

A. PROJECT IDENTIFICATION

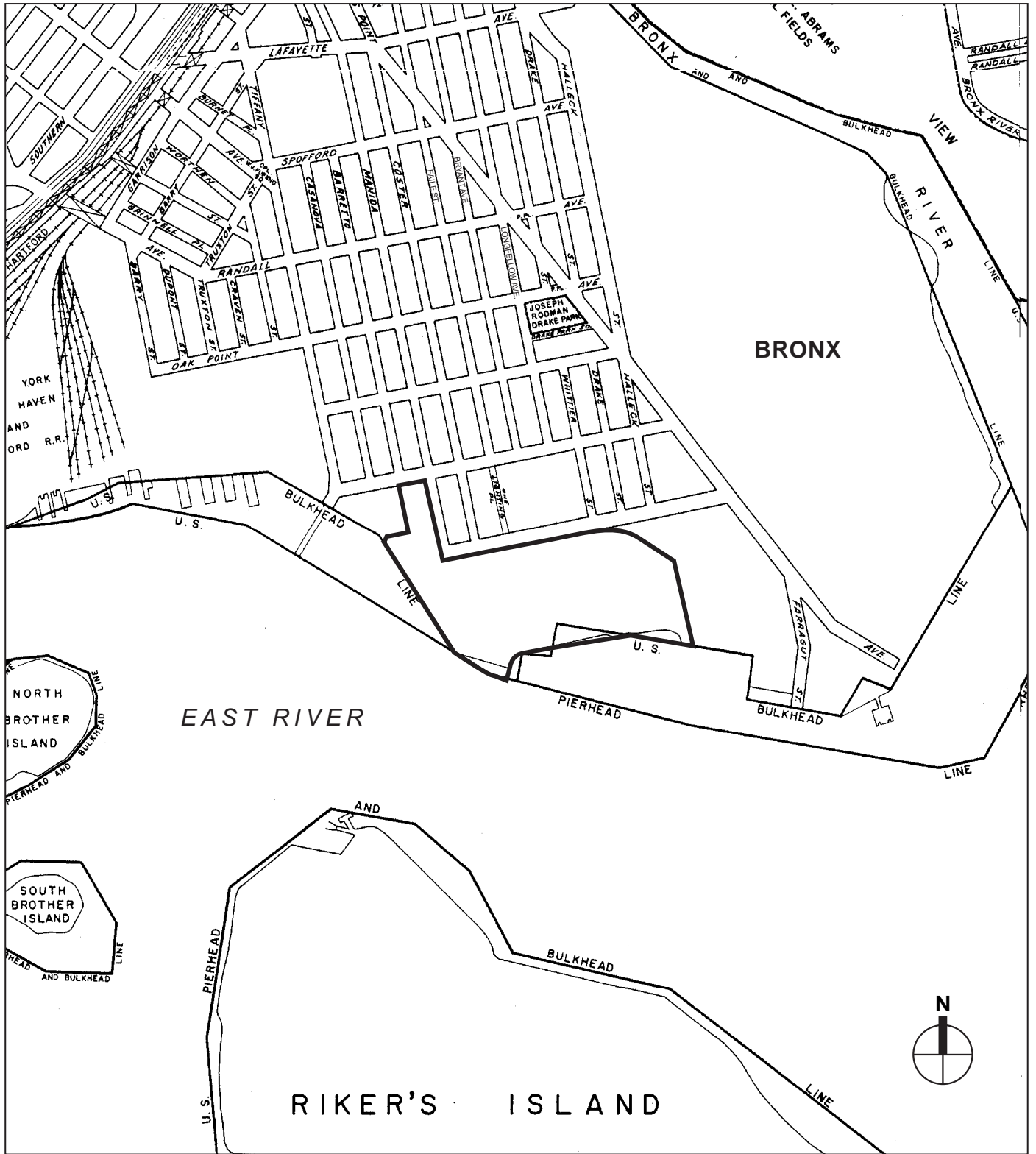
The Hunts Point Water Pollution Control Plant (WPCP) is located in the Hunts Point section of the Bronx, in the City of New York, and treats wastewater from portions of the Bronx, Rikers Island, City Island, and Hart Island (see Figure 1-1). The New York City Department of Environmental Protection (NYCDEP), on behalf of the City of New York, is currently upgrading the WPCP under two upgrade plans—the Phase I and Phase II Upgrades. The Phase I Upgrade is being undertaken to address the plant’s peak wet weather capacity. The Phase II Upgrade is being undertaken to address the plant’s nitrogen removal capabilities. This Environmental Impact Statement (EIS) assesses the potential for impacts from additional improvements to the WPCP.

The “proposed action” considered in this EIS consists of two components; the first, which is known as the Phase III Upgrade, would involve construction and upgrading to improve the solids handling facilities at the plant. The second component would be undertaken to enhance nitrogen removal.

