

**FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR THE  
CROTON WATER TREATMENT PLANT  
AT THE HARLEM RIVER SITE**

|                |  |    |
|----------------|--|----|
| 7.12.          | HISTORIC AND ARCHAEOLOGICAL RESOURCES.....       | 1  |
| 7.12.1.        | Introduction.....                                | 1  |
| 7.12.2.        | Baseline Conditions .....                        | 1  |
| 7.12.2.1.      | Historical Background .....                      | 1  |
| 7.12.2.2.      | Existing Conditions.....                         | 11 |
| 7.12.2.3.      | Future Without the Project.....                  | 13 |
| 7.12.3.        | Potential Impacts.....                           | 14 |
| 7.12.3.1.      | Potential Project Impacts .....                  | 14 |
| 7.12.3.2.      | Potential Construction Impacts.....              | 14 |
| FIGURE 7.12-1. | HISTORIC RESOURCES AT THE HARLEM RIVER SITE..... | 7  |

## 7.12. HISTORIC AND ARCHAEOLOGICAL RESOURCES

### 7.12.1. Introduction

An historic and archaeological resource analysis evaluates an action's effects on an area that has been reported to potentially possess an historical importance and/or has not been disturbed due to construction activities. Resources encompass buildings, structures, and objects of historical, aesthetic, cultural and archaeological (subsurface) importance. In an archaeological analysis, data must be gathered from the surrounding area to predict the likelihood of resources existing in the project area.

For the site file search, the study area encompassed a one-mile radius around the Harlem River Site. The methodology used to prepare this analysis is presented in Section 4.12, Data Collection and Impact Methodologies, Historic and Archaeological Resources. Supporting documentation is also included in Appendix D.

### 7.12.2. Baseline Conditions

#### 7.12.2.1. *Historical Background*

The Indian sachems, Tequeemmet, Rechgawas, and Pachimiens conveyed the first parcel of land to the Dutch West India Company in 1639. The Company was granted a large tract of land called:

*Keskeskick, stretching lengthwise along the Kil which runs behind the island of Manhattan, mostly east and west, and beginning at the head of said Kil and running opposite of the high hill by the flat, namely by the Great Kil, with all right, titles, etc., etc..<sup>1</sup>*

The Kil behind Manhattan that is referred to in the deed is the Harlem River. Although the boundaries of the Keskeskick purchase were not very clear, it can be inferred that the water treatment plant site was included in this initial purchase. Two years later Jonas Bronk became the first white settler of the region when he bought 500 acres between the Harlem and Bronx Rivers. While initial contact between the native inhabitants and the European settlers was primarily peaceful, large-scale conflicts erupted during Governor Willem Kieft's administration of the colony (late 1630s-40s). Kieft was notorious for his harsh policies against the local tribes. Although the colony changed to English control during the late seventeenth century, little changed with regard to policies toward the Native inhabitants.

Under the English, the section of the Keskeskick patent that was adjacent to the Harlem River became the Manor of Fordham. In 1671, Governor Lovelace granted the manor to Jan (John) Archer (Arcer), a Dutchman, who was "so skilled in acquiring land from the Indians that he was nicknamed Koopall (Buy all) by his neighbors."<sup>2,3</sup> Archer's manor, named for the ford at Spuyten Duyvil Creek, extended along the Harlem River from "The Wading Place," just before

---

<sup>1</sup> Jenkins, S. 1912. *The Story of The Bronx*. G.P. Putnam's Sons. NY.

<sup>2</sup> Bolton, R. 1848. *A History of the County of Westchester, from Its First Settlement to the Present Time*. 2 vols. Alexander Gould. NY.

<sup>3</sup> WPA. 1982. *The WPA Guide to New York City*. Pantheon Books. NY.

the bend in the Harlem River, south to Highbridge, and east to the Bronx River. Archer leased 20-acre lots to tenants who cleared and cultivated the land. Each tenant had a house and lot in the Village of Fordham, which he established on his property near the Harlem River (just northeast of the water treatment plant site). Disputes over Archer's land ownership ensued and he was eventually acknowledged as rightful owner and a formal patent was granted.

Archer's patent, the Manor of Fordham, was ruled by the Governor and his Council who dictated how Archer was to proceed as lord of the manor. Land in dispute between Harlem and Fordham at Spuyten Duyvil was eventually granted to Fordham, however, Archer's rule over Fordham was not without its problems. In 1669-1670 residents of his manor complained to the Mayor's Court in New York that he acted forcefully and generated troubles between the residents. The court, to no avail, essentially told Archer to mend his ways. After several more grievances were filed, the court ordered that the magistrates of Harlem hear further complaints. Archer mortgaged the Manor in 1684 to Cornelis Steinwyck, a New York merchant.<sup>4</sup> After both Archer's and Steinwyck's deaths that same year, the lands were inherited by Steinwyck's wife. After remarrying, Margaretta Steinwyck Selyns and her husband granted the property to the elders and overseers of the Nether Dutch Church of New York in 1694.<sup>5</sup> In 1753 the Lieutenant Governor of New York granted the church elders permission:

