

**STATEMENT OF FINDINGS  
FOR THE SITING OF THE  
CROTON WATER TREATMENT PLANT**

CEQR No. 98DEP027

July 16, 2004

Pursuant to applicable environmental rules and procedures; specifically in accordance with New York City's Executive Order 91 of 1977 and its amendments establishing City Environmental Quality Review ("CEQR"), Article 8 of the Environmental Conservation Law establishing the State Environmental Quality Review Act ("SEQRA") and its implementing regulations (6 NYCRR Part 617), and the State Environmental Review Process ("SERP") as required by the State Revolving Loan Fund Program, the New York City Department of Environmental Protection ("NYCDEP"), acting as lead agency, issued a Notice of Completion of the Final Supplemental Environmental Impact Statement ("SEIS") for the proposed Croton Water Treatment Plant on June 30<sup>th</sup>, 2004. Subsequently, a Notice of Correction and an errata sheet were issued on July 6, 2004.

NYCDEP, on behalf of the City of New York, proposes to design, construct and place into operation a 290 million-gallon-per-day (mgd) water treatment plant to provide filtration and disinfection of the Croton Water Supply System ("Croton System") at the Mosholu Golf Course Site in Van Cortlandt Park in Bronx, NY ("Mosholu Site"). The project is being planned to meet the public water supply and public health needs of the City, and to comply with State and Federal drinking water standards and regulations.

The Croton System is part of an intricate water system that provides New York City ("City") with its drinking water. The Croton System is the oldest of the City's three systems (Croton, Catskill and Delaware) that provide drinking water to the City and upstate communities. The Croton watershed is a series of interconnected reservoirs and lakes in northern Westchester and Putnam Counties. The Jerome Park Reservoir, a distribution reservoir, is located at the downstream end of the Croton System and is the point at which Croton water enters City's water distribution system. The Croton System provides an average of approximately 10 percent of the City's average daily demand. During droughts, the Croton System can provide up to 30 percent of in-City consumption.

The Croton Water Treatment Plant ("WTP") would also include the construction of new water tunnels to connect the plant to the New Croton Aqueduct ("NCA") and the improvements and rehabilitation of structures related to distribution connections at and near Jerome Park Reservoir in the Bronx, New York City.

The SEIS was prepared to assist DEP in selecting the location for the Croton WTP. Three alternative sites were evaluated for the WTP in the Final SEIS these included the Eastview Site in the Town of Mount Pleasant, Westchester County; the Mosholu Site in the Bronx, New York City; and the Harlem River Site, also in the Bronx, New York City. The Final SEIS thoroughly evaluated the various potential environmental impacts of the proposed WTP at the three sites being considered. It also identified measures to avoid or mitigate potential significant adverse environmental impacts to the maximum extent practicable.

The Final SEIS identified the Mosholu Site, in the Bronx, as the preferred site for the proposed Croton WTP.

NYCDEP, by its Commissioner Christopher O. Ward, has considered the Croton Water Treatment Plant Final SEIS and finds that all CEQR/SEQRA requirements have been met. NYCDEP finds that consistent with social, economic, and other essential considerations of State and City policy, from among the reasonable alternatives available, the action is one that minimizes or avoids potential significant adverse environmental impacts to the maximum extent practicable. In addition, potential significant adverse environmental impacts disclosed in the Final SEIS at the Mosholu Site will be minimized or avoided by incorporating as conditions to this decision those mitigative measures that are identified as practicable, as well as further measures to reduce the affect of the project on the public, such as the use of Ultra Low Sulfur Diesel Fuel (“ULSD”), noise restrictions, and the building of an ornamental wall along Jerome Avenue.

NYCDEP, by its Commissioner, hereby approves the siting of the Croton Water Treatment Plant at the Mosholu Golf Course in Van Cortlandt Park in the Bronx, NY, including the mitigation measures set forth in the Final SEIS. The social, economic, environmental, including mitigation measures, and other factors that form the basis of this decision are discussed below.

**I. Croton Water Treatment Plant is Necessary to Protect Public Health and Ensure Future Viability of the Croton Water Supply.**

In 1997, the United States of America and the State of New York brought an action against the City, under the federal Safe Drinking Water Act (“SDWA”), the federal Surface Water Treatment Rule (“SWTR”) and the State Sanitary Code (“SSC”), seeking to compel the City to filter its Croton water supply. This action was resolved through a federal court consent decree (United States, et al. v. City of New York, et al., Index No. CV 97-2154 (EDNY), entered on November 24, 1998, as supplemented (as supplemented, the “Croton Consent Decree”)), to which the City is a party, and under which the City is obligated to design and construct a water treatment plant to provide filtration and disinfection of the Croton water supply to meet the requirements of the SWTR and SSC.

Although the issue of filtration is settled by virtue of the Croton Consent Decree, it is useful to briefly summarize why filtration is necessary and desirable to protect public health and ensure the future viability of the Croton water supply.

Although the Croton system has provided high quality water to consumers for many years, and continues to provide water that meets all existing health-based standards, there is ample evidence that, absent filtration, it will be difficult for the City to continue relying on the Croton system going forward as a viable part of its water supply infrastructure.