The Phase III Upgrade would involve construction of two new egg-shaped sludge digesters and a digester gallery, replacement of sludge thickener collector mechanisms, replacement of a gas holding tank, replacement of existing waste gas flares with three new enclosed waste gas burners, renovation of existing digesters and sludge storage tanks, installation of an emergency generator, and installation of odor controls on the plant’s primary effluent channels. The Phase III Upgrade is required to rehabilitate or replace facilities that are at or nearing the end of their useful life. The Phase III Upgrade requires construction and construction staging on the existing plant site and on an additional 5.5-acre vacant parcel of City-owned land located to the northwest of the existing plant boundary. This vacant 5.5-acre property is under NYCDEP’s jurisdiction and consists of a 4.3-acre area where the proposed new egg-shaped sludge digesters would be built and an approximately 1.2-acre area that would be used for construction staging. This 1.2-acre area will be transferred to the New York City Department of Parks and Recreation (NYCDPR) and mapped as parkland for inclusion in the adjacent Barretto Point Park when the area is no longer needed for construction staging.

The enhanced nitrogen removal elements would include carbon and polymer addition facilities. Carbon addition facilities would be constructed to address future 2014 nitrogen reduction goals, and polymer addition facilities would be constructed to enhance nitrogen removal facilities being constructed as part of the Phase II Upgrade.

Together, the Phase III Upgrade and the carbon and polymer addition facilities are the proposed action analyzed in this EIS. This EIS also assesses the potential for impacts from implementation of an additional two digesters (for a total of four—the “four-digester scenario”). These two additional digesters would be required in the future as the existing digesters (to be renovated under the proposed action) near the end of their useful life.



— Project Site Boundary

0 1000 FEET
SCALE

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NYCDEP is required to examine the potential environmental impacts of the proposed action in its role as lead agency under the State Environmental Quality Review Act (SEQRA) and its implementing regulations (6 NYCRR Part 617), New York City's Executive Order 91 of 1977 (as amended), City Environmental Quality Review (CEQR), and the State Environmental Review Process (SERP). NYCDEP has determined that the proposed action is appropriate for analysis within the context of an EIS to permit the highest level of community involvement in the decision-making process. NYCDEP has therefore prepared this EIS to assess and fully disclose any potential significant adverse impacts on the environment. This EIS presents the results of the various environmental impact analyses, mitigation of any identified significant adverse impacts, and alternatives to the proposed action. The analyses in the Draft EIS (DEIS) were performed in accordance with the methodology set forth in the Scope of Analysis, which was issued on June 15, 2005, and reflected public comments. The DEIS and Notice of Completion were published on December 19, 2006, and the subsequent public comment period, which included a public hearing on April 12, 2007, remained open until April 23, 2007. After the close of the comment period on the DEIS, the comments were incorporated into this Final EIS (FEIS).

The proposed action would require site selection of the 4.3-acre area (Block 2777, lots 100, 105, and 600) under the Uniform Land Use Review Procedure (ULURP). The DEIS must be certified as complete before the ULURP application can proceed. Typically, the ULURP application is certified by the New York City Department of City Planning (NYCDCP) upon publication of the DEIS. In the case of the environmental review for the proposed action, the certification of the ULURP application (February 26, 2007) was delayed until after publication of the DEIS. This schedule allowed for additional time for community review of the DEIS.

B. THE HUNTS POINT WPCP

SERVICE AREA

The existing Hunts Point WPCP, built in 1952, is located on a 39-acre site adjacent to the East River in the Hunts Point section of the Bronx. The service area to the Hunts Point WPCP consists of 15,222 acres on the mainland portions of the Bronx, 367 acres on the north side of Rikers Island, 239 acres on City Island, and 111 acres on Hart Island, for a total of almost 16,000 acres (see Figure 1-2).

The existing design dry weather flow capacity is 200 million gallons per day (mgd). The recent Phase I Upgrade provided improved conveyance and delivery at the plant to allow the plant to handle a peak wet weather capacity of 400 mgd (the Phase I Upgrade is described in detail below). The 2005 average dry weather flow to the plant was 114 mgd. This represents a dramatic reduction in flows to the plant since the early 1990s, when dry weather flows approached 148 mgd. This flow reduction is due primarily to water conservation and flow reduction measures implemented by NYCDEP since the early 1990s. Based on NYCDEP's wastewater flow projections, the dry weather flow to the plant in the year 2045 is expected to be 124 mgd.

EXISTING PLANT OPERATIONS

Wastewater treatment at the plant (as upgraded with the Phase I Upgrade, described in detail below) consists of a modified aeration treatment process, including screening, primary settling, step aeration activated sludge, final settling, and chlorination with sodium hypochlorite. The



 Hunts Point Water Pollution Control Plant

 Community District

New York City WPCP Drainage Areas
Including Hunts Point WPCP Drainage Area
Figure 1-2

existing aeration tanks were retrofitted with a Basic Step Feed Biological Nutrient Reduction (BNR) process to provide an interim degree of nitrogen removal until the Phase II Upgrade (which includes a Full Step Feed BNR process to achieve a higher degree of nitrogen removal) is completed (the Phase II Upgrade—its goals and its facilities—is described below under the “Phase II Upgrade” section of “Background and Planning Context”). The treated effluent from the plant discharges to the East River.

