USACE AIRICLIANAI

PHASE IA CULTURAL RESOURCE
DOCUMENTARY STUDY FOR
SPRING CREEK
ECOSYSTEM RESTORATION
BOROUGH OF BROOKLYN AND QUEENS
KINGS AND QUEENS COUNTY, NEW YORK

Draft Report



Prepared by

Christopher Ricciardi, M.A., R.P.A. and Kirsten Davis

Prepared for DEPARTMENT OF THE ARMY U.S. ARMY CORPS OF ENGINEERS New York District

Prepared under the supervision of

902

Christopher Ricciardi, M.A., R.P.A. Principal Investigator

MANAGEMENT STUDY:

A Phase 1A Cultural Resource Documentary Study was performed on behalf of the New York District of the U.S. Army Corps of Engineers in connection with a planned ecosystem restoration project at Spring Creek in the Borough of Brooklyn and Queens, Kings and Queens County, New York. This study involved background research, field inspection and preparation of this report. The purpose of this work was to provide a preliminary assessment of archaeological potential and cultural resource issues that might affect the implementation of the ecosystem restoration scheme. Research was conducted at the New York State Office of Parks, Recreation and Historic Preservation Office, the New York City Public Library and Map Room, the Jamaica Bay Local History Room at the Jamaica Queens Library, the New York City Landmarks Preservation Commission, Special Collections Room at Brooklyn College's Library and with interviews of local historians.

No previously documented prehistoric or historical archaeological resources were noted within the project site. Based on historical references, and taking into account the extensive land modification that resulted from the deposition of refuse and dredge materials at Spring Creek in the early to mid-twentieth century, in the range of fourteen to sixteen feet of fill, there is judged to be a little potential for intact Native American or Historic remains within the project area.

Sensitivity for Native American resources was considered low based on geological and cultural factors. Typically, Native American sites identified on Long Island were located on terraces or knolls above the low-lying land. There are no natural areas of high ground within the project area.

Portions of a dilapidated wooden footbridge remain within the project area. Most likely this bridge spanned the wetlands that allowed access down to the waterfront. Although mills were common in the areas such as Spring Creek, and one reported mill was present somewhere in the Spring Creek area in the nineteenth century, a review of area maps, previous pedestrian surveys, interviews with local historians and the depth of deposition of twentieth century dredge material and refuse has greatly affected the project area.

The Corps has determined, based on the information gathered for this report, that that subsurface testing is not necessary within the project area. There are no potentially eligible sites within the area that can be considered for the National Register.

The restoration project will have no effect on cultural resources. Although no recorded sites are located within the project area, and the deposition of material in the twentieth century have most likely buried any potential site below the current project's limits, limited periodic monitoring during the excavation phase of the ecosystem restoration project is recommended as a precaution.

TABLE OF CONTENTS:

		H.		
				Page
Management Study				i
Table of Contents				ii
List of Figures and Plates				iii
A	knowledg	gements		v
1	Introduc	tion		1
1.	A.	Project Background		1
	В.			5
	р. С.	Previous Research		7
	C.	11cvious research		,
2.	2. Prehistoric Background			
3.	Historic :	Background		10
4.	Field Inv	restigations		13
5.	Assessm	ent of Archaeological Potential		14
	Α.	Prehistoric Resources		14
	В.	Historical Archaeological Resources		14
6.	Summai	y and Recommendations	,	15
7.	Append	ices		16
	Α.	Maps		16
	В.	Photographs	•	24
8.	Referen	ces		32

LIST OF FIGURES:

Figure I: Western Ben – Project Area	2	
Figure II: Eastern End – North of Creek – modern garbage deposits	2	
Figure III: Site Map 1	3	
Figure IV: Site Map 2	3	
Figure V: Looking Northwest	5	
Figure VI: Looking North – Towards deposited garbage mounds	6	
Figure VII: Looking South - Towards Flynn (?) Causeway/Foot Bridge	8	
Figure VIII: HTRW testing	13	
Figure IX: Looking South - Towards Foot Bridge	15	
Figure X: Colton 1826 Map of Long Island, Jamaica Bay, Queens	16	
Figure XI: Colton 1844 Map of Long Island, Jamaica Bay, Queens	16	
Figure XII: Tilden 1860 Map of the City of New York - Jamaica Bay	17	
Figure XIII: Beers 1873 Atlas of Long Island	18	
Figure XIX: Drips 1877 Map of Kings and Queens County	19	
Figure XX: Wolverton 1891		
Figure XXI: Bein 1891 Atlas of Long Island	21	
Figure XXII: Board of Public Improvement 1902 Jamaica Bay		
Figure XXIII: US Geodetic Survey 1926 East Coast, Jamaica Bay, New York		
Figure XIX: City of New York - Department of Parks and Recreation	23	
circa 1930s Spring Creek/Jamaica Bay		
Figure XX: Disposal Mound	24	
Figure XXI: Disposal Area	24	
Figure XXII: Disposal Area	25	
Figure XXIII: Disposal Area	25	
Figure XXIV: North bend of Creek and Disposal Area	26	
Figure XXV: North bend of Creek and Disposal Area	26	
Figure XXVI: Looking South - Towards Flynn (?) Causeway/Foot Bridge	27	
Figure XXVII:Looking South - Towards Flynn (?) Causeway/Foot Bridge 2		
Figure XXVIII: Looking South – Towards Flynn (?) Causeway/Foot Bridge	28	
Figure XXIX: Looking East – Towards Disposal Area		
Figure XXX: Eastern Road		
Figure XXXI: Eastern Road – Towards Development		
Figure XXXII:Eastern Bend – Disposal Area		
Figure XXXIII: Man-Hole Cover/Sewer System		
Figure XXXIV: Man-Hole Cover/Sewer System	31	
Figure XXXV: Broken Sewer Line	31	

ACKNOWLEDGMENTS:

As the ultimate team effort, many helped with the completion of this report. From within the Corps, Kirsten Davis was instrumental in documentary research and the report preparation. Work for this report was conducted at the following locations, with the assistance of several staff members. These included: New York State Office of Parks, Recreation and Historic Preservation Office, New York State Museum, New York Public Library – 42nd Street Map Room and Local Reading Room, Queens Historical Society Collections – Jamaica Bay Public Library, Local History Room – Jamaica Bay Public Library, Special Collections Division – Brooklyn College Library, Special Collections Division – Brooklyn Public Library and New York City Landmarks Preservation Commission. Special thanks go to the following individuals and groups: Ronald Schweiger, Brooklyn Borough Historian, Lee Rosenzweig, Brooklyn Historian, Natural Resource Group of the New York City Department of Parks and Recreation, Staff, Brooklyn College Archaeological Research Center, Matrix Environmental and Geotechnical Group and Steven Rizick, Director of Document Services, Parks Department, who deserves more credit than anyone in his kindness and support. Finally, thanks to everyone at the U.S. Army Corps of Engineers – New York District for their support.

I. INTRODUCTION

A. Project Background

The U.S. Army Corps of Engineers, New York District (Corps) is developing a preliminary Ecosystem Restoration Plan for Spring Creek Park, located in northern Jamaica Bay, bounding both Kings and Queens Counties (see Figures 1 and 2). The proposed project will restore thirty-seven acres of habitat: seventeen acres of inter-tidal salt marsh and twenty acres of coastal grassland and maritime scrubland.