*to sell and dispose of their lands, tenements, and hereditaments in the County of Westchester, commonly called and known by the name of the Manor of Fordham.*<sup>6</sup>

To the north of the water treatment plant site, Kingsbridge was laid out in the township of West Farms just north of Papirinemen Hill, an Indian name meaning "a place parceled out." Kingsbridge is not far from Marble Hill - named for old marble quarries. By 1673 the Albany Post Road had been laid out through the Bronx, crossing the Harlem River at Kingsbridge near its intersection with the Boston Post Road. The Albany Post Road connected Manhattan with the vast trading post at Fort Orange, now Albany. The settlement near the Harlem River in this location was named after the first bridge built by Frederick Philipse, linking Manhattan to what is now the Bronx. Local farmers resented paying toll to Philipse, a wealthy landholder, and reacted by erecting the free Farmers' Bridge for their own use. Stagecoach service was established on it in 1785.<sup>7</sup> As with the rest of the borough, the project area was rural farmland until the time of intensified residential and commercial development in the mid-to-late nineteenth century.

During the American Revolution both British and American militia recognized the strategic importance of safe passage over the Harlem River at Kingsbridge. As a result, Kingsbridge witnessed extensive Revolutionary War activity with several fortifications built nearby. Under the command of Major-General Charles Lee, a total of seven sites were selected for redoubts, two on the northern end of Manhattan, and five in the Kingsbridge area of the Bronx. Three of these redoubts were built to the east of the water treatment plant site overlooking the Harlem River from Fordham Heights. These Revolutionary War sites were located to the east of Sedgwick Avenue. Three forts were built on Spuyten Duyvil Neck and Tippet's Hill, northwest

---

<sup>4</sup> Bolton. 1848.

<sup>5</sup> Bolton. 1848.

<sup>6</sup> Bolton. 1848.

<sup>7</sup> Jenkins. 1912.

of the water treatment plant site. These were captured by the English in November of 1776, and were subsequently abandoned by 1779.

Fort Independence (a.k.a. Fort No. 4), and Fort Nos. 5, 6, 7, and 8 were the defenses closest to the water treatment plant site. The extant Fort Independence Park at the north end of the Jerome Park Reservoir and Old Fort Park (Fort No. 5) at the south end of the reservoir are in the approximate locations of the original forts' footprints.

During the late 1950s an archaeological salvage investigation was conducted in the location of Fort Independence. The archaeologists uncovered evidence of the army occupation, including the foundations of two buildings identified as quarters, a stone platform, campfire hearths, and a refuse dump. The archaeological report presents extensive inventories of the military-related artifacts as well as miscellaneous camp equipment.

Fort No. 5 was a redoubt of about seventy square feet situated due south of Fort Independence at the southwest end of the Jerome Park Reservoir. Established on Dominie Tetard's farm of sixty acres, it was confiscated and occupied by the British in 1777 and abandoned in 1779.<sup>8</sup> Bronx Historian Reginald Bolton and others excavated the site, located approximately 100 feet east of Sedgwick Avenue, during the early twentieth century.<sup>9</sup> Excavations detected the remains of brick fireplaces and other military relics, including regimental buttons.

Fort No. 8, which stood at the site of Bronx Community College less than one mile southeast of the water treatment plant site, had been in the hands of the English from the time it was built in 1776 until it was demolished in 1782.<sup>10</sup> When the Schwab family eventually built their mansion on the site, they were said to have turned up cannonballs, musket balls, coins, and buttons from the fort.<sup>11</sup> The house now stands on the campus of the Bronx Community College.<sup>12</sup>

Additional archaeological evidence of Revolutionary War activity was encountered when the Jerome Park Reservoir was constructed. The large excavation revealed "several cannon-balls, bayonets, swords, buttons, and other military relics."<sup>13</sup> Jenkins further reports that "from time to time, similar relics have been unearthed, including several skeletons, one of which by means of the regimental buttons and shreds of uniform that remained, was identified as that of a British officer".<sup>14</sup>

Following the Revolution (1788) the water treatment plant site, which was in the area known as West Farms (Fordham), was incorporated into the township of Westchester. West Farms was later established as a separate township in 1846. The Bronx became the Annexed District of New York City in 1874 and was chartered as a Borough in 1898.<sup>15</sup> During the nineteenth and twentieth centuries the creation of the New York City Water System, the building of the Harlem

---

<sup>8</sup> Jenkins. 1912.

<sup>9</sup> Jenkins. 1912.

<sup>10</sup> McNamara, J. 1984. *History in Asphalt*. The Bronx County Historical Society. New York, NY.

<sup>11</sup> McNamara. 1984.

<sup>12</sup> Ultan, L. 1979. *The Beautiful Bronx 1920-1950*. The Bronx County Historical Society. NY.

<sup>13</sup> Jenkins. 1912.

<sup>14</sup> Jenkins. 1912.

<sup>15</sup> Jenkins. 1912.

River Canal, the introduction of the railroad, the construction of the University Heights Bridge, and the construction of the Major Deegan Expressway have had a profound effect on the project neighborhood.