First, the Croton water supply originates in a small, heavily suburbanized watershed that has undergone dramatic changes since World War II. Population growth, residential and

commercial development, and resulting wastewater discharges and stormwater runoff have all placed greater stress on this watershed.

Although still meeting existing health-based standards, Croton water often experiences problems associated with color, odor and taste. This contributes to regular shutdowns of the Croton system in late summer and early fall, depriving the City of a water source that, on average, supplies 10 percent of the City's daily demand and could supply up to 30 percent in times of drought. Filtration would eliminate color, odor and taste problems by removing organic matter from Croton water, and would allow the City to use the Croton water supply year-round, greatly enhancing the overall dependability of its water supply system. The Croton WTP project is designed so as to allow the City to consistently treat and convey 290 mgd of Croton water to the distribution system.

Second, when chlorine is added to Croton water, for purposes of disinfection, it results in the formation of certain compounds known as disinfection byproducts ("DBPs"). Certain laboratory studies have indicated that DBPs may lead to cancer or other health problems such as bladder, colon, and rectal cancers as well as adverse reproductive outcomes such as neural tube defects and miscarriages. The federal government has adopted regulations governing permissible levels of DBPs in drinking water, and is proposing more stringent regulations to take effect in the future. Because of the nature of the Croton watershed, and the resulting chemical makeup of Croton water, NYCDEP predicts that Croton water will not consistently meet these new standards going forward. Indeed, in May 2003, Croton water violated federal regulations governing the maximum contaminant level for five haloacetic acids, a group of DBPs, for the first time. Filtration will reduce the level of DBPs by removing organic material that would otherwise react with chlorine to form DBPs. In addition, the use of filtration to remove these organics results in less chlorine needed to disinfect the water.

Third, NYCDEP has conducted extensive studies of the Croton watershed, the natural processes that occur within the reservoirs and on the surrounding landscape, water quality data in reservoirs and streams, and various options for watershed management. While watershed protection must remain an integral part of the City's long-term strategy to safeguard Croton water even after a filtration plant is built, the analysis clearly indicates that, given the unique facts and circumstances associated with the Croton supply, it is not a substitute for filtration.

Contrary to allegations made by some interested parties, Croton filtration does not mean an end to watershed protection. The City, acting through NYCDEP, is spending unprecedented sums on a variety of measures to protect Croton water quality at the source, and thus enhance the effectiveness of the Croton WTP. These measures include (among others): approximately \$200 million for wastewater treatment plant upgrades; \$20 million to implement a program to protect selected Croton system reservoirs from non-point sources of pollution; \$68 million paid to Westchester and Putnam Counties to implement water quality protection programs (such as sewage diversion and septic repair); and \$38.5 million for land acquisition in the Croton watershed.

In sum, the Croton WTP project is necessary to provide filtration and disinfection of the Croton supply in order to (1) allow the City to continue providing drinking water of the highest quality; (2) prevent the periodic shutdown of the Croton system, particularly at times of the year when City water demand is at its highest; (3) consistently meet the requirements of existing and future regulations; (4) augment the effective yield and operational flexibility of the City's overall water supply system (by making larger quantities of Croton water available throughout the year); and 5) satisfy the terms of a federal court Consent Decree.

## **II. The City Has Conducted an Exhaustive Review of Potential Sites for the Croton WTP**

**The City has conducted what can only be described as an exhaustive review of potential sites for the Croton WTP. The Final SEIS is only the most recent product of that exercise.**

As part of a 1970 engineering study of the future treatment of the Croton Water Supply that included evaluation of potential sites for a WTP, the City concluded that Jerome Park Reservoir in the Bronx should be the site for a proposed plant. Several years later, in 1993, NYCDEP undertook an environmental assessment of the Jerome Park Reservoir as the preferred site of the Croton WTP. In response to public comments, another siting study for the proposed Croton WTP was initiated, to update the previous study and to consider alternatives to the Jerome Park Reservoir. This study was a three-phased, multi-criteria, focused screening process that evaluated numerous potential locations within the Bronx and Westchester County, New York. This screening effort began with 120 sites, reduced that pool to 23 alternatives, and finally six alternatives to Jerome Park Reservoir that were evaluated in depth. In 1995, based on public comment asking that NYCDEP consider all sites equally and not select a preferred site until the public could review the relevant impact analyses, Jerome Park Reservoir was no longer identified as a preferred site and all the alternatives under consideration at that time were considered as equal candidates.

In 1996 and 1997, based on public comment and revised site screening analyses, additional sites were identified and evaluated. Because the sites initially screened were found to be unavailable or unacceptable, screening criteria were broadened to consider smaller lots, and parks for the first time. The Mosholu Site, in Van Cortlandt Park, Borough of the Bronx, New York City, was added in May 1998 in response to public comment. The Draft EIS published in 1998 selected the Mosholu Site, but in February 2001, the use of this site was suspended because of a decision by the New York Court of Appeals, holding that the construction of the Croton WTP at the Mosholu Site, as proposed by the City, amounted to alienation of parkland, requiring State legislative approval.