This report details the Phase 1A Documentary Information gathered for the project. Limited historic research and collection of background material was conducted for the alternatives as originally proposed. Site surveys combined with documentary research yielded little evidence to suggest that Phase 1B subsurface testing, or beyond, was a necessary component of the cultural resource report. Research was conducted at the New York State Office of Parks, Recreation and Historic Preservation Office, the New York City Public Library and Map Room, the Jamaica Bay Local History Room at the Jamaica Queens Library, the New York City Landmarks Preservation Commission, Special Collections Room at Brooklyn College's Library and with interviews of local historians.

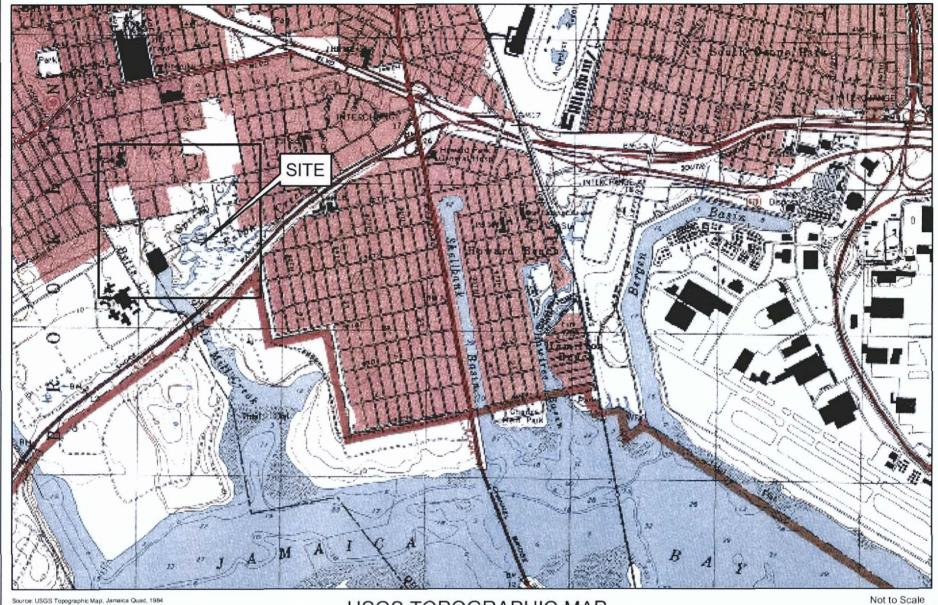
This cultural resource study has been undertaken to bring the plans recommended through the feasibility study into compliance with Section 106 of the National Historic Preservation Act of 1966, as amended. As a Federal Agency the Corps has certain responsibilities concerning the identification, protection and preservation of significant cultural resources within the Area of Potential Effects (APE) of any proposed project. The cultural resources deemed significant are any material remains of human activity that are listed on, or eligible for inclusion on, the National Register of Historic Places (NRHP). Other statutes and regulations authorizing the Corps to undertake these responsibilities include Section 101 (b) (4) of the National Environmental Policy Act of 1969 and the Advisory Council Procedures for the Protection of Cultural Properties (36 CFR Part 800).



Figure I: Western bend – Project Area



Figure II: Eastern end – North of Creek – modern garbage deposits



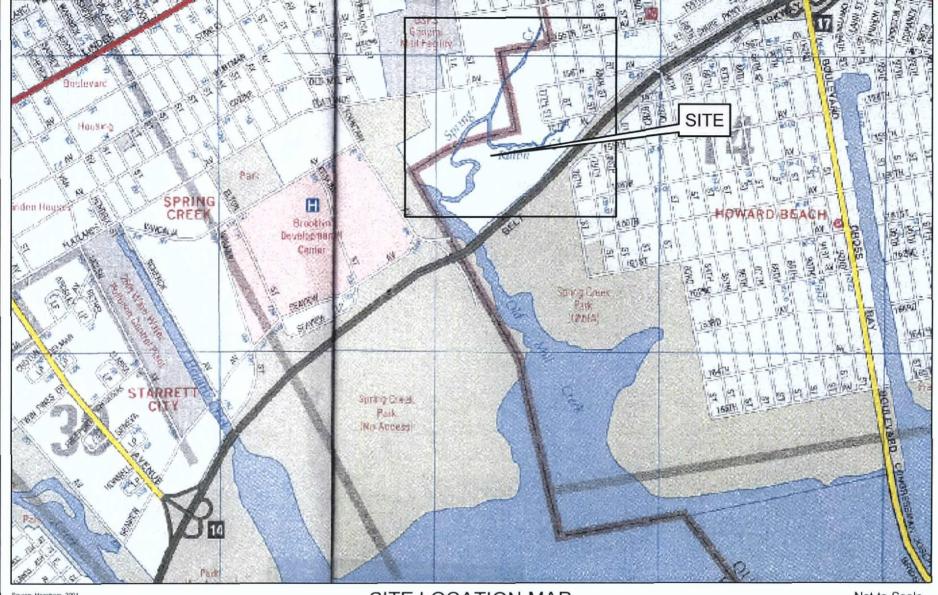
Source: USGS Topographic Map, Jamaica Quad, 1984

USGS TOPOGRAPHIC MAP SPRING CREEK ECOSYSTEM RESTORATION PROJECT BROOKLYN, KINGS COUNTY, NY



FIGURE 3

US Army Corps of Engineerse New York District



Source: Hagstrom, 2001

SITE LOCATION MAP

SPRING CREEK ECOSYSTEM RESTORATION PROJECT BROOKLYN, KINGS COUNTY, NY



Not to Scale



FIGURE 24

B. Project Description

Spring Creek is located within both the counties of Kings and Queens. The project area is located with in the northern part of Jamaica Bay and contains the largest amount of undeveloped land and wetlands in the area (USACE 2002). Jamaica Bay is a shallow tidal wetland of about 20 square miles in area. It grassy marshes are sheltered from the Atlantic Ocean by the Rockaway Peninsula. Although containing many islands, that have been formed, destroyed and reformed over the past three hundred years, only the largest, Broad Channel, is inhabited (NYC Parks Department Fact Sheet 2003). A Federal navigation channel was constructed beginning in 1910 and extends from offshore of Rockaway Point, Queens, through Rockaway Inlet and bisects at the southern edge of Floyd Bennett Field, Brooklyn, with one branch extending north into the upper part of Jamaica Bay and a second branch extending east into lower Jamaica Bay, in New York, New York. The project area was adversely affected by the dredging and filling activities associated with the construction and maintenance of the Federal navigation channel (USACE 2002) as well as numerous episodes of refuse deposition during the early to mid twentieth century. It is indicated in historical records that Spring Creek suffered approximately the same seventy-five percent wetland loss that Jamaica Bay experienced as a whole since the twentieth century.

The site is located in the wetlands approximately 3 miles south of the terminal moraine formed from the melting of the Wisconsin glacier approximately 18,000 years ago (Eisenberg 1978:19). The site was described in 1860 as such, "Jamaica Bay, a large shallow, landlocked bay upon the south shore...Encloses a large number of low, marshy islands separated by narrow and irregular tidal currents. Wide salt marshes extend along the shore of the bays, and far inland along the courses of the small creeks." (French 1860: 365). The topography of the present site is mainly the result of its use as a landfill for dredged and construction fill, ash from the Department of Sanitation incinerator and a refuse dump.



Figure V: Looking Northwest

The vegetation on the site is typical of that found in marsh areas of heavy fill and disturbance; marsh plants such as cord grass (Spatina alterniflora) and pike grass (Distichlis), also present was reed grass (Phragmits communis) (Historical Perspectives 1988: 5).