### *7.12.2.1.1. Harlem River Ship Canal*

Almost immediately after European settlement of the Bronx, the Harlem River presented fording and navigation challenges to the local population. Initially, it was thought that a ferry service would provide the best access from Harlem to the lands further north. In 1666 the English Governor, Nicolls, granted a charter to the residents of Harlem to establish a ferry to the mainland to allow the passage of people, goods, and livestock.<sup>16</sup> The following year Nicolls granted a patent to Delaval, Turneur, Verveelen and others from Harlem, giving them four lots on the mainland near Spuyten Duyvil.<sup>17</sup> Verveelen established a ferry service at Spuyten Duyvil but soon encountered problems with objectors. To circumvent his ferry fees, nearby residents would walk or swim their livestock across the Harlem River at “the fording place” at Spuyten Duyvil near what is now Kingsbridge. Nearby residents tore down fences erected by Verveelen to block river access, and the Mayor’s court of the City of New York supported him by exacting payments from the evaders for missed ferry fees.<sup>18</sup> In 1669 Verveelen’s ferry service ceased. In time, the need for passage over the Harlem River increased, and the rights to build a bridge were granted. A bridge at Williamsburg was eventually completed in 1693. For a time, the Philipse family, landowners in Westchester, collected fees for this bridge. Following the Revolution, however, passage was free.

As the population grew on both sides of the Harlem River, additional bridges were constructed. Shipping traffic, however, was being restricted because of the tidal action of the Harlem River and the narrow Spuyten Duyvil Creek. For most of the nineteenth century the Harlem River had an available depth of approximately ten feet from the East River to Morris dock, except at High Bridge where the depth was six feet. From Morris dock to Fordham Landing there was a crooked channel approximately seven feet deep, and above that point the river could be used only by vessels of small draft. Plans to improve navigation along the river began as early as 1826 when the Harlaem Canal Company was established. Unfortunately, although they started work in the area of the Spuyten Duyvil Creek, the project was abandoned. Another company, the Harlaem Canal Survey Company similarly abandoned it the following year. Finally in 1863, the Harlem River Canal Company was chartered.

During the 1860s efforts were made to improve navigation on the Harlem River. A survey of depth soundings was completed, and a navigable channel with a uniform depth of ten feet at mean low water was proposed. The proposed 150-foot-wide channel was thought to be wide enough and deep enough to allow smaller and mid-sized vessels safe passage. The plan called for dredging the soft mud from portions of the river. The irregularly shaped shoreline along much of the channel’s edge was eventually filled and turned into fast land. (Fast land is the original landmass that was not underwater or inundated to a degree that made use questionable; it was part of the original shoreline. See Figure 7.12-1 for a depiction of the areas that are fast

---

<sup>16</sup> Scharf, J.T. 1886. History of Westchester County, New York. Two volumes. Picton Press, Maine. L.E. Preston and Company, Philadelphia.

<sup>17</sup> Scharf. 1886.

<sup>18</sup> Scharf. 1886.

land at the water treatment plant site.) Thus began the first major steps toward creating the Harlem River Canal. The Harlem River Ship Canal project was modified over the next three decades until work was completed in 1895.

The construction of the Harlem River Ship Canal entailed introducing a bulkhead line outboard of the existing shoreline and excavating the large canal bypass through Dyckman's meadow to the mouth of the Spuyten Duyvil Creek.<sup>19</sup> This would eliminate having to travel around the narrow bend in the Creek and speed up shipping. Before the Harlem River Ship Canal was dug in 1895 Marble Hill was physically connected to Manhattan. Following the creation of the canal, Marble Hill became an island until 1923 when the remaining section of the creek was filled. The canal project also provided for the creation of a continuous channel at least fifteen feet deep and four hundred feet wide, except at High Bridge where it is only three hundred and seventy-five feet wide, and at Dyckman's meadow where, in a rocky section, it is three hundred and fifty feet wide and eighteen feet deep. Amid much fanfare, the canal was opened in June 1895 just north of the water treatment plant site.

#### ***7.12.2.1.2. The Railroad***

The project area's urbanization began in earnest only after railroads linked the area with the City. The first and most important was the New York and Harlem Rail Road, which was incorporated in 1831, and began service through the County of Westchester in 1842.<sup>20</sup> This line ran through Melrose, Morrisania, and Fordham on the same route as the present Conrail tracks along Park Avenue, approximately one and a half miles east of the water treatment plant site.<sup>21</sup> By 1851 a branch line was built to the south at Port Morris along the Harlem River. By cutting the time and expense of travel, the railroad made it possible for people to live full-time in the Bronx and work in New York City. As a result, the Bronx was ripe for development, and the larger landowners were motivated to subdivide their parcels.

