwatching tours of the Freshkills Park site.

Site uses advanced, over time, based on population and natural features

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cargo ships transporting goods between Staten Island and a rapidly growing Manhattan. Boats ferried passengers from Smoking Point, at the foot of what is now West Mound, to New Jersey.

During the Revolutionary War, Fresh Kills served as an entry point, for both sides, to British settlements in the island's interior. A mill near the southeast corner of the site served as a major outpost for British troops.

The area continued to develop after the war. Rich clay deposits along the Arthur Kill were the prompt for industrialization. In 1854, Balthazar Kreisler, a Bavarian immigrant, capitalized on the clay supply by opening a brick factory in Charleston, a few miles south of Fresh Kills. Other industrialists followed, including the Dunn & Dolan Brick Manufacturing Company, the Richmond Brick Company and the Rossville Brick Company; all of these operations were sited on land that would later become the landfill. Just north of Fresh Kills, the

inventor of linoleum, Frederick Walton, built the country's first linoleum factory. The American Linoleum Manufacturing Factory became an important business center and by 1900 employed 800 people, many of whom lived in the surrounding neighborhood, called Linoleumville (and later renamed Travis).

On the west shore, industry declined as quickly as it had grown. When Staten Island was incorporated into New York City in 1898, its government functions moved from Richmondtown to St. George at the northeast tip of the island. The Fresh Kills area declined in prominence, and commercial activity along the creeks slowed. In 1917, the City built a garbage disposal plant—a sort of primitive incinerator—on Lake's Island. The facility took on a considerable amount of New York City's waste, but it was shut down after only two years of operation, due largely to local complaints about odors. The brick manufacturing companies closed during the 1920s and 1930s, and the linoleum factory in 1931.

Despite the ill-fated attempt at waste disposal on Lake's Island, talk and press about transforming Fresh Kills into a full-scale urban landfill continued through the 1920s and 1930s. Parks Commissioner and powerful New York City planner Robert Moses is noted as supporting a landfill proposal as early as 1938. A formal proposal from the era submitted by Moses to Mayor Vincent Impellitteri envisioned the construction of an expressway through the middle of the site, with the 'useless' marshes filled on either side to accommodate housing, parkland and industry.

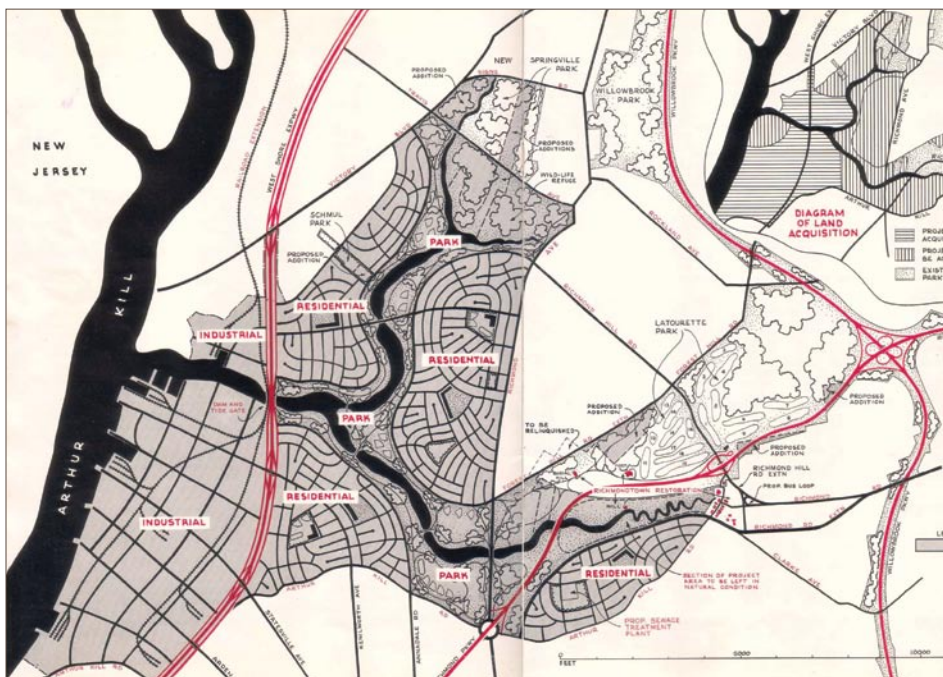
To achieve the plan, the Fresh Kills Landfill opened in 1948. Three to five years of landfill operations were expected (though 53 years ultimately proceeded). The West Shore Expressway was completed; the housing and industry never were.