The Corps proposes to remove the dredged material that was deposited within portions of Spring Creek and redeposit the material in other areas of Creek. Approximately ten to twelve feet in depth is called for removal. This material will then be caped with blacktop, soil and sand and be used as a passive park area. The areas where the material was removed from will also serve as a passive recreational area. The main focus is to return Spring Creek to a more active marsh area where native species of floral can flourish.



Figure VI: Looking North towards deposited garbage mounds

C. Previous Research

Research on the prehistory, history, and previous cultural resource studies in the project area was conducted at the following institutions: New York Public Library at 42nd Street, New York Public Library at 34th Street, Queens Borough Public Library in Jamaica, Queens, New York City Municipal Archives, New York City Landmarks Preservation Commission, Brooklyn College Archaeological Research Center's Archives, the Special Collections Room at Brooklyn College and the New York State Office of Parks, Recreation and Historic Preservation Office.

Research was also undertaken at the Map Room of the Olmstead Center of the New York City Department of Parks and Recreation (Parks) in Queens, New York. Parks maintains historic maps of their properties. Unfortunately, these maps are of only once the property became a park and therefore only detail what disturbances have occurred since a sites inception as a park.

No previous archaeological studies have been conducted within the specific project area. Three studies have been undertaken that incorporates portions of the Spring Creek region including one study for the U.S. Post Office, the National Park Service and the Army Corps of Engineers. None of the reports detail any Prehistoric or Historic remains within the project area.

No historically written materials exist on the project area per say. Spring Creek is lumped together with Jamaica Bay and, in general, this southern area of Kings and Queens Counties in such widely circulated reference such as: Black 1981, Ross 1902, Prime 1845, Thompson 1918, Van Wyck 1924 and Stiles 1884.

Frederick Black conducted a Historic Resource Study for the Jamaica Bay area in the late 1970s on behalf of the National Park Service (NPS) (Black 1981). His report was fairly brief, with little referencing and provided an overview of the history of the area and a current condition report.

John Milner and Associates also undertook a similar study of the same project area for the NPS (John Milner and Associates 1978). There report indicated that there was little chance to impact either Native American or Historic Sites within the Spring Creek area.

Historical Perspectives, working on behalf of the U.S. Post Office, conducted a Phase 1A just north of the current project area (Historical Perspectives 1988). The report references Van Wyck extensively and indicated that no impact would occur for either Native American or Historic Period sites within the overall area.

Arnold Pickman, working on behalf of the Corps, has conducted two Phase 1A Studies of the Jamaica Bay area as part of the larger Jamaica Bay Ecosystem Restoration Project (JBERP), which the Corps is still underway (Pickman 1990 and 2000). Pickman's report was the most detailed of the reports on the area. Although he indicates that there is little chance for the recovery of Native American sites, the Flynn Causeway should be investigated further. ¹

¹ Note that the above referenced reports are on file with the New York City Landmarks Preservation Commission and the U.S. Army Corps of Engineers, New York District.

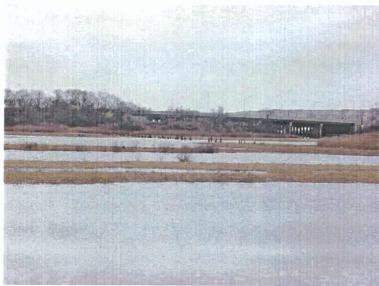


Figure VII: Looking South towards nineteenth to twentieth century Flynn foot bridge/causeway

II Prehistoric Background

The prehistory of both Kings and Queens Counties has been documented in great detail in a number of formats, both historical and archaeological. Therefore only a limited detail of the project area is presented here to provide an overview.

The project site is located on the present day southwestern shore of Long Island. The island itself is a linear landform, called the Ronkonkoma Moraine, which is composed of low irregular hills, with two principal ridges (the Ronkonkoma and Harbor Hill ridges). The moraine was formed by the advancing ice sheet of the last glaciations, and forms the dominant geomorphological structure of Long Island into the present day (Hunter 2002: 2)

10,000 years ago, rising temperatures and warming ocean currents began to erode the ice sheet that covered the area, forming the outline of the Sound, and giving definition to modern day Long Island. The warming trends over the following millennia aided in the creation of several habitats on Long Island. Along the south shore of the island, the Atlantic barrier beaches protected salt meadows and shallow bays, as well as streams that were flowing into the bays, creating vast freshwater wetlands rich in plant and animal resources (Strong 1997: 35-53).

As the ice sheet receded and temperatures rose, the Native American occupation of the area soon began; it must be noted that the archaeological evidence of such activity during the Paleo-Indian (circa 10,000-8,000 BC) and Archaic (8,000-2,000 BC) period is relatively sparse. There has been some evidence found of Paleo-Indian peoples working with local materials (i.e. quartz) in order to produce stone tools and projectile points. The projectile points that were discovered were of the fluted variety characteristic of Paleo-Indian points found throughout the Atlantic coastal plain. Unfortunately the points that were found were discovered at surface level, leaving

no sense of archaeological context, nor was there enough material to consider the discovery a site of habitation (Strong 1997: 35-53; Hunter 2002: 2-5)

The Native American lifestyle of the Paleo-Indian, Archaic and Early Woodland periods (8,000 BC- 1000 AD) was one of hunting, gathering and fishing. In general the populations were mobile bands that moved from place to place based upon the migratory patterns of game and fish, the seasonal availability of plant resources, as well as the location of lithic raw materials. On Long Island there was an absence of chert, the preferred lithic material for tool making, forcing the Native people of the area to use quartz. Quartz is particularly difficult to flake down to a thin cutting edge, often crumbling in the process. Of the projectile points discovered, three were made of quartz, the others made of non-local materials such as chert, chalcedony and jasper, suggesting that they were likely being carried there by nomadic hunters (Strong 1997: 55-79; Hunter 2002: 2-5; Wick ND)

From the Middle Woodlands period on (1000BC-1000AD), the population base of the area appears to have grown relatively steadily, and become increasingly sedentary. The practice of agriculture begins during this period, around 1250 AD, and semi-permanent settlements become visible in the archaeological record in the Lower Hudson Valley. It is assumed that the same types of settlements were being formed further south, on Long Island. Coastal areas, such as the South Shore of Long Island, came to play an important part in the settlement patterns and food procurement patterns of the Native Americans. It has been suggested by Robert Wyatt in 1977, that the Native American's of the area moved in a seasonal round from summer camps (near the shore and fresh water streams) to a winter camp slightly more inland, where the focus of food procurement would include the hunting of deer and fowl (Wyatt 1982:76; Strong 1997: 55-77; Hunter 2002: 2-5

The Late Woodland period, circa AD 1000-1600, was one in which European contact occurred, though until the later date (1600AD), the impact was relatively minimal upon Native American life ways. At this time, both the Canarsee and Rockaway Native American groups were using this area as fishing and hunting grounds (Panamerican 2003). Although agriculture was practiced by this time, their settlement patterns changing very little. It is with the arrival of permanent settlers to the area in 1653, that the way in which the Native Americans lived their lives, their settlement and farming patterns become drastically altered. It is throughout this Late Woodland period that shell middens and campsites become a common feature within the tidal landscape of southern Long Island (Wyatt 1982:76; Strong 1997: 79-107; Hunter 2002: 2-5).

Toward the end of the Late Woodland period the Native American record begins to become a part of the written historical record of the time. Contact with seventeenth century Europeans, apart from bringing about a documented history of Native Americans, also brought about changes in settlement patterns and social structure.

Limited archaeological survey's pertaining to Native Americans at Spring Creek have been conducted. In 1988 Toni Silver conducted a site survey of the area, particularly a possible shell midden, and concluded that historic material found was the result of landfill activities. The Brooklyn College Archaeological Research Center has also performed pedestrian surveys of the area since the 1970s, but have yielded only modern rubbish remains.