Revised siting criteria established subsequent to the February 2001 Court of Appeals decision included much smaller lots, greater distances from the NCA, larger changes in height, and for the first time, the consideration of land that could require the condemnation of private property. These criteria led to two alternative sites for study in the context of an EIS: the Harlem River Site in the Bronx and the Eastview Site in the Town of Mount Pleasant. The

other sites considered in 1999 and earlier were eliminated because they either offered no advantages over the Mosholu Site, and/or were located in parks or adjacent to schools or residences, or were zoned inappropriately.

Following the February 2001 Court of Appeals decision, the City sought approval from the New York State Legislature to discontinue use of the Mosholu Site as parkland and instead use such Site for the construction, operation and maintenance of the Croton WTP. A home rule message was passed by the New York City Council on June 13, 2003. On June 20, 2003, the State Legislature passed a bill authorizing the City to discontinue the use of approximately 43 acres of land in Van Cortlandt Park as parkland. The bill was signed into law by Governor George Pataki on July 22, 2003, as Chapter 175 of the Laws of 2003. The legislation provides for the temporary alienation of portions of Van Cortlandt Park during construction of the Croton WTP, and permanent alienation of portions of the Park to operate and maintain the Croton WTP and related facilities. This legislation has allowed the reconsideration of the Mosholu Golf Course and Driving Range as a possible site for the Croton WTP. The legislation required the City to conduct a supplemental environmental impact statement of the construction, operation and maintenance of the Croton WTP at the Mosholu Site. The Final SEIS was intended to satisfy this requirement, and included an updated evaluation of the Mosholu Site, along with the Eastview and Harlem River Sites, which were under consideration in the April 2003 Draft EIS.

### **III. The Final SEIS Clearly Demonstrates that the Mosholu Site is the Preferred Site, Based on a Number of Critical Factors.**

After careful consideration of the information and analysis contained in the Final SEIS, including the manner in which the City's water supply system is operated, water quality information, and other information and data relevant to the issue of siting, as well as consideration of public comments received during the SEQRA review process, it is clear that the Mosholu Site is the most advantageous location for the Croton WTP based on a combination of compelling factors.

As the operator of a public water supply system serving nearly half of the State's population, and with the responsibility of ensuring the quality and wholesomeness of drinking water consumed by millions of residents, commuters, and visitors each day, NYCDEP must consider a variety of factors in determining which site, on an overall basis, would be the best site for the WTP. The factors that have been considered include, among others: water system dependability, water quality, security, complexity of engineering/construction, cost, environmental impacts, jobs and economic development, and community benefits.

In summary, NYCDEP has selected the Mosholu Site as the preferred site for the following reasons:

- ***Water system dependability:*** Construction at the Mosholu Site would allow the City's Catskill/Delaware (Cat/Del) systems and the Croton System to remain separate, while still allowing for interconnections closer to the City. This creates the most diversified and redundant water supply for the City. Connecting the Croton system to the Cat/Del

System at the Eastview Site would make the City more vulnerable to the possibility of a single catastrophic incident disrupting all water delivery.

- **Water quality:** The Mosholu Site is closer to the distribution system, thereby greatly reducing the risk of contamination after filtration. Additionally, water filtered at Mosholu will not require rechlorination closer to the City, which would increase the operational complexity of the system, as well as require another chlorine addition facility in the City. If rechlorination takes place, there is a potential for increased levels of DBPs.
- **Security:** The Mosholu Site will be constructed underground, thereby making it the most secure site. Locating the plant at the Eastview Site would consolidate critical water supply facilities at a single location.
- **Engineering/Construction:** If the Croton WTP was built at the Eastview Site, it would be designed so that filtered water would be delivered to the City through the NCA or a new Kensico-City Tunnel (“KCT”). Usage of the NCA would first require substantial renovations and repairs to the Aqueduct, estimated to take approximately 5 years. The KCT does not yet exist, and would need to be designed and constructed (estimated to take approximately 10 to 15 years). Until either of these actions is completed, treated water from Eastview would need to be conveyed through the Delaware Aqueduct. This is problematic in terms of assuring redundancy and dependability for water conveyance into the City.

The City has indicated that it plans to build an ultraviolet light disinfection facility (“UV Facility”) at Eastview, to further enhance protection of the Cat/Del systems, and in accordance with the terms of a November 2002 Filtration Avoidance Determination (“FAD”) for those systems issued by the United States Environmental Protection Agency (“USEPA”). The combination of building both the Croton WTP and the UV Facility at Eastview would greatly impact the surrounding community, and could cause schedule delays for both projects, and/or increase costs because of the need to coordinate construction of both projects in the same time frame.

- **Cost:** Capital costs for construction at the Mosholu Site are \$204 million less than at Eastview. Additionally, the operating and maintenance costs at Mosholu will be at least \$11 million per year less than at the Eastview Site. Finally, if the Croton WTP is built at Eastview, the City would be obligated to pay real property taxes on the plant to County and local taxing authorities. Town, county and school budgets drive local tax assessments and locating the Croton WTP at Eastview would make the City vulnerable to property tax increases over time.
- **Environmental impacts:** If built at the Mosholu Site, the Croton WTP will be built underground, and the driving range rebuilt above. The overall visual character of the site would remain more or less the same. There will be more trees cut down to build at Eastview than at Mosholu. There will be more significant traffic impacts at Eastview than at Mosholu, where construction vehicles will not pass either residential premises or

businesses. No potential for significant adverse impacts, which would not be mitigated, would occur. Additionally, no potential significant adverse impacts were predicted to occur as a result of the operation of the Water Treatment Plant at the Mosholu Site.