LOOKING FORWARD

The life of the Freshkills Park site has been long, with uses varying in scale and mission by the ability and ambition of the people occupying it. The Freshkills Park plan is accordingly ambitious and encompassing—it aims to draw together the next stage of human intervention with appreciation and support for the site's natural resources and its potential as both habitat and demonstration space for sustainable development—and all of this while providing world-class recreational and cultural amenities.

But the plan, which lays out a 30-year development timeline, does not take for granted that the site will ever be static or fixed. It recognizes that the Fresh Kills area exists in a state of gradual but constant change, and is reflected in a timeline that stretches back thousands of years and generations into the future.

Seth Wollney, Program Associate, and Ed Johnson, Director of Science at the Staten Island Museum, contributed to the reporting of this story.



A plan of the proposed land uses to follow landfilling at the Fresh Kills site, from a 1951 proposal.



1 The **American Linoleum Manufacturing Company** opened in 1872. In 1882, the factory became the first electrically lit building on Staten Island, and by 1900, it employed more than 800 people. A company town, named Linoleumville, sprung up around the factory. When the company moved to Philadelphia in 1931, residents voted to rename the town Travis.

2 The **Louis Schmul family farm** bordered the marshland at Fresh Kills. In 1939, the family donated 8.5 acres of land to the City of New York for the development of Schmul Playground.



The **Lake's Island garbage disposal plant** was built in 1917 at a cost of \$1 million. The plant received waste by scow from Manhattan, the Bronx and Brooklyn. It was closed a few years later due largely to public protest about odors and other nuisances generated by the disposal operation.

Artifacts of a Woodland Period-era (presumably Lenape) **village and shell midden** were also identified in the Lake's Island area prior to 1948.

4 The **Richmond Brick Company** opened as early as 1872 and closed by the 1920s.



Benedict's Creek extended from the Arthur Kill into what is now the center of West Mound, the largest of the four landfill mounds. Native American artifacts from eras preceding European Contact have been found near Benedict's Creek.



In 1907, two small brick yards were consolidated into the **Rossville Brick Company**. The factory transported bricks on rail cars to cargo ships on the Arthur Kill shore. On-site housing was provided for employees of the factory. The factory closed by the 1920s.

7 The **Blazing Star Ferry** crossed the Arthur Kill to Woodbridge Township, NJ. It was established in this lower Rossville location in the 1760s.

8 A second 18th century ferry crossing, the **New Blazing Star Ferry**, connected the present-day

Travis neighborhood to Carteret, New Jersey. It was the site of a battle between the British and Americans in August of 1777.

9 Former site of **Peters Creek**.

10 Former site of **Jesse Bedell's Creek**.



Around the turn of the 20th century, **The Dunn & Dolan Brick Company** consolidated two smaller brick yards. An advertisement from 1906 claimed that they made 5,000,000 of their A1 Red Bricks annually.

12 The **LaTourette family farm** was established in 1830 and grew to be a top-producing farm on Staten Island, renowned for its superb produce. In 1928, the family sold their farm to the City of New York. The property is now Latourette Park.

13 A 19th century **brick yard** was identified at this site through inspection of historic aerial photography.

14 A 19th century **blacksmith shop and grist mill** were identified at this site through inspection of historic aerial photography.



The **Fresh Kills Bridge** permitted travel through the marshy western shore of Staten Island. The bridge was built in the vicinity of the modern Richmond Avenue in 1851 by the Plank Road Company. The bridge was rebuilt several times from the 1890s onward.

16 A 19th century **coal yard** was identified at this site through inspection of historic aerial photography.

17 A **French Huguenot Church** and cemetery were built in the late 1600s in the vicinity of what is now Arthur Kill Road. The church was demolished in the early 18th century.

Photos courtesy of the New York Public Library. Historically sensitive areas within the Freshkills Park site and surrounding area have been identified and described in the Freshkills Park Final Generic Environmental Impact Statement (FGEIS), accessible through the Freshkills Park website, at <http://www.nyc.gov/parks/freshkillspark>, under the Public Review tab.

Various artifacts of pre-Contact populations were found at the Freshkills Park site prior to the start of landfill operations. Several of these are pictured in the quiz on Page 7.

Large-scale compost operation next to park site

NYC Compost Project

Through the NYC Compost Project, DSNY encourages New Yorkers to make their own compost. Funded and managed since 1993 by DSNY's Bureau of Waste Prevention, Reuse and Recycling, the NYC Compost Project provides compost education and outreach in all five boroughs. Key programs include outdoor composting workshops for adults and children, indoor worm bin composting workshops, mulch mowing workshops, master composter certificate courses, compost demonstration sites and technical assistance to organizational composting efforts.