III. Historical Background

Brief Overview of the History of Queens County²

Queens County was one of the ten original counties of New York created by the English in 1682. Prior to the official founding of the county the Dutch settled many areas including Astoria, Dutch Kills, and the Long Island City area as early as 1637. English settlers entered the areas of Jamaica, Flushing and Elmhurst beginning in 1642. By 1683 Queens was divided into three main towns, Newton, Flushing and Jamaica. Physical barriers separated the towns (tidal marsh, estuaries and the terminal moraine). Water travel, through the many rivers, creeks and estuaries was the main transportation source.

The majority of Queens County was agrarian until the mid twentieth century, although a small area, in what is today Long Island City, did contain some industrial type work. Large family estates dotted the landscape. Goods were sold at markets in Manhattan and along the Kings/Queens boarder (Linder and Zacharias 1999).

By the mid nineteenth century, and lasting until the first quarter of the twentieth century, the population of the City of New York expanded at an exponential rate. Many of the new residents settled in the "outer boroughs" of Brooklyn, Queens and the Bronx. The farms of western Queens, closest to Manhattan were bought by land speculators and turned in to villages/housing areas.

With the opening of the Queens Borough Bridge and followed soon after by the subway system, Queens County's population and landscape exploded. The population increased caused the decrease in farms and a turn towards industrialized manufacture of goods and materials (Linder and Zacharias 1999).

Brief Overview of the History of the Rockaway's:

Yet with this change in economic subsistence one area of Queens remained fairly unchanged, that of the southern and southwestern shore area that connected to Kings County on the west and Nassau County on the east, the Rockaways. Home originally to the Rockaway and Canarsee Native American groups, the Rockaways became a shorefront haven for the residents who needed to "get away" from it all. The landscape, formed by the retreating Wisconsin glacier (circa 12,000 bce), consisted of tidal marshes, sandbars, islands, rivers, estuaries, wetlands, mud flats and ocean beaches.

² Unless otherwise referenced, this chapter is summarized from the following sources: William Trist Bailey c.1880; Louis & Associates, Inc, Cultural Resource Group Berger 1992; Frederick Black 1981; Eugene J. Boesch 1997; Edward Gloeggler 1973; Historical Perspectives, Inc. 1986, 1988a, 1988b, 1993; Kearns, Betsy, Cece Kirkorian and Richard Schaefer (Historical Perspectives, Inc.) 1991; John Milner Associates 1978; Panamerican Consultants 2003; Arnold Pickman 1990, 1999, 2000; Nathaniel Prime 1845; Henry R. Stiles 1884; Benjamin F. Thompson 1843 and Frederick Van Wyck 1924, 1935.

The name of the Rockaway's seems to have come from the Canarsee Indians when they established themselves at Rockaway Neck. Their word for the area was "Reckouwacky" which means the place of our own people. Within fifty years of European settlement, the Canarsee had sold their rights to the area to the English. The sale encompassed the entire Jamaica Bay area.

Since Native American occupation, settlements have been sparse in the area. This is due to the landscape, as no solid rock formations exist to build upon. Consisting mostly of marshes, the land lent itself more to occupational usage such as fishing. Fishing was the main subsistence of local residents until the late eighteenth century when limits were put on shell fishing.

There is limited information on the original inhabitants, although the original landowner appears to have been Richard Cornell. Most titles for property in the area list him as the original owner.

Settled areas began to spring up in the mid nineteenth century along the back bay side of Jamaica Bay. One resident, Van Wicklen set up a mill some time after the beginning of the nineteenth century. The Van Wicklen Mill was located in Spring Creek by the mid nineteenth century. During the late nineteenth through the early twentieth century the area was sparsely populated and used. Wooden piers and footbridges dotted the marsh area spanning the creek connecting the street developments that were developed to the northwest and northeast sections of the project area (Panamerican 2003).

The area remained largely unsettled until 1880, when the New York, Woodhaven, and Rockaway Railroad built a wooden trestle five miles long across the bay, connecting the Rockaways to the rest of Queens. Industry expanded along the shores of the bay, and their waste, along with sewage disposal, polluted the bay. In 1916, the Board of Health banned fishing and swimming in the bay, and all the summer resort hotels that had been built along the bay closed down (Panamerican 2003).

Spring Creek, which connected to Ralph Creek, Old Mill Creek, Crum Creek Crum Hill Creek and Lotts Creek eventually drained into Jamaica Bay. Along the bay, the City of New York planned in the late nineteenth century to establish the area for residential living. Landfill was brought in and placed throughout the area to begin this process. A branch of the Long Island railroad was established in the 1880s as well. By the turn of the twentieth century Patrick Flynn created a causeway that extended through the Spring Creek project area that connected the waterfront to the planned community north of the current project area. Remains of the Flynn causeway are still present in Spring Creek today (Pickman 2000).

During the prohibition period there is an indication that the area was used by bootleggers. Speakeasy's were rumored to exist along the Flynn piers in the late 1920s. Pedestrian survey's by the Brooklyn College Archaeological Research Center since the late 1970s have revealed hundreds of white-ware/hotel ware plates remains as well as bottles for alcohol, wine and condiments. One theory presented for the location and use of the area as a an illegal drinking establishment was that the area was so far away from the mainland/mainstream that police would not bother to break up the ring. It would appear that most entered the area through boats from Jamaica Bay (Mulller, n.d.; Brooklyn College Archaeological Research Center 2000).

The land for Spring Creek Park was acquired by condemnation in May 1938 as part of the construction of the Shore Parkway. In 1992, the Department of Real Property assigned another section of property to Parks, more than doubling the size of the park. The northern and farthest western portion of the park lies in Brooklyn, while the southern portion below 157th Avenue is contained in Queens. In 1994 and 1995, two more parcels in Queens, on Fairfield Avenue, were added to the park. Today, a part of the bay and its surrounding area is protected as part of the Gateway National Recreation Area, created in 1972 under the National Park Service (New York City Department of Parks and Recreation – Spring Creek Fact Sheet 2000; Panamerican 2003).

IV: Field Investigations

Pedestrian surveys were undertaken in March, April, June, July and August of 2003. Photographs documenting the surveys are included in Appendix B. No subsurface testing was undertaken during any of these surveys. Monitoring of the drilling and excavation for the hazardous material (HTRW) survey's were also conducted in 2003 under the direction of the Corps³.

No evidence of prehistoric sites were noted during the survey. The only noted historic remains, aside from modern refuse, was the partial remains of a dilapidated wooden footbridge. This bridge spans a portion of the creek channel and runs in a, generally, east to west fashion.

Over twenty pits were excavated throughout the area for the HTRW survey. In general, areas were excavated to a depth of fourteen to eighteen feet below the modern ground surface. Only twentieth century materials were recovered in any of the pits to those depths. No pre-twentieth century surfaces were excavated. Refuse and some hazardous soils were recovered in the test pits.

Of the non-HTRW survey's, twentieth century refuse material, including burned out cars, ash dumps from the near-by incinerator, and general refuse litter the entire project area. No pre-1950s historic material was noted in the survey.



Figure VIII: HTRW testing

³ Detailed information from the HTRW report will be presented in the Spring Creek Ecosystem Restoration/Environmental Assessment Report due in Summer 2004.