By 1846, population in the western Bronx had increased so much that the Town of West Farms was created. West Farms was originally a village on the Bronx River, which had become an important manufacturing center, due to its water-powered mills. The new township consisted of all the present Bronx west of the Bronx River, including the project area.<sup>22</sup>

The new residents clamored for improved roads and other municipal amenities, and annexation by New York City was discussed as early as 1864. It is significant that the streets laid out near the Harlem River continued the numbers of Manhattan streets.<sup>23</sup> When a referendum on annexation was finally held in 1873, Morrisania, West Farms and Kingsbridge voted overwhelmingly to become part of New York City, and officially became the 23rd and 24th Wards in 1874. Under the New York charter the two wards were officially designated the Borough of the Bronx.

---

<sup>19</sup> Stevens, S. 1892. Harlem River Ship Canal. Letter to the Commissioners of the Sinking Fund. New York, NY.

<sup>20</sup> Jenkins. 1912.

<sup>21</sup> Shonnard, F. and W. W. Spooner. 1900. History of Westchester County New York from Its Earliest Settlement to the Year 1900. New York History Company. New York, NY.

<sup>22</sup> Shonnard and Spooner. 1900.

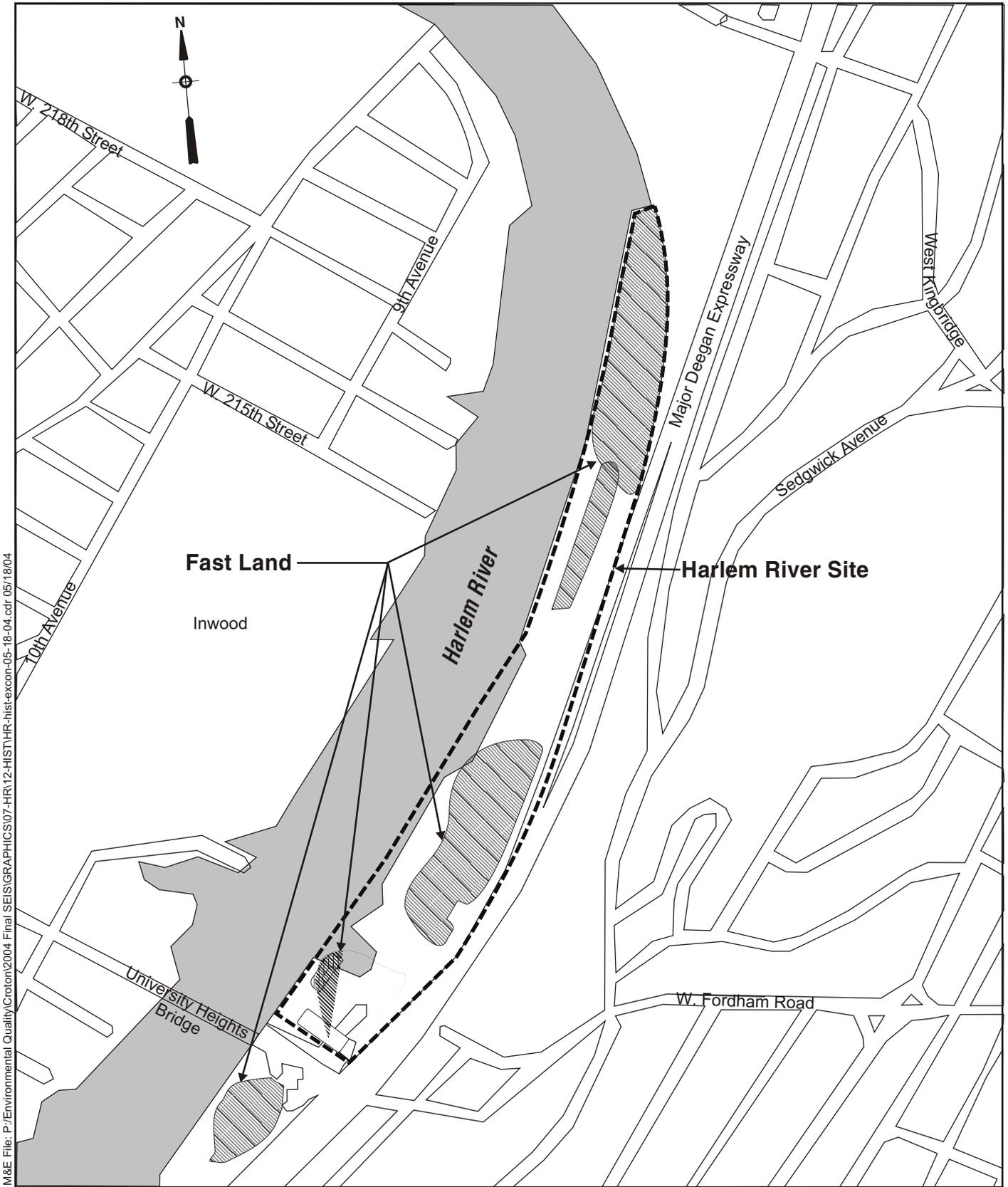
<sup>23</sup> Shonnard and Spooner. 1900.