- ***Jobs and economic development:*** By building at the Mosholu Site, at least 600 construction jobs would be available in the City. Additionally, the induced economic benefits during construction of the plant in the City include an additional 456 new jobs being created.
- ***Parks amenities:*** Construction at the Mosholu Site would obligate the City to spend \$43 million, mainly to improve Van Cortlandt Park, and \$200 million to acquire parkland and/or improve parks and recreational facilities in the Bronx.

Construction of the WTP at any of the three sites under consideration would potentially result in environmental impacts, including traffic and natural resource impacts. At the Mosholu Site, impacts would largely be confined to the area immediately surrounding the construction site, primarily the adjacent golf course. NYCDEP is committed to taking appropriate mitigation measures that will reduce these impacts and maintain quality of life, wherever the project is sited. At Mosholu, these efforts will include steps to keep the golf course open even while the project proceeds, thus maintaining an important public recreational resource.

Since each of the sites presents potential environmental impacts, and each will involve appropriate measures by NYCDEP that are expected to mitigate those impacts, environmental impacts alone cannot form the basis for selecting a preferred site.

However, when consideration is given to a number of other, equally important factors, the Mosholu Golf Course site is clearly the site that offers the greatest benefits to the City. Among other things, the Mosholu Golf Course Site is the most secure; it maintains the redundancy already built into the City water supply by keeping the Croton and Cat/Del systems separate; it is the least costly site; it does not require further land use approvals; it involves the least risk in terms of tunneling; it would keep construction jobs within the City; and it would result in a \$200 million investment in Bronx parks and recreational facilities, as well as certain capital improvements within Van Cortlandt Park that were already required by the ULURP approval granted in 1999. Although approximately 43 acres of parkland would be alienated in order to allow for construction, operation and maintenance of the Croton WTP and related facilities, the Mosholu Golf Course would remain open during construction, and virtually all of the alienated land, except for approximately two acres adjacent to the WTP, would be available for some form of open space or recreational use after the WTP is completed and is operational.

#### **IV. The Design of the WTP has been Carefully Developed to Maximize Required Treatment While Minimizing the Amount of Space that is Needed.**

The design of the Croton WTP, if sited at Mosholu, has been carefully developed to maximize required treatment while at the same time minimizing the amount of space taken

away from Van Cortlandt Park. As such, the plant fulfills its critical public health function, while minimizing the loss of public recreational resources.

### A. Design of Croton WTP - General

The key treated water quality objectives considered in evaluating and selecting a treatment process for the Croton System focus on source water quality and current and anticipated water quality regulations. These water quality objectives include filtration, aesthetics, disinfection, and disinfection by-products. To satisfy these criteria, the selected treatment process for the proposed plant would be a “stacked” dissolved air flotation/filtration (“DAF/Filtration”) system. This proposed 290 mgd plant would include coagulation/mixing, flocculation, dissolved air flotation (DAF), filtration, and UV disinfection. This selection would achieve treated water quality goals including a 99.9 percent (3-log) removal/inactivation of *Giardia* and 99.9-percent (3-log) removal of *Cryptosporidium*.

Ancillary systems in the proposed plant would include pre/post-treatment chemical storage and handling, process waste backwash water handling and residual facilities, with necessary support facilities such as: electrical; instrumentation; plumbing; security; and heating, ventilation and air conditioning systems.

The proposed plant would include the water treatment building (housing the treatment processes, administrative offices, and a process laboratory), an electrical substation, a raw water tunnel from the NCA, treated water conveyances, and pumping station.

The proposed plant layout would be designed to minimize space requirements. The structural components would be designed in accordance with state and local codes to accommodate normal and seismic forces. The proposed plant design would incorporate levels of redundancy based on good engineering practices and regulatory requirements. The proposed plant would be designed such that the main flow of water through the treatment processes would be by gravity. The average design flow would be 144 mgd with a maximum capacity of 290 mgd. With the design principle that no single plant component would treat, convey, or power more than 50 percent of the plant design flow, in the event of an unforeseen shutdown or emergency, the main treatment processes would be divided into two separate water treatment trains.

Treatment of Croton water would result in the production of residuals throughout the treatment process. The proposed plant residual handling facility would serve the following purposes: 1) collection and recycling of waste backwash water and filter-to-waste water from periodic cleaning of the DAF tanks and filters (e.g., backwashing), 2) collection of the floated solids from the DAF tanks, and 3) transferring floated solids off-site for dewatering and disposal.

If the WTP is built at the Mosholu Site, solids and wastewater would be conveyed to the Hunts Point Water Pollution Control Plant (“WPCP”) in the Bronx. This WPCP has adequate capacity to handle the solids from the Croton WTP without additional construction

or staffing. The conveyance to Hunts Point would be via a 6-inch force main under City streets.