V: Assessment of Archaeological Potential

A. Prehistoric Resources

At Spring Creek there is little potential for the uncovering of Native American remains. Although creeks and shorelines such as Spring Creek were used by Native Americans in the area, i.e. Gerritsen's Creek just to the west for example, it appears that this area was not inhabited for any great length of time. No known archaeological sites exist in the project area in the files of NY SHPO, NYS Museum or the LPC. Previous archaeological investigations of the area reported little potential for the recovery of Native American sites. Historical accounts for the area do not list Native Americans as being at Spring Creek, but rather in the areas near the Creek, the Rockaways, Canarsie, New Lots, and Gerritsen's Creek. The geology of the Spring Creek area also lends itself to not having been used as an occupation area.

Based on the above information, and the fourteen to eighteen feet of fill present over the site, there is limited potential for the recovery of significant Native American remains.

B. Historical Archaeological Resources

A study of the available historic maps of the Spring Creek area (See Appendix A Figures 1-10 indicate that no historic (or prehistoric) settlements were located within the project area. Beginning with the Colton Maps (1836 and 1840), the area has been marshland. Tilden (1860) and Beers (1873) indicate that a roadway was, at least, planned to connect to the Spring Creek area. The Drips (1877), Wolverton (1891), Bein (1891) and the Board of Public Improvement (1902) detail the area as being only marshland as well. The 1930s New York City Department of Parks and Recreation Map, the last of the historic maps, reveals no structures within the area. What is interesting is none of the maps indicate the remains of the only standing structure within Spring Creek, the possible Flynn Causeway/footbridge.

Pickman reports that causeway can be linked to Flynn, which most likely connected the mill and the northern settlements to the water's edge (1988 and 2000). However, the work by the Brooklyn College Archaeological Research Center and Muller (n.d.) regard this bridge as an early twentieth century structure that served as a pathway towards illegal speak-easy settlements along Jamaica Bay's waterfront. Although mills and footbridges may be eligible for the National Register under certain criteria, the remains of the Flynn Causeway/foot bridge at Spring Creek would not quality based on the lack of verifiable documentary evidence and the decrepit nature of the remains. Most of the bridge as rotted away and what is left poses more of a hazard than a benefit.

Van Wicklen's Mill by Van Wyck (1924) and reiterated by Pickman (1988 and 2000) is located just to the northwest of the current project area (Panamerican 2003). This mill was present until the early nineteenth century. The location is now a garbage building.

No other historic resources are noted in the historic record or uncovered during the survey and HTRW excavations. Therefore, there is limited potential for the recovery of historic sites and/or materials within the project area.

Based on the above information, and the fourteen to eighteen feet of fill present over the site, there is limited potential for the recovery of significant Historic remains.



Figure IX: Looking South towards foot bridge

IV: Summary and Recommendations

Based on the geographic history of the area, the documentary evidence, previous archaeological work, pedestrian field surveys, HTRW excavations and oral reports, the Spring Creek area holds limited potential for the uncovering of Prehistoric or Historic sites. No current National Register eligible sites area in the project area.

The Ecosystem Restoration Plan, as proposed by the Corps, will have no effect on the Cultural Resources of Spring Creek and it is the recommendation of this report that a finding of No Effect be given.

However, to insure that the cultural heritage of the area is not impacted even on a limited basis, the Corps recommends the following with regard to the Spring Creek Ecosystem Restoration Project.

During the excavation phase of the Ecosystem Restoration Project, a limited archaeological monitoring occur. With this monitoring, if something with regard to the cultural history of the area is uncovered, a determination can be made as to its potential for significance.