During the 1860s, residents continued to request new transportation lines. The eastern side of the Harlem River became the focus for a new railroad corridor. On April 24, 1867, the Spuyten Duyvil and Port Morris Railroad was chartered.<sup>24</sup> In 1872, the New York Central and Hudson Railroad Company built the Spuyten Duyvil and Port Morris Line, linking the Harlem Line in the south Bronx to the Hudson Line proper at Spuyten Duyvil. This line passed along the shore of the Harlem River and looped northwestward around Marble Hill. The Putnam Line was opened in 1881 and ran north from Harlem alongside, and to the east of, the Spuyten Duyvil and Port Morris Line to Putnam County. The two lines separated north of E. 230<sup>th</sup> St. with the Hudson Line branching westward and the Putnam Line continuing north.

In the 1880's, a rock cut was made through Marble Hill to allow the Railroad Water Level Route access to the Harlem River's north bank. In 1905-1906, the Railroad Line was rebuilt in connection with electrification. The old Spuyten Duyvil and Port Morris Line was relocated to run along the Harlem River Ship Canal in 1906. As a result, the Hudson and Putnam Lines separated south of 192<sup>nd</sup> Street. The rail alignments have not changed significantly since 1906.

---

<sup>24</sup> Jenkins. 1912.



Not to Scale

## Historic Resources at the Harlem River Site

### *7.12.2.1.3. University Heights Bridge*

Throughout the historical development of the Bronx, numerous efforts were made to establish access ways across the Harlem River. This section of the Harlem River served as a transportation link between what is now the Bronx and the Inwood section of Manhattan. The early King's Bridge crossed the Harlem River at West 230<sup>th</sup> Street and Kingsbridge Avenue near the northern limit of the water treatment plant site. Built by Frederick Philipse in 1693, he charged a toll to everyone crossing his lands and bridge. "During the Revolutionary War, it was the main military artery for both sides, and was under continuous attack. The bridge fulfilled its duties until 1916 when the Spuyten Duyvil Creek was filled in. During excavations in the 1960's, parts of the wooden span were brought to the surface by workmen, and are now in the possession of the Kingsbridge Historical Society."<sup>25</sup>

Benjamin Palmer built a second wooden bridge, referred to as either the Farmer's Bridge or the Free Bridge, in 1758 at West 225<sup>th</sup> Street and Exterior Street, also on the edge of the water treatment plant site. This bridge was an attempt to by-pass the toll on the King's Bridge. "When the Ship Canal was dug past West 225<sup>th</sup> Street, the bridge was stranded and covered over with landfill in 1911."<sup>26</sup>

The Fordham Footbridge (first proposed in 1874 and erected in 1881 through private funds) spanned the Harlem River just north of the University Heights Bridge for approximately 15 years. This touchdown area is noted on historical maps as Fordham Landing. The narrow, wooden-trestle bridge was only four feet above the Harlem River but it was not considered an obstacle to shipping because the Harlem River was not navigable north of Sherman Creek at that time. The footbridge was removed ca. 1891 in preparation for the construction of the Harlem River Ship Canal to the north of the water treatment plant site.<sup>27</sup> A replacement span was not constructed.

At the turn of the twentieth century, the City was considering the construction of a new vehicular bridge for the Fordham Landing location, but the cost for the latest engineering designs was too high to win City approval. Therefore, when the ca. 1895 Broadway Bridge span was being replaced in 1903 with a bridge that could accommodate rail traffic, plans were activated through the War Department to transfer the Broadway span to the Fordham Landing location. The Board of Alderman formally adopted the name "University Heights Bridge" in 1904. The Boller-designed central span of the Broadway Bridge was floated downriver to the Fordham Road – 207<sup>th</sup> Street location in 1906. In anticipation of the move, a river channel had been dredged, local streets widened, and caisson foundations and pier supports were built. A new wheel-tread and pinion-rack was also installed.<sup>28</sup>

Still dominating the southern limit of the water treatment plant site, the University Heights Bridge is a testament to the aesthetics of the 1890s, when ornament was considered both

---

<sup>25</sup> McNamara. 1984.

<sup>26</sup> McNamara. 1984.

<sup>27</sup> Stevens. 1892.

<sup>28</sup> Reier, S. 1977. *The Bridges of New York*. Quadrant Press. New York, NY.

beautiful and essential. Boller's structural artistry is displayed in the light and playful cut-outs and in the peak silhouette of the span itself.<sup>29,30</sup> Technologically, the University Heights Bridge is a rim-bearing swing bridge, comprised of two continuous trusses supported by a drum girder at the center, and toggle end lifts at the end piers. The King Bridge Company under the direction of the Department of Public Works, New York, completed the construction.<sup>31</sup>

Boller designed five spans across the Harlem River and won the acclaim of the American Society of Engineers, particularly for his Macombs Dam Bridge to the south. Four of these bridges, including the University Heights Bridge, are listed in the *Guide to Civil Engineering Projects in and around New York City*.<sup>32</sup>

#### ***7.12.2.1.4. Major Deegan Expressway***

In the early 1930s, the Regional Plan Association (RPA) proposed the creation of a network of expressways and parkways all around the metropolitan area. One of the recommended routes was from the Tri-Borough Bridge north through the Bronx to upstate New York on the east side of the Hudson River. In 1935 Robert Moses, the New York City arterial coordinator, began the initial work on the Major Deegan Expressway. Named after Major William F. Deegan, an Army Corps of Engineers architect and WWI veteran, the first one and a half miles connected the Tri-Borough Bridge to the Grand Concourse. The road was six lanes wide and also called NY 1B.