Chemical facilities would be designed in accordance with NYSDOH and New York State Department of Environmental Conservation (“NYSDEC”) requirements. Regulatory requirements encompass chemical storage capacity, redundant transfer and feed pumps, and secondary containment of chemicals to protect against potential spills. All chemical storage tanks would be provided with secondary containment with the capacity to hold at least 110 percent of the largest single tank volume in the containment area. Incompatible chemicals would be stored in separate areas. The chemical system would be divided into two sub-systems, each serving one half of the treatment plant.

#### B. Mosholu Site - Description of Proposed Project Site and Layout

If built at the Mosholu Site, the proposed plant would be located beneath part of the 13-acre driving range of the 74-acre Mosholu Golf Course, located within the 1,146-acre Van Cortlandt Park, Bronx, New York. The Mosholu Golf Course section of the Park is bounded by the Mosholu Parkway and Major Deegan Expressway to the west and north, Jerome Avenue and the IRT No. 4 elevated train tracks and Woodlawn Subway Station to the east, and West Gun Hill Road to the south. Across Jerome Avenue to the northeast of the site is the Woodlawn Cemetery. The Shandler Recreation Area abuts the golf course to the north and the Saturn Playground is located to the southeast. Existing facilities at the site include a clubhouse, maintenance facility, driving range, nine-hole golf course, and a parking lot for approximately 75 cars. These facilities would be replaced on a temporary basis during construction and on a permanent basis after construction.

Construction of a proposed Croton WTP at the Mosholu Site would include a new raw water tunnel to convey untreated water from the NCA to the water treatment plant site; a raw water pumping station; a main treatment building located underground that would house all the process elements, administrative offices, a conference room, a small process laboratory, maintenance and storage facilities, electrical and heating, ventilation and air conditioning (HVAC) rooms; a treated water pumping station; and a new treated water tunnel to convey treated water from the proposed plant back to Jerome Park Reservoir (“JPR”) and the City’s distribution system. During construction, an approximately 800-foot long ornamental wall would be constructed along Jerome Avenue that would provide a visual barrier and aid in noise attenuation. In addition, construction of the proposed plant would require the rehabilitation and stabilization of several off-site Croton System facilities that would include Gate House No. 1 and modifications to the facilities in and around the Jerome Park Reservoir.

The proposed plant would require a footprint of about nine acres, which would include the water treatment facility, unloading and access building, parking lot, and treated water connections to the City’s distribution system via the NCA and City Tunnels No. 1 and No. 3. The facilities would be installed below-grade and the surface of the proposed plant would be restored to create a public golf driving range. A new golf course clubhouse, maintenance

facility, and new golf course parking lot would be built on the existing Mosholu Golf Course property.

Areas of the Mosholu Site that would require restriction from public access include the WTP rooftop, which would be under the future driving range, and the approximately two-acre secure area north of the existing parking lot that would be used for NYCDEP parking, the chemical fill building, and the arrivals/receiving building. These areas would be restricted to vehicles by low stone walls or other structures such as the tee-boxes for the driving range along the east side of the driving range. The stone walls along the north and south sides would incorporate ventilation louvers and would serve as the foundation for a tall fence that would keep golf balls from leaving the driving range. The facades of the low stone walls would be designed to look like the existing rock walls along Jerome Avenue north of Gun Hill Road, although their internal construction would be designed to serve as a vehicle interdiction wall.

The alienation legislation signed into law in July 2003 authorizes the City to discontinue use of approximately 43 acres of land at the Mosholu Site as parkland. If the Croton WTP is sited at the Mosholu Site, this land would be transferred to NYCDEP's jurisdiction for purposes of constructing, operating and maintaining the WTP and related facilities and appurtenances. Apart from the rooftop of the plant (9 acres), where a new driving range would be installed once the WTP is completed, and the 2-acre secure area (described above), NYCDEP will work in conjunction with the New York City Department of Parks and Recreation ("NYCDPR") to review and develop appropriate open space/recreational uses for the remaining portions of the land under NYCDEP jurisdiction.

The current NYCDPR maintenance facility for the golf concessionaire consists of a pair of sheds west of the current parking area. These sheds are in poor repair, and would be replaced by a new facility located just north of their current location and adjacent to the NYCDEP secure area. Access to the driving range for NYCDPR maintenance of the driving range would be provided. The entrance road to the Mosholu Golf Course would be improved but would remain in the existing location. The new road would fork approximately 350 ft. west of Jerome Avenue. The fork to the south would convey public traffic to a new club house and parking area near the rebuilt driving range. The fork to the west would pass through a security checkpoint to a secure area of about two acres that would enclose the chemical fill station, arrivals/receiving building, and NYCDEP parking. This area would be screened from casual public view by a low stone wall or the natural topography that would serve to block vehicles. Upon completion of construction, the driving range, with new two level tee boxes, would be rebuilt atop the WTP. In addition, the golf course will be improved as either an 18-hole Executive Golf Course or an alternative 9-hole golf course with superior playability than the existing golf course.

The NCA would be used to convey raw water from the New Croton Reservoir to the proposed plant at Mosholu. The Jerome Park Reservoir (both the north and south basins) would be used as a raw water reservoir. A new raw water tunnel, approximately 900-foot long and 12-foot in diameter, would extend from a NCA connection within the Mosholu Golf Course to a new raw water shaft located under the existing driving range to the west of

the proposed plant. Raw water pumps would lift the water to the plant inlet. After this initial pumping, water would then flow by gravity through all the main treatment processes within the proposed plant.