APPENDIX A: Historic Maps



Figure X: Colton, Map of Long Island- 1836



Figure XI: Colton, Map of Long Island-1844

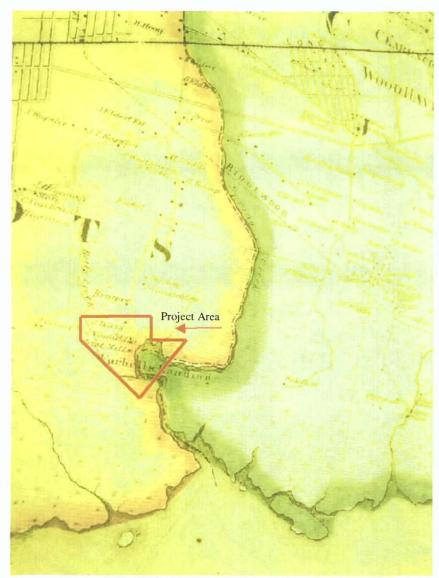


Figure XII: Tilden, Map of City of New York-1860

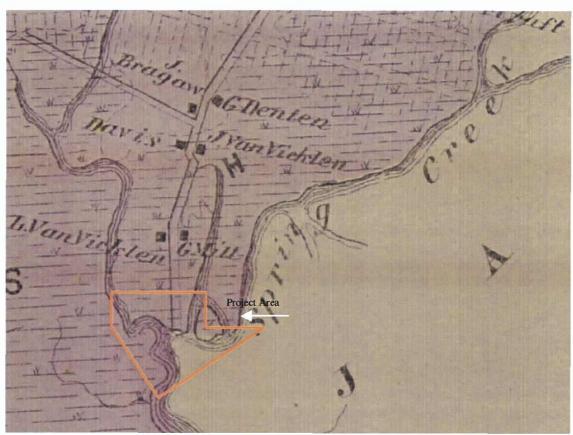


Figure XIII: Beers Atlas of Long Island, 1873

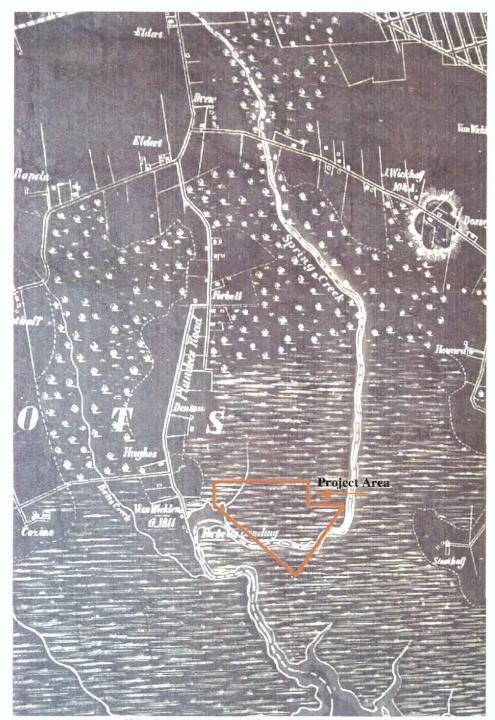


Figure IV: Drips, Map of Kings and Queens Co-1877

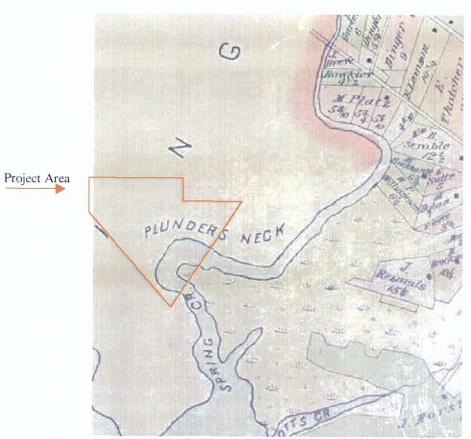


Figure XV: Wolverton, Map of New York City- 1891

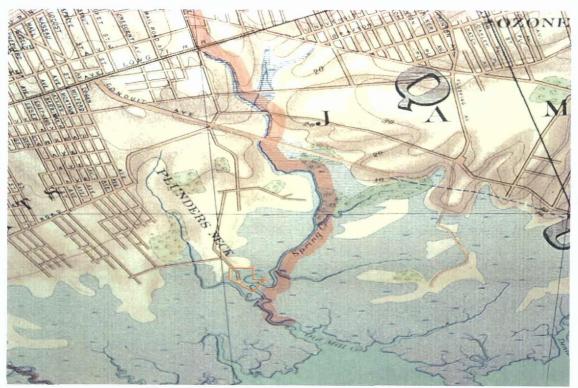


Figure XVI: Bein, Atlas of Long Island-1891

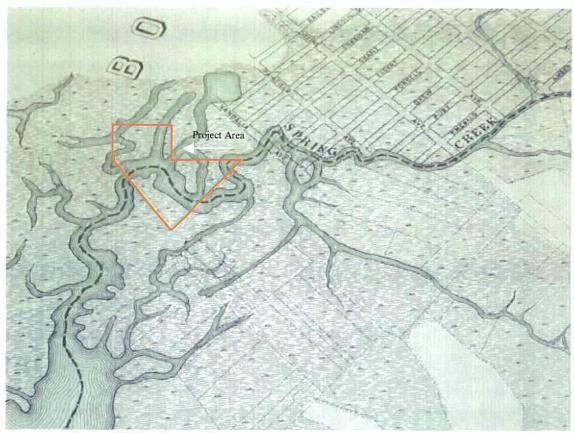


Figure XVII: Board of Public Improvement, City of New York, 1902

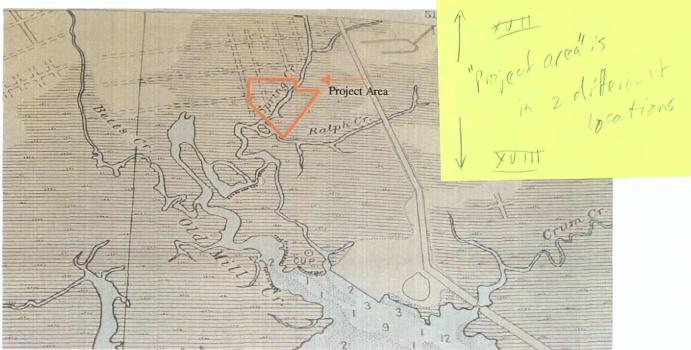


Figure XVIII: U.S. Coast and Geodetic Survey, United States East Coast, Jamaica Bay and Rockaway Inlet-1926

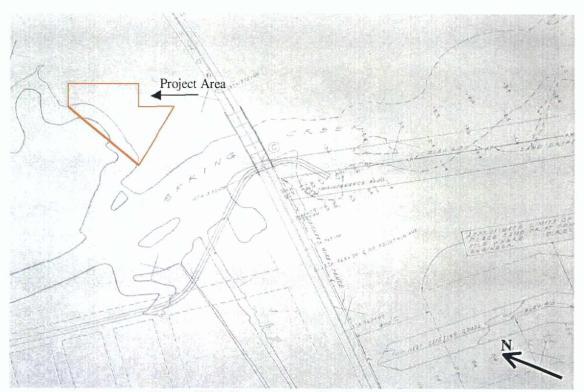


Figure XIX: Department of Parks, circa 1930

APPENDIX B: Photographs:



Figure XX: Disposal Mound



Figure XXI: Disposal Area



Figure XXII: Disposal Area

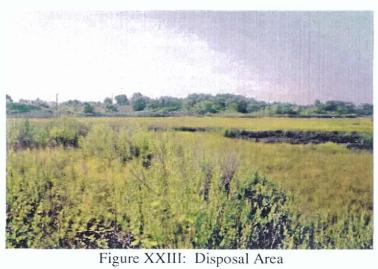




Figure XXIV: North bend of Creek and Disposal Area

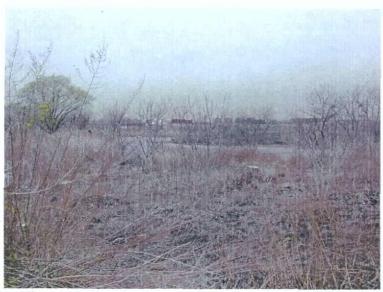


Figure XXV: North bend of Creek and Disposal Area



Figure XXVI: Looking South Towards Flynn (?) Causeway/Foot Bridge



Figure XXVII: Looking South Towards Flynn (?) Causeway/Foot Bridge



Figure XXVIII: Looking South Towards Flynn (?) Causeway/Foot Bridge



Figure XXIX: Looking East Towards Disposal Area



Figure XXX: Eastern Road



Figure XXXI: Eastern Road - Looking Towards Development



Figure XXXII: Eastern Bend - Disposal Area



Figure XXXIII: Man-Hole Cover/Sewer System



Figure XXXIV: Man-Hole Cover/Sewer System

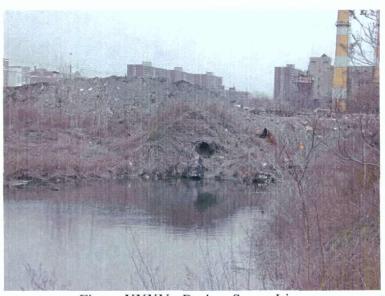


Figure XXXV: Broken Sewer Line

VII: References

Anonymous.

- n.d. "Last of Squatters Wait City Eviction From Inlet Shacks."

 Unidentified Newspaper article in clipping file (Parks, Kings County), of the Queens Borough Public Library, Long Island Division. Vertical File, "Barren Island."
- 1904 "'Horse Factories"...Over at Barren Island. December, 1904. Otherwise unidentified newspaper article in the Collection of the Queens Borough Public Library, Long Island Division. Vertical File, "Barren Island."
- 1905 "Here is a Little Venice at the Door of Brooklyn." Otherwise unidentified newspaper article in the Collection of the Queens Borough Public Library, Long Island Division. Vertical File, "Howard Beach, History."
- "More of Barren Isle Drops into the Bay." April 19, 1907. Otherwise unidentified newspaper article in the Collection of the Queens Borough Public Library, Long Island Division. Vertical File, "Barren Island."
- 1909 "Changes at Bayswater." Otherwise unidentified newspaper article bound with pamphlet (see Bailey ca. 1880.) in the Collection of the Queens Borough Public Library, Long Island Division.
- "William T. Bailey Dies at Rockaway." Unidentified newspaper clipping bound with pamphlet (see Bailey ca. 1880.) in the Collection of the Queens Borough Public Library, Long Island Division.

Bailey, William Trist.

c.1880 Bayswater Beach, Breezy Point, Far Rockaway, Long Island, N.Y. New York: William Trist Bailey. Pamphlet in the collection of the Queens Borough Public Library, Long Island Division. [date 1880? added by hand on front cover]

Beers, F. W.

- 1873 Atlas of Long Island, New York. New York: Beers, Comstock and Cline.
- 1886 New Map of Kings and Queens Counties, New York. New York

Bellot, Alfred H.

1918 History of the Rockaways. Far Rockaway: Bellot's Histories, Inc.

Berger, Louis & Associates, Inc, Cultural Resource Group.

1992 Phase IA Historical and Archaeological Survey, Liberty Pipeline Project, Queens and Nassau Counties, New York. Report on file at the New York City Landmarks Preservation Commission.

Bien, Julius.

1891 Atlas of New York City and Vicinity.
New York Public Library – Map Room, New York, New York.

Black, Frederick.

1981 Historic Resource Study – Jamaica Bay: A History
Department of the Interior – National Park Service, Washington, DC.

Boesch, Eugene J.