After the construction of the initial section of the road, plans were immediately made to extend it to Van Cortlandt Park. The favored route was along the Bronx shorefront of the Harlem River. The new section would allow the road to connect with the Mosholu, Henry Hudson, and Saw Mill River Parkways. When the route along the Harlem River was constructed, the one-mile stretch in the University Heights area was built at different levels to provide motorists with a river view. From 1939 to 1950, work on the Major Deegan Expressway ceased until Moses pushed through the plan to extend the route through Van Cortlandt Park to the Westchester County border. The 8.5 mile long Major Deegan Expressway was completed in 1956.

The adjacent area along the Harlem River shoreline, including the water treatment plant site, has been altered as a result of the introduction of a shoreline, the shipping canal construction and dredging, and various forms of commercial development.

---

<sup>29</sup> Reir. 1977.

<sup>30</sup> McNamara. 1984.

<sup>31</sup> No Author Listed. 1906. "The Replacement of the Broadway Bridge over the Harlem Ship Canal." *The Engineering Record*: Vol. 54, No. 5.

<sup>32</sup> The American Society of Civil Engineers 1997. *Guide to Civil Engineering Projects in and around New York City*. New York, NY.

### 7.12.2.1.5. *New York City Water Supply System*

As New York City rapidly expanded during the nineteenth century the need for clean water was of paramount importance. Most of the Manhattan springs, ponds, and wells had been polluted by the last quarter of the eighteenth century. The search for significant outside sources of water was a continuing problem that required a large-scale solution. When 3,500 people died during the cholera epidemic of 1832, and millions of dollars were lost in the catastrophic Great Fire of 1835, it became clear that the growing city needed a new and abundant source of water.

In an attempt to address these problems, the City built a series of pumps over underground springs through the eighteenth and early nineteenth centuries. The most famous of these, the Tea Water Pump, opened in the 1740s at what is now Park Row in Manhattan, and operated for 80 years until it too was declared unsanitary.<sup>33</sup> However, these measures failed to meet the needs of the City's growing population. A number of other failed attempts to supply the city with water resulted in the creation of the New York Water-Works Company in 1825, and by 1833 plans for the Croton Aqueduct were created.

The Croton Water Supply System is the oldest municipal system in the United States to employ a system of aqueducts for transporting water from afar. The original Croton Aqueduct was constructed in 1842 after years of failed attempts to deal with New York City's impoverished and unsanitary water conditions.

The aqueduct, designed by the engineer John B. Jervis, consisted of iron pipes protected by brick masonry. Built by Irish immigrants over a period of five years it covered a distance of 41 miles, running from the Croton Dam in Westchester County south to a receiving reservoir at what is now the Great Lawn in Central Park. Water was then piped to a distributing reservoir at 42nd Street, where the New York City Public Library now stands.<sup>34</sup> The first Croton water system opened in 1842 and supplied over 60 million gallons of water a day to the City via what is now known as the Old Croton Aqueduct, which is located east of the water treatment plant site, on the east side of Sedgwick Avenue.

When it was completed in 1842, it was the main source of water for the City until its capacity proved inadequate. By 1861 an enlarged main was constructed, and the need for a greater supply was recognized. In the 1890s the construction of the New Croton Aqueduct (NCA) was planned in conjunction with the creation of the Jerome Park Reservoir, and the original aqueduct system was renamed the "Old Croton Aqueduct."

The NCA is mostly a tunnel laid through rock. It is at least three times larger than the Old Croton Aqueduct and is situated further inland, emptying into the Jerome Park Reservoir. Both the old and new aqueducts ended at the 135th Street Gate House, where cast-iron pipes carried water into the current Central Park Reservoir. With the inception of the NCA, portions of the old aqueduct were closed while others were drastically altered and demolished. Regardless, it

---

<sup>33</sup> Koepfel, G. 1994. "A Struggle for Water." *Invention And Technology*, Winter 1994.

<sup>34</sup> Jackson, K. 1995. *The Encyclopedia of New York*. Yale University Press. New Haven, CT.

continued to carry a diminished capacity of water to New York through 1955. While portions of it are still in use in northern Westchester County, it no longer brings water to New York City.<sup>35</sup>

#### **7.12.2.2. Existing Conditions**

##### **7.12.2.2.1. Historic Resources**

The Old Croton Aqueduct, dating to the 1840s, is located east of the water treatment plant site, on the east side of Sedgwick Avenue. The NCA (built between 1887-1893) also runs to the east of the water treatment plant site. A small stone Gate House (built ca. 1890) of the NCA is located nearby on West Burnside Avenue at the southwest corner of Phelan Place. The Old Croton Aqueduct, north of New York City, is currently listed on the National Register of Historic Places. Both the southern section of this system and the NCA are potentially eligible for inclusion on the National Register of Historic Places. At this time, the NYC Landmark Preservation Commission (NYCLPC) does not intend to pursue granting these structures Landmark status. However, the NYS Office of Parks, Recreation, and Historic Preservation (OPRHP) has confirmed their potential significance.<sup>36</sup>

The University Heights Bridge (built ca.1895-1906), located at the southern end of the water treatment plant site, is also potentially eligible for inclusion on the National Register of Historic Places.