A new shaft would be constructed west of the proposed plant to contain two new treated water conduits. A new combined treated water tunnel, approximately 3,680 feet long, would be constructed from the bottom of this shaft at the water treatment plant site to a new shaft chamber located near Jerome Park Reservoir.

### C. Design Minimizes Amount of Space Needed and Preserves Recreational Resources.

By virtue of its stacked design, underground construction, and relative location within Van Cortlandt Park, the current WTP design at the Mosholu Site maximizes required treatment while at the same time minimizing the space that is needed and preserving recreational resources.

The design will fully accomplish the water quality goals enumerated above. However, the stacked approach, along with certain other refinements, results in reducing the overall footprint of the plant from approximately 11 acres as contemplated in the 1999 ULURP submission to approximately 9 acres today.

As a result of the revised design, the Mosholu Golf Course will remain open during plant construction (under the 1999 design scheme, the Golf Course would have been closed). The existing driving range will close (the same result would have ensued under the 1999 design), but a new temporary range will be constructed in the vicinity of the existing 9<sup>th</sup> hole of the Golf Course. Thus, the adjacent community and visitors to Van Cortlandt Park will continue to enjoy the use of the Golf Course and a driving range even while plant construction proceeds.

Although State legislation will effectively result in 43 acres of parkland being transferred to NYCDEP jurisdiction for purposes of the WTP project, all but a small portion of the land will continue to be available for some form of open space/public recreational use. The rooftop of the plant will be the site of a new and improved permanent driving range (to be constructed once the plant is completed), and NYCDEP will work with NYCDPR to identify appropriate uses for all but approximately 2 acres of the remaining alienated land.

In addition, and as more fully explained below, constructing the Croton WTP at the Mosholu Site will obligate the City to spend \$43 million for certain improvements at Van Cortlandt Park, and \$200 million for projects to acquire additional parkland in the Bronx, and/or to improve parks or recreational facilities in the Bronx. This is an unprecedented level of investment in Bronx parks. When this is considered along with the ultimate projected use of the land that has been alienated for purposes of the Croton WTP project, it is clear that the project, as currently designed for the Mosholu Site, not only minimizes loss of existing recreational resources, but offers the opportunity for greatly expanding recreational resources available to all Bronx residents.

**IV. Mosholu Site Offers Greatest Level of Public Benefits to the City and its Residents.**

Among the three proposed sites for the WTP, the Mosholu Site would provide the greatest level of public benefits to the City and its residents. This extends both to the communities surrounding the project site, as well as to the water supply system as a whole.

**A. Benefits to Bronx Parks.**

If the Croton WTP is built at the Mosholu Site, the City would be obligated, under the terms of the 1999 ULURP approval for the project, to invest \$43 million on a variety of improvements to Van Cortlandt Park. These include:

- Restore the Mosholu Golf Course and Driving Range
- Implement a Forest Management Plan in Van Cortlandt Park
- Renovate the Shandler Recreation Area
- Renovate the Saturn Playground
- Upgrade and improve the Old Croton Aqueduct Trail
- Provide signage describing flora and fauna within Van Cortlandt Park wetland areas adjacent to the site
- Renovate the entrance way west of Dickensen Avenue, near Van Cortlandt Park South
- Complete restoration of the area adjacent to the Van Cortlandt Valve Chamber
- Evaluate the feasibility of building a bridge over the Major Deegan Expressway to connect the east and west portions of Van Cortlandt Park
- Create a Facilities Monitoring Committee

In addition, under the terms of the State alienation legislation (Chapter 175 of the Laws of 2003), authorization to construct, operate and maintain the Croton WTP at the Mosholu Site is conditioned upon the City entering into a Memorandum of Understanding (“MOU”) with the President Pro Tempore of the State Senate, and the Speaker of the State Assembly, and ratified by the City Council, identifying a specific sum of money that the City would dedicate for the purpose of implementing eligible projects to acquire and/or improve parklands in the Borough of the Bronx. The City has committed to spending \$200 million on projects to acquire and/or improve parks and recreational facilities, and to improve the environment in the Bronx, which commitment will be reflected in the MOU.

This amounts to an unprecedented investment in parks and park improvements in the Bronx. By way of comparison, the Mayoral capital budget for Bronx parks, for Fiscal Year 2004, is \$5 million.

These sums will result in improvements to Bronx parks that will provide enhanced recreation and enjoyment to Bronx residents and other City residents for generations to come.

## B. Other Public Benefits

At the Mosholu Site, the proposed WTP would be built substantially below existing grade and fully covered, allowing the replacement and enhancement of existing park uses. In addition, improvements to the entrance to the Mosholu Golf Course would be incorporated into the proposed project plan. These measures would reduce visual impacts and disruption of the community facilities at and in the vicinity of this location. In addition, by being underground the WTP would be most secure of three site alternates.

The Mosholu Site would allow the City's Catskill/Delaware systems and the Croton System to remain separate, while still allowing for interconnections closer to the City. This creates the most diversified and redundant water supply for the City. This site is also closer to the distribution system, thereby greatly reducing the risk of contamination after filtration. Additionally, water filtered at Mosholu will not require rechlorination closer to the City, which would increase the operational complexity of the system, as well as require another chlorine addition facility in the City.