1997 "Archaeological Evaluation and Sensitivity Assessment of the Prehistoric and Contact Period Aboriginal History of the Borough of Queens, New York City." Report Submitted to New York City Landmarks Preservation Commission.

Borough of Queens, Office of the President, Topographical Bureau.

1915a Map Showing Street System for the Territory Designated as Section 174 of the Final Maps of the Borough of Queens.

1915b Map Showing Street System for the Territory Designated as Section 176 of the Final Maps of the Borough of Queens.

1915c Map Showing Street System for the Territory Designated as Section 177 of the Final Maps of the Borough of Queens.

1916 Map Showing Street System for the Territory Designated as Section 226 of the Final Maps of the Borough of Queens.

Brooklyn Daily Eagle.

1899 "Barren Island's New Era. May 8, 1899. Collection of the Queens Borough Public Library, Long Island Division. Vertical File, "Barren Island."

1936 "Barren Island Squatters Ordered Off by Moses." March 13, 1936.

Brooklyn College Archaeological Research Center.

2000 Spring Creek Site Report. Report on file with the Brooklyn College Archaeological Research Center; Brooklyn College, Brooklyn, New York.

Colton,

1836 Map of Queens County, Long Island.
New York Public Library – Map Room, New York, New York.

1844 Map of Kings County, Long Island.
New York Public Library – Map Room, New York, New York.

Davis, C. G.

1911 "Ramblersville." Copy of Article from *Motor Boat*. August 10, 1911. Vertical File, Howard Beach, History. Collection of the Queens Borough Public Library, Long Island Division.

Dripps, Matthew.

- 1852 Map of Kings and a Part of Queens Counties, Long Island, New York. New York: Surveyed by R.E.O. Connor. New York Public Library – Map Room, New York, New York.
- 1868 Map of Kings County, N.Y.

 New York Public Library Map Room, New York, New York.
- 1877 Atlas of the Townships of New Utrecht, Gravesend, Flatbush, Flatlands and New Lots, Kings County, New York.

 New York Public Library Map Room, New York, New York.

Dvirkin and Bartilucci, Consulting Engineers.

1985 "201 Wastewater Facilities Plan for the Barrier Beach Area, Volume IV, Selected Plan and Environmental Assessment". Report prepared for the Nassau County Department of Public Works. Syosset, N.Y.

Fairchild Aerial Camera Company.

1924 Aerial Photographs of New York City. New York City, Board of Estimate and Apportionment.

Gloeggler, Ed. K.

- "Oyster Shells in Bayswater." October 30, 1973 article in bound collection of column "Reminiscence of Rockaway Past" from the Rockaway Journal.
 Collection of the Queens Borough Public Library, Long Island Division.
- 1983 "Somerville." January 19, 1983 article in bound collection of column "Reminiscence of Rockaway Past" from the *Rockaway Journal*. Collection of the Queens Borough Public Library, Long Island Division.

Grumet, Robert.

1981 Native American Place Names in New York City.

Historical Perspectives, Inc.

1986 Cultural Resources Survey for the Avenue Urban Renewal Project, Queens, New York. Report Prepared for Dresdner Associates, Inc. On File at the New York City Landmarks Preservation Commission, New York, New York.

- 1988a Phase IA Archaeological Assessment Report for the U.S. Truck Body Site, Rockaway Peninsula, Queens, New York, CEQR 88 -164Q. Report Prepared for Allee King Rosen & Fleming, Inc. On File at the New York City Landmarks Preservation Commission, New York, New York.
- 1988b Phase 1A Archaeological Report for the USPS Brooklyn GMF/VMF
 Environmental Assessment Spring Creek Site, Brooklyn, New York.
 Report on file at the New York City Landmarks Preservation Commission, New York, New York.
- 1993 Phase IA Archaeological Report for the Gateway Estates Site, New Lots, Brooklyn, New York, CEQR NO. 93-HPDO14K. Report on file at the New York City Landmarks Preservation Commission, New York, New York.

Hyde, E. Belcher.

- 1899 Atlas of the Borough of Brooklyn of the City of New York. Brooklyn. Vol. 3. New York Public Library Map Room, New York, New York.
- 1901 Atlas of the Borough of Queens, City of New York. Vol. I.
 New York Public Library Map Room, New York, New York.
- 1905 Atlas of the Borough of Brooklyn, City of New York 1905 Edition Updated to
 1912.
 New York Public Library Map Room, New York, New York.
- 1907 Atlas of the Borough of Queens, City of New York. Brooklyn. Vol. I. Edition updated to 1912.
 New York Public Library Map Room, New York, New York.
- 1909 Atlas of the Borough of Brooklyn, City of New York. New York. 1909 Edition
 Updated to 1912. Vol. 8.
 New York Public Library Map Room, New York, New York.
- 1912 Miniature Atlas of Far Rockaway.
 New York Public Library Map Room, New York, New York.
- 1913 Atlas of the Borough of Queens, City of New York. Vol. I. New York Public Library – Map Room, New York, New York.
- 1921 Desk Atlas of the Borough of Brooklyn, Vol. II.
 New York Public Library Map Room, New York, New York.
- 1929 Atlas of the Borough of Brooklyn, City of New York. Vol. 4. New York New York Public Library Map Room, New York, New York. New York Public Library Map Room, New York, New York.

- Kearns, Betsy, Cece Kirkorian and Richard Schaefer (Historical Perspectives, Inc.).
 - 1991 Generic Environmental Impact Statement III, JFK West, Queens, Phase IA Archaeological Assessment. Report on file at the New York City Landmarks Preservation Commission, New York, New York.
 - 1993 New York City Department of Environmental Protection, Water Quality Facility Plan, Paerdegat Basin, Brooklyn, NY, Phase 1a Archaeological Assessment. Report on file at the New York City Landmarks Preservation Commission, New York, New York.

Landesman, Alter F.

1977 History of New Lots; Brooklyn to 1887 Including the Villages of East New York, Cypress Hills and Brownsville. Kennikat Press, Port Washington, New York.

Linder, Marc and Lawrence Zacharias.

1999 Of Cabbages And Kings County: Agriculture and the Formation of Modern Brooklyn. University of Iowa Press, Iowa City, Iowa.

Milner, John (Associates).

1978 A Cultural Resources Inventory of the Gateway National Recreation Area, New York and New Jersey. Report prepared for the National Park Service, Denver Service Center, Denver, Colorado. Contract Number CX-2000-7-0010 Report on file with the U.S. Army Corps of Engineers, New York District, New York, New York.

Muller, J.W.

n.d. Campers By The Sea.

New York City – Board of Public Improvements.

1902 Map of Jamaica Bay area.
New York Public Library – Map Room, New York, New York.

New York City - Department of Docks and Ferries, City of New York.

- 1911 Annual Report. Borough of Queens, Occupancy of Lots at Broad Channel, Jamaica Bay, Borough of Queens, Under Permit from This Department. pp. 449-450. New York Public Library – Local History Room, New York, New York.
- 1915 Annual Report. Borough of Queens, Occupancy of Lots at Broad Channel, Jamaica Bay, Borough of Queens, Under Permit from This Department. New York Public Library – Local History Room, New York, New York.

New York City – Department of Parks and Recreation.

2000 Spring Creek Fact Sheet; New York City Department of Parks and Recreation, New York, New York.

New York Times.

- 1907 "Long Island Resort Burned." October 24, 1907. Transcript of Article in Clipping File, Collection of the Queens Borough Public Library, Long Island Division.
- 1942 "Barren Island's Last 25 Squatters Routed by Expansion of Naval Base." January 18, 1942.

O'Neill, Anne.