##### **7.12.2.2.2. Archaeological Resources**

**Prehistoric Potential and Sensitivity.** A site file search at the New York State Museum (NYSM) and the OPRHP identified 17 prehistoric sites within a one-mile radius of the water treatment plant site (see Appendix D). The NYSM, which inventories only prehistoric sites, reported fifteen sites either directly adjacent to or within approximately one-mile of the water treatment plant site. The OPRHP site file search reported site numbers A061-01-0114, the Harlem River Shellheaps, and A061-01-0127, another shell midden, to the west of the water treatment plant site, adjacent to the opposite shore of the Harlem River. Site A061-01-0114 included the remains of dog burials. To the southwest, site A061-01-0538, another shell midden of unknown age, was exposed during the grading of Tenth Avenue.

There is strong evidence of an extensive Native American presence in the surrounding neighborhood, as indicated by the many habitation sites and trails documented historically and through recent archaeological investigations. Although many of the known Indian sites and trails have since been covered by historical development, a wealth of recorded information about these resources strongly supports the prehistoric Native American presence in the immediate area.

---

<sup>35</sup> Cooper, L.G. n.d. Walker's Guide to the Old Croton Aqueduct. New York State Office of Parks, Recreation, and Historic Preservation.

<sup>36</sup> Shaver, P. 1994. Resource Evaluation, Jerome Park Reservoir Complex - November 4, 1994. New York State Office of Parks, Recreation and Historic Preservation. Waterford, NY.

Evidence of Native American occupation has been observed in the north and western reaches of the Bronx and across the River in the northern limits of Manhattan. Specifically, Native American sites have been recorded to the north in Kingsbridge, to the west in Spuyten Duyvil and Inwood, and to the east in Fordham.

The extensive documentation of aboriginal occupation throughout the area suggests that the Harlem River Site may have been the location of prehistoric activities. Typically, prehistoric peoples exploited the terraces along streams and rivers for temporary encampments and possibly longer-term occupations. In fact, numerous sites and middens have been identified along the Harlem River.

New York City Landmarks Preservation Commission (NYCLPC) has identified areas along the Harlem River as sensitive for Native American potential. However, this sensitivity rating is based on the collections and information gathered decades prior to the drastic changes to this landscape in the last 110 years: creation of the Harlem Ship Canal, construction of major bridge crossings, construction of the railroad berm, and the construction of the Major Deegan Expressway.

Although riverside sites are frequent, it is important to recognize that the shape of the land has been considerably altered over time, so the original shoreline and the small islands that once dotted the Harlem River no longer exist. In the location of the water treatment plant site, the introduction of the Harlem River bulkhead line in the nineteenth century has altered the shoreline considerably. The likelihood that prehistoric resources are extant within much of the site, considering the extreme land manipulation, is minimal. However, the portions of the site that contain fast land, specifically at the north and south ends, might have the potential to host these resources.

***Historical Potential and Sensitivity.*** Documentary research found that the Archer homestead was well south of the project site.<sup>37</sup> Although the Archers had tenant farmers living on the manor lands, there is no indication that the riverside area would have been the site of any dwellings or associated agricultural structures during the seventeenth through nineteenth centuries. The limited amount of fast land present and the tidal activity of the Harlem River would have precluded the construction of these structures along the riverbank. Therefore, the Harlem River Site is not considered sensitive for early historical resources.

At the time of the Revolutionary War, a line of fortifications was built along the Fordham Heights ridge. Subsequent nineteenth century homeowners (e.g., the Schwab and Bailey families), living east of the water treatment plant site, found Revolutionary War relics in their gardens or during house construction.<sup>38</sup> According to documentary research, all of the Revolutionary War resources were situated east of Sedgwick Avenue and distant from the water treatment plant site. Although Fordham Ridge, which rises above the Harlem River in this section of the Bronx, saw extensive activity during the War, the uneven shoreline and the tidal activity of the river would have precluded the construction of these structures along the river banks. At present, only small portions of the water treatment plant site are fast land and there is

---

<sup>37</sup> Jenkins. 1912.

<sup>38</sup> Jenkins. 1912.

no indication that any significant features or *in situ* cultural deposits dating to the Revolutionary War era would be present.

As discussed above, the project area was used as a landing for bridges to Manhattan since the earliest settlement in the area in the seventeenth century. Almost all of the bridge sites, however, were outside of the water treatment plant site boundaries. The 1881 footbridge at Fordham Landing was removed when the Harlem River Ship Canal was constructed and the shoreline was reconfigured for larger ship traffic. The touchdown location of the footbridge was further disturbed by the twentieth century construction of the University Heights Bridge, just south of its location.