NYC Compost Programs are provided by host sites in each borough. Every NYC Compost Project offers a home composting demonstration site, a compost telephone helpline and compost-related workshops and classes. For more information, visit www.nyc.gov/wasteless/compost.

The Fresh Kills Compost Site is located adjacent to the Freshkills Park site and managed by the NYC Department of Sanitation.

The Fresh Kills Compost Site, managed by the New York City Department of Sanitation (DSNY), is located just beside the future Freshkills Park site. Since 1990, the site has hosted the large-scale transformation of plant waste like leaves, brush, Christmas trees and grass into nutrient-rich compost. In the shadow of the former landfill, the Compost Site demonstrates valuable practices in sustainable waste management.

Private landscapers deliver plant waste to the site from early spring to late fall. DSNY, through its Christmas Tree Recycling Program, collects Christmas trees from the public and delivers them to the site in early January. Before budget cuts suspended the Fall Leaf Collection Program, DSNY also delivered fall leaves there.

Once delivered to the Compost Site, plant waste is added to open-air windrows—long, piled rows—approximately 10 feet high and 200 feet long, to begin its transformation into compost. Given adequate air, water and decomposing agents, the plant material breaks down progressively, ultimately generating a crumbly, dark substance similar in appearance to soil. Decomposers in that process can include microbes like bacteria, protozoa and fungi, which act chemically on organic material, or worms, sow bugs and mites, which physically consume and process material.

At the Compost Site, a windrow-turning machine aerates each row and cuts up piled material into smaller pieces, which accelerates the composting process. Windrows are also turned and moved by front-end loaders. A water truck is used to wet down each windrow as needed to control dust.

The composting process continues for six to eight months. When the final product is generated, it is passed through a screen to sift out any impurities. The end result is high-quality, finished compost which, when used in gardens and parks, can help to make soil loose and well-drained, provide plants with valuable nutrients, protect soil from erosion and compaction and conserve water and other resources.

Compost from the Fresh Kills Compost Site is made available to City agencies, community gardens, schools, and nonprofit organizations. The biggest recipients are the Department of Parks & Recreation and the Department of Transportation, which use the compost citywide to improve overall soil quality for both new and old plantings. Community gardens are the next largest group of recipients; they make use of compost for various soil mitigation and habitat improvement projects.



Wildlife Spotlight: Hardy striped bass communities in west shore waterways



PHOTO COURTESY OF ANDREY SUKHANOV

Striped bass *Morone saxatilis*

Range: Native to the Atlantic coast of North America. Introduced worldwide to many waterways and reservoirs outside their natural range due to their popularity in sport fishing and their function as controls on other aquatic populations.

Size: As large as six feet long and up to 77 pounds. Those beyond 40 pounds are usually female. Growth rate depends on habitat, sex and competition. After age four, they tend to grow at a rate of 2.5 to 3 inches yearly until age 8. Females grow faster than males.

Preferred Habitat: They are anadromous, preferring salt water but migrating and spawning in fresh water lakes and estuaries.

Striped bass have had a long presence at Fresh Kills and in its adjacent waterways. Studies conducted in the area in the early 1990s, before landfill closure, indicated an abundance of the fish. A Department of Sanitation follow-up survey in 1995 confirmed large populations in Main and Richmond Creeks.

Also known as a striper or rockfish, the striped bass is characterized by a distinctive silvery body with long, dark stripes stretching from its gills to the base of its tail. They have also been bred with other species of bass to generate hybrids, which live in many freshwater bodies.

These fish are omnivorous and eat a variety of invertebrates and other fish species. Spawning usually occurs between April and June. Most males and females leave the spawning grounds after birth, but females migrate along the coastlines while males remain in estuaries. Because adult striped bass have few natural predators, they can be relatively long-lived fish, capable of surviving in the wild for more than 25 years.

As a result of overfishing and exposure to toxins, the population of striped bass declined rapidly and came under heavy regulation by the U.S. government during the 1970s and 1980s. The International Union for the Conservation of Nature and Natural Resources (IUCN) lists striped bass as a vulnerable species, and they are now regulated by the Atlantic States Marine Fisheries Commission (ASMFC) through the Striped Bass Conservation Act. The regulations have been relaxed as the population has rebounded, though the striped bass was designated as a protected game fish in 2007.

Archeological artifacts found in the Fresh Kills area before 1948: How many can you identify?

Pictured are artifacts of the historical periods preceding European colonization of Staten Island. They are all in the collection of the Staten Island Museum.



TOP ROW: axe head; drill; pottery fragment; projectile point. BOTTOM ROW: pendant; pestle fragment; net sinker; paint pot.

STAY CURRENT AND CONNECTED

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/wasteless/>

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FreshkillsPark

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