"Asserts Howard Landing was 'Venice of America." Transcript of letter published in *Brooklyn Eagle*, July 18, 1948. Collection of the Queens Borough Public Library, Long Island Division. Vertical File, "Howard Beach."

Pettit, William Soper.

1901 History and Views of the Rockaways. Collection of the Queens Borough Public Library, Long Island Division.

Pickman, Arnold.

- 2000 Draft Cultural Resource Baseline Study Jamaica Bay Ecosystem Restoration Report. Report on file with the U.S. Army Corps of Engineers, New York District, New York, New York.
- Stage IA Archaeological Documentary Study, Flatlands Retail Center, Block
 Lots 200 and 301, Borough of Brooklyn, CEQR #99-DME-005K. Report on file at the New York City Landmarks Preservation Commission.
- 1990 Cultural Resource Reconnaissance Atlantic Coast of New York Borough of Brooklyn Rockaway Inlet to Norton's Point. Report on file with the U.S. Army Corps of Engineers, New York District, New York, New York.

Prime, Nathaniel.

1845 History of Long Island From Its Earliest Settlement By Europeans To The Year
 1845 With Special Reference To Eccleslastical Concerns.
 Robert Carter Printing, New York, New York.

Robinson, E.

- 1886 Robinson's Atlas of the City of Brooklyn, Kings County, New York. New York Public Library – Map Room, New York, New York.
- 1890 Robinson's Atlas of Kings County, New York.

 New York Public Library Map Room, New York, New York.

Rosenzweig, Lee.

2003 Personal Communication. Brooklyn Historical Information Collector.

Ross, Peter.

1902 A History OF Long Island: From Its Earliest Settlement To The Present.
The Lewis Publishing Company, New York, New York.

Sanborn Map Company

- 1901 Insurance Maps of the Borough of Queens, City of New York.

 New York Public Library Map Room, New York, New York.
- 1907 Insurance Maps of the Borough of Brooklyn, City of New York. Vol. 15 & 16. New York Public Library Map Room, New York, New York.
- 1908 Insurance Maps of the Borough of Brooklyn, City of New York. Vol. 8. New York Public Library Map Room, New York, New York.
- 1911 Insurance Maps of the Borough of Queens, City of New York. Vol. 4.
 New York Public Library Map Room, New York, New York.
- 1912 Insurance Maps of the Borough of Queens, City of New York. Vol. 8. New York Public Library Map Room, New York, New York.
- 1927 Insurance Maps of the Borough of Queens, City of New York. Vol. 18. New York Public Library Map Room, New York, New York.
- 1928 Insurance Maps of the Borough of Brooklyn, City of New York. Vol. 17 New York Public Library – Map Room, New York, New York.
- 1930 Insurance Maps of the Borough of Brooklyn, City of New York. Vols. 15 & 19. New York Public Library Map Room, New York, New York.
- 1933 Insurance Maps of the Borough of Queens, City of New York. Vols. 8 & 21. New York Public Library Map Room, New York, New York.
- 1990 Insurance Maps of the Borough of Queens, City of New York. Vol. 8. New York Public Library Map Room, New York, New York.
- 1951 Insurance Maps of the Borough of Queens, City of New York. Vols. 8.
 New York Public Library Map Room, New York, New York.
 (1933 edition updated to 1951).

Schweiger, Ronald.

2003 Personal Communications. Brooklyn Borough Historian.

Stiles, Henry R.

1884 The History of Kings County Including Brooklyn Volumes I and II. W.W. Munsell and Company, New York, New York.

Taylor, George and Andrew Skinner.

1781 Map of New York and Staten Island and Part of Long Island Surveyed by Order of His Excellency General Sir Henry Clinton, K. B. Collection of the New York Public Library.

Thompson, Benjamin F.

1843 History Of Long Island: From Its Discovery And Settlement To The Present Time – Volumes I to III. Goulds, Banks and Company, New York, New York.

Tilden.

1860 Map of Jamaica Bay.
 New York City Public Library – Map Room, New York, New York.

United States - Coast and Geodetic Survey.

- 1878 Rockaway Inlet and Western Part of Jamaica Bay, Long Island, New York
 New York Public Library Map Room, New York, New York.
- 1879 Jamaica Bay and Rockaway Inlet, Long Island, New York.

 New York Public Library Map Room, New York, New York.
- 1911 Jamaica Bay and Rockaway Inlet, Long Island, New York. Chart #542.
 New York Public Library Map Room, New York, New York.
- 1926 U. S. East Coast, New York, Jamaica Bay and Rockaway Inlet. Chart #542 New York Public Library – Map Room, New York, New York.
- 1939 U. S. East Coast, New York, Jamaica Bay and Rockaway Inlet. Chart #542 New York Public Library – Map Room, New York, New York.
- 1941 U. S. East Coast, New York, Jamaica Bay and Rockaway Inlet. Chart #542.
 Published 1942; Surveyed in 1941.
 New York Public Library Map Room, New York, New York.
- 1948 U. S. East Coast, New York, Jamaica Bay and Rockaway Inlet. Chart #542 New York Public Library – Map Room, New York, New York.

United State - Geological Survey.

1955 Coney Island, New York. 7.5 Minute Topographical Series.
New York Public Library – Map Room, New York, New York.

United States - Works Progress Administration.

- 1938 Historical Collections of the Borough of Queens. Bound Volumes in the Collection of the Queens Borough Public Library; Long Island Division.
- 1939 New York City Guide. New York: Random House, Federal Writers Project.

Ullitz, Hugo.

1919 Atlas of Far Rockaway and Rockaway Beach, Borough of Queens, City of New York. New York City.

Van Wyck, Frederick.

1924 Keskachange, or the first white settlement on Long Island. G.P. Putnam's Sons, New York, New York.

1935 Long Island Colonial Patents. A. Beauchamp Publishers; Boston, Massachusetts.

Walling, Charles.

"Marine Park 1 - Par Links Opens in Aug." Sunday News. June 16, 1963. in clipping file (Parks, Kings County). Collection of the Queens Borough Public Library, Long Island Division.

Walling, H.F.

1859 Topographical Map of the Counties of Kings and Queens, New York. New York. New York. New York, New York.

Wolverton, Chester.

1891 Atlas of Queens Co., Long Island, New York. New York
New York Public Library – Map Room, New York, New York.

Young, John C.

1955a Untitled Article, March 3, 1955 in bound collection of columns "Reminiscing with Old-Timer" from *The Wave of Long Island*. Collection of the Queens Borough Public Library, Long Island Division. 5 Vols.

1955b Untitled Article, October 8, 1955 in bound collection of columns "Reminiscing with Old-Timer" from *The Wave of Long Island*. Collection of the Queens Borough Public Library, Long Island Division. 5 Vols.

1956a Untitled Article, July 19, 1956 in bound collection of columns "Reminiscing with Old-Timer" from *The Wave of Long Island*. Collection of the Queens Borough Public Library, Long Island Division. 5 Vols.

1956b Untitled Article, September 27, 1956 in bound collection of columns "Reminiscing with Old-Timer" from *The Wave of Long Island*. Collection of the Queens Borough Public Library, Long Island Division. 5 Vols.

1959 Untitled Article, May 7, 1959 in bound collection of columns "Reminiscing with Old-Timer" from *The Wave of Long Island*. Collection of the Queens Borough Public Library, Long Island Division. 5 Vols

1963 Untitled Article, April 18, 1963 in bound collection of columns "Reminiscing with Old-Timer" from *The Wave of Long Island*. Collection of the Queens Borough Public Library, Long Island Division. 5 Vols.