The railroad has been a dominant factor in the character of the water treatment plant site area since the introduction of the rail corridor in the mid-nineteenth century. Prior to the horizontal expansion of the shoreline, after ca. 1900, the rail line hugged the shore in portions of the water treatment plant site. No significant railroad-related structures (other than railroad spurs) were identified within the water treatment plant site during the documentary assessment.

The examination of cartographic resources found that a significant degree of landfilling and bulkheading has occurred along the shoreline of the Harlem River during the late nineteenth through early twentieth centuries. While the Harlem River Canal is clearly a significant resource, it is located far outside of the water treatment plant site boundaries. In addition, the artificial shoreline and fill on the western edge of the site is not considered to be sensitive because of its late date and the unknown origin of the fill material.

An archaeologist conducted a site visit and walkover reconnaissance survey on November 20, 2001. The archaeologist took field notes and photographed the water treatment plant site. No evidence of prehistoric resources was noted during the visit.

#### **7.12.2.3. *Future Without the Project***

The Future Without the Project conditions were developed for the anticipated peak year of construction (2009) and the anticipated year of operation (2011) for the proposed plant. The anticipated peak year of construction is based on peak truck traffic and the peak number of workers.

In the Future Without the Project, it is anticipated that the water treatment plant site would remain relatively unchanged from its existing condition. Although as described in Section 7.2, Land Use, Zoning, and Public Policy, comprehensive waterfront plans have been identified that propose redevelopment of the area, the only proposal to have been initiated to date is the construction of the Storage Post, a self-storage facility (formerly Butler Lumber Co.) on the water treatment plant site, proposed to be completed by 2004. Considering the previous extreme land manipulation of the site, the likelihood that prehistoric resources are extant within much of the water treatment plant site is minimal. In addition, the water treatment plant site is not considered sensitive for early historical resources.

### **7.12.3. Potential Impacts**

#### ***7.12.3.1. Potential Project Impacts***

The anticipated year of operation for the proposed plant is 2011. Therefore, potential project impacts have been assessed by comparing the Future With the Project conditions against the Future Without the Project conditions for the year 2011.

##### ***7.12.3.1.1. Historic Resources***

Although the University Heights Bridge would be used for access to the water treatment plant site, the bridge would not undergo any modifications as part of the proposed project; therefore, no significant impacts are anticipated to this historic resource.

##### ***7.12.3.1.2. Archaeological Resources***

Based on the presentation of the existing conditions, the likelihood that prehistoric resources are extant at much of the Harlem River Site is minimal, considering the extreme land alterations. However, portions of the water treatment plant site that contain fast land, specifically at the north and south ends, might have the potential to host these resources. The Harlem River Site is not considered sensitive for early historical resources. See the Construction Impacts section below for further details regarding field-testing for archaeological resources. It is not anticipated that operation of the proposed plant would affect any potential archaeological resources on site.

#### ***7.12.3.2. Potential Construction Impacts***

If the Harlem River Site were selected, the anticipated year of peak construction for the proposed plant is 2009. Therefore, potential construction impacts have been assessed by comparing the Future With the Project conditions against the Future Without the Project conditions for the year 2009.

##### ***7.12.3.2.1. Historic Resources***

As previously discussed, although the University Heights Bridge would be used for access to the water treatment plant site, the Bridge would not undergo any modifications during construction of the proposed project. The Bridge would be protected and construction practices would be reviewed by the NYS Office of Parks, Recreation, and Historic Preservation; therefore, no significant adverse impacts are anticipated to this historic resource.

##### ***7.12.3.2.2. Archaeological Resources***

Prior to excavation in any area of the water treatment plant site identified as archaeologically sensitive, archaeological field-testing would be undertaken for prehistoric cultural resources in consultation with OPRHP. The only areas that would be considered archaeologically sensitive are the Fastland areas to the North near where River Plaza is being built, and to the South by the University Heights Bridge. The presence of excessive fill on the

remainder of the water treatment plant site would make additional investigations unnecessary. As discussed above, the project area was used as a landing for bridges to Manhattan since the 17<sup>th</sup> century. However, almost all of these bridge sites are outside of the water treatment plant site boundaries. The 1881 footbridge at Fordham Landing was removed when the Harlem River Ship Canal was constructed and the shoreline was reconfigured for larger ship traffic. The touchdown location of the footbridge was further disturbed by the 20<sup>th</sup> century construction of the University Heights Bridge, just south of this location. Remnants of these earlier crossings (if they exist) are not listed on the National Register of Historic Places. Therefore, it is not anticipated that construction activity would significantly impact historic resources related to the former bridge crossings. There would be major changes to the shoreline at the water treatment plant site to accommodate barging activity. Because there is a potential for significant adverse impacts on artifacts of historic importance, further consultation with the NYCLPC and State Historic Preservation Office would take place after the preferred site is selected. Barging activity would not result in disturbance to items of historical importance; therefore, no significant adverse impacts to historic resources are anticipated from barging activities. If remnants of earlier Harlem River crossings are discovered during construction or barging activity at the site, OPRHP would be consulted.