Economic benefits during construction would stem from direct employment and income from project expenditures. Approximately 660 construction workers per day would be on-site in the peak year. Based on median salary of \$49,600 per worker (typical for the types of construction workers that would be on-site), wages during the peak construction year would total \$30 million with potentially \$1 million being generated in income tax to the City. Additionally, the induced economic benefits during construction of the plant in the City could add an average of 456 new jobs per year of construction to the economy.

Fifty-three new permanent employees would be required at the proposed water treatment plant. The permanent operations employees, their salaries, and the total dollars invested annually by NYCDEP for operation and maintenance (\$22 million) of the proposed project would create indirect effects on Bronx County's economy. This could add a total of 186 new jobs to the County's economy (including the 53 employees at the plant). These benefits would be in addition to the economic activity generated by the golf course, driving range, and clubhouse that would be restored upon completion of construction of the proposed plant.

## **V. Any Significant Adverse Impacts Resulting from Construction and Operation of the Croton WTP at the Mosholu Site Will Be Mitigated and Addressed.**

When a proposed project is reviewed under CEQR and SEQRA, the review must identify potential significant adverse impacts, and those impacts must be avoided or minimized to the maximum extent practicable. As a result, appropriate mitigation measures must also be identified and evaluated.

As demonstrated in the analyses for the Final SEIS, there would be no significant adverse impacts associated with the proposed project at the Mosholu Site in the areas of land use, visual character, community facilities, neighborhood character, air quality, open space, historic and archaeological resources, socioeconomic impacts, growth inducement,

electromagnetic fields/ extremely low frequency fields (“EMF/ELF”), hazardous materials, infrastructure and energy, and solid waste.

The analyses also show that there are other areas where potential significant adverse impacts could occur, although these would largely be confined to the immediate site of the proposed Croton WTP. More importantly, the Final SEIS has identified mitigation measures that NYCDEP will implement, to avoid or minimize these potential impacts to the maximum extent practicable. Taking a conservative approach, the Final SEIS includes recommended mitigation measures for construction-related impacts, which are generally not classified as significant because of their temporary nature. Because construction at the Mosholu Site will take 5.5 years, these construction-related impacts have been quantified and appropriate mitigation measures developed wherever possible. No potential significant adverse impacts as a result of the project would remain unmitigated.

The following paragraphs summarize the nature of the potential significant adverse impacts that could occur, and the steps that NYCDEP will take, based on the Final SEIS, to fully address them.

### Traffic

Construction of the project is expected to result in traffic impacts at 233<sup>rd</sup> Street and Jerome Avenue, and at Jerome Avenue and the Mosholu Golf Course entrance. These impacts would be mitigated and addressed by: (1) requiring all construction related traffic to use the Major Deegan Expressway 233<sup>rd</sup> Street exit and travel south along Jerome Avenue until they enter the site (traffic exiting the site would travel north along Jerome Avenue to 233<sup>rd</sup> Street); (2) widening the 233<sup>rd</sup> Street exit ramp to provide exclusive, temporary right-turn lane for traffic turning south onto Jerome Avenue; (3) adding a left-turn signal phase for traffic heading south on Jerome Avenue at the intersection of Jerome Avenue and 233<sup>rd</sup> Street; (4) widening 233<sup>rd</sup> Street and adding a second left turn lane at Jerome Avenue for traffic traveling westbound and then turning south onto Jerome Avenue; (5) signage and traffic control personnel during peak traffic periods to prevent truck traffic from accessing the site via Jerome Avenue from the south; and (6) related signal timing changes at certain intersections.

Therefore, construction of the WTP is not expected to result in any significant traffic impacts.

### Noise

Predicted construction-related noise level increases generally exceed the acceptable 3-5 dBA noise increase threshold established by CEQR to define long-term or permanent significant adverse noise level increases. However, noise sensitive receptors that would be affected by these increased noise levels are limited to four sites: Saturn Playground; Mosholu Golf Course; Shandler Recreation Area; and certain residences at Jerome Avenue and 213<sup>th</sup> Street.

NYCDEP will require construction contractors to develop specific noise mitigation plans, meeting the standards in the New York City Noise Code and keeping noise level increases below the acceptable noise level thresholds prescribed by CEQR. These plans would be subject to NYCDEP review and approval prior to implementation. Although contractors will be allowed to identify means and methods for noise mitigation (subject to NYCDEP approval), it is anticipated that these means and methods will include one or more of the following techniques:

- Noise barriers facing potentially impacted receptors, installed at fixed locations along the boundaries of the construction site; it is expected that, with the exception of the section of the Mosholu Golf Course immediately to the west of the proposed construction site, construction-related noise would be attenuated to acceptable levels with conventional noise barriers in place. Certain more highly sound absorbent materials, if incorporated into a noise barrier along the western boundary of the site, may yield transmission loss (i.e., attenuation) of upwards of 25 dBA, which would reduce noise to acceptable levels even at the Golf Course; and/or
- Installing portable noise barriers around certain noise-generating equipment on site such as air compressors, rock drills, welding machines and cranes; these types of devices are generally capable of approximately 11 dBA of sound transmission loss for each piece of equipment to which it is applied.

Additionally, no significant noise impacts are expected from operation of the WTP, when completed.

Finally, as an additional measure, NYCDEP would implement a noise monitoring program and dedicated complaint response system to address any unforeseen construction- or operations-related noise.

### Natural Resources

Clearing and grading for WTP and related facilities will result in direct loss of 278 trees. In addition, a further 166 trees adjacent to the construction or close to the proposed infiltration trench could be threatened by compaction of soils, changes in surface or groundwater drainage patterns, or accidental damage. Although NYCDEP will take steps to protect the latter category of trees by placing barriers and by other means, their possible loss is treated (for purposes of analysis) as an additional potential significant adverse impact. Finally, a group of 16 trees would be threatened by the proposed widening of the Major Deegan Expressway northbound exit ramp at 233<sup>rd</sup> Street. These are small trees that can be removed and replaced in kind.

In addition, dewatering of the WTP foundation would lower the local water table and potentially change the stormwater and groundwater hydrology so as to adversely affect a five-acre floodplain forest wetland north of the site.

To mitigate the aforementioned potential impacts, NYCDEP will implement a comprehensive reforestation and monitoring program developed in conjunction with NYCDPR. This will include: planting trees to replace those lost during construction of the WTP; pressure grouting any fractures that leak water into the excavation area; and constructing infiltration structures adjacent to the site access road and to the south of the forested wetland. Flow from the infiltration structures would prevent water from flowing away from the wetland as a result of the project.

### Public Health

In response to community concerns about the potential for construction activities to increase the movement of nuisance rodents, NYCDEP has developed a rodent control and monitoring plan that would be implemented at the site. This would include measures to control the existing population if any; prevent the opening of conduits that could be used by rodents to move to and from the site; and implement a hygiene program during construction to prevent the creation of new food sources.

### Additional Measures Being Taken by NYCDEP

Although analysis of potential air quality impacts did not predict air quality concentrations within the community that are considered to be significantly adverse, NYCDEP plans to take steps to minimize air emissions during construction. Contractors will be required to use Ultra Low Sulfur Diesel (“ULSD”) fuel in all project vehicles working on site or hauling excavated soil and rock from the site, or alternatively, to install air emissions control devices such as catalytic converters, catalyst mufflers or other equivalent devices on all such vehicles; minimum air emissions reductions required for such devices for each vehicle will be 20 percent particulate matter (PM), 40 percent carbon monoxide (CO) and 40 percent hydrocarbons (HC).

NYCDEP will also require contractors to use noise attenuation devices in order to keep noise levels generated during construction at 65 dBA or an increase of 3 dBA above baseline

levels, whichever is higher, during the normal work day (7 AM to 6 PM). If work is ever required outside of those hours, the noise levels would be attenuated to 55 dBA or an increase of 3 dBA above baseline, whichever is higher.

### Off-Site Facilities

The only potential significant adverse impacts expected to result from work on off-site facilities are noise-related impacts. Noise level increases during construction of certain off-site improvements (improvements to Gatehouse No. 1 in Van Cortlandt Park; construction of New Shaft Chamber north of Gatehouse No. 5 at Jerome Park Reservoir (“JPR”); and improvements at other sites near JPR) are projected to exceed the 3-5 dBA acceptable noise increase threshold established under CEQR.

Construction-related noise associated with work at Gatehouse No. 1 is not expected to produce significant adverse impacts because the facility is located in a remote portion of Van Cortlandt Park visited by very limited numbers of park users. Construction-related noise associated with work at JPR could produce significant impacts because of the close proximity of sensitive receptors such as Lehman College, Bronx High School of Science and DeWitt Clinton High School.

NYCDEP will address and mitigate noise-related impacts at JPR through noise reduction measures such as barriers, mufflers and other measures, and by limiting the noisiest construction activities such as concrete pours to weekends, summers and holiday periods.

## **VI. Conclusion and Findings**

The Final SEIS identified the Mosholu Site as the preferred site for the Croton WTP. Having duly considered the Final SEIS, and the information and analysis contained therein, the undersigned, as Commissioner of NYCDEP concurs in the determination that the Mosholu Site is the preferred site for the Croton WTP, and finds that:

- The requirements of Part 617 of the New York Code of Rules and Regulations have been met;
- Consistent with social, economic, and other essential considerations, from among the reasonable alternatives thereto, the actions to be approved are ones that would minimize or avoid adverse environmental impacts to the maximum extent practicable; and
- Consistent with social, economic, and other essential considerations, the adverse environmental impacts revealed in the Final SEIS will be minimized or avoided to the maximum extent practicable by incorporating as conditions to the approval those mitigative measures that were identified as practicable.

**Croton Water Treatment Plant**

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The Final SEIS and the Notice of completion of the Final SEIS constitute the written statement of facts and the environmental, social, economic and other factors and standards that form the basis of this decision, pursuant to Section 617.11(d)(5) of the SEQRA regulations.

Dated: July 16, 2004  
Flushing, NY

A handwritten signature in black ink that reads "C.O. Ward". The signature is written in a cursive style with a long, sweeping underline.

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Christopher O. Ward  
Commissioner  
New York City Department of Environmental Protection