EXISTING WASTEWATER TREATMENT PROCESS

The wastewater treatment process (as upgraded under the Phase I Upgrade) includes the following steps: primary and secondary screening, primary settling, step aeration activated sludge, final settling, and chlorination. A schematic of plant operations is provided in Figure 1-3. The wastewater treatment process, and the management of the waste products generated during each step of the process, is described below:

- *Primary and Secondary Screening.* The raw wastewater from the plant’s service area enters the site from an interceptor sewer near the main building. The incoming wastewater passes through primary screens in the screening chamber adjacent to the main building. The primary screens remove larger waste objects that have entered the wastewater stream (e.g., pieces of wood). The wastewater is then pumped to the secondary screens, where smaller objects are removed. The solid items removed during the screening process (referred to as “screenings”) are trucked off-site for disposal.
- *Primary Settling.* The wastewater is then pumped to the primary settling tanks, located on the northern portion of the site. During primary settling, heavier solids (including sludge and grit) settle to the bottom of the tank. Cyclone degritting is used to separate the grit and sludge. The grit material is trucked off-site for disposal. The sludge (referred to as “primary sludge”) is conveyed to the sludge thickeners and digesters for further treatment, as discussed below.
- *Step Aeration Activated Sludge.* After primary settling, the wastewater flows to the aeration tanks located in the center and eastern portions of the site. Activated sludge, which contains bacteria and other microorganisms, is used during this step to remove soluble pollutants from the wastewater. Air is bubbled into the aeration tanks to provide optimum oxygen concentrations for the activated sludge process. The existing aeration tanks also include a Basic Step Feed BNR process to provide an intermediate degree of nitrogen removal until the Phase II Upgrade, which includes the Full Step Feed BNR facilities, is constructed. One of the existing aeration tanks is used to treat centrate produced by the sludge dewatering process at the dewatering facility. Centrate has a high ammonia nitrogen concentration that is reduced in the centrate treatment tank before the centrate is introduced to the other aeration tanks.
- *Final Settling.* After aeration, the wastewater flows to the final settling tanks. The wastewater is held in the final settling tank until heavier sludge materials have settled. A portion of the activated sludge that settles in the final settling tanks is recycled back to the aeration tank to maintain the optimum amount of bacteria for the activated sludge process. The remaining waste activated sludge is conveyed to the thickening and digestion tanks for further treatment (described below), along with the primary sludge collected during primary settling.

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- *Chlorination.* Finally, sodium hypochlorite is applied to the treated wastewater to destroy bacteria.

Subsequent to this final step, the treated wastewater (the effluent) is discharged to the East River. The plant is currently designed to achieve the national effluent standards for secondary treatment—30 milligrams per liter of suspended solids (SS), 25 milligrams per liter of carbonaceous biochemical oxygen demand (CBOD), and an 85 percent removal of SS and CBOD on a monthly average basis.

EXISTING SLUDGE HANDLING FACILITIES

As described above, primary sludge is generated in the primary settling tanks, and waste activated sludge is generated in the final settling tanks. The combined sludge is conveyed from the settling tanks to the sludge thickeners located in the northwest corner of the site. Using gravity, the sludge thickeners remove excess liquid from the sludge. The excess liquid is sent back to the primary settling tanks for wastewater processing. The thickened sludge is sent to the four existing sludge digesters for anaerobic digestion, a biological process that reduces the quantity of sludge. The digestion process takes approximately 15 to 20 days. After digestion, the sludge is transferred to the sludge storage tanks located in the southwest corner of the site. The digestion process also produces methane gas, which is used to heat buildings at the facility. Any excess gas is sent to the waste gas burners.

In addition to the sludge produced at the Hunts Point WPCP, the off-site sludge from other NYCDEP WPCPs is stored in the sludge storage tanks. After holding in the storage tanks, the sludge (both the off-site sludge and the sludge produced at the plant) is pumped to the dewatering building on the eastern edge of the site. The sludge dewatering building was constructed at the Hunts Point WPCP during the 1990s to comply with the City's Sludge Management Program. The dewatered sludge uses centrifuge dewatering to further remove liquids from the sludge. The resulting product is formed into sludge cake (called biosolids), which is trucked off-site for disposal. If the sludge cake satisfies the criteria established in the U.S. Environmental Protection Agency (EPA) Processes to Significantly Reduce Pathogens (PSRP) regulations, the sludge cake can be directly land applied. Sludge cake that does not meet PSRP criteria is further processed at an appropriate off-site facility and then land applied.

As described later in this chapter, plant modifications are proposed as part of the Phase III Upgrade to improve the sludge handling and treatment at the facility.

SITE LAYOUT

The existing plant is bound by Ryawa Avenue to the north, the East River to the south and west, and Halleck Street to the east. The existing plant (as upgraded under the Phase I Upgrade) includes the following areas:

- The main building is located on the northern edge of the site along Ryawa Avenue, across from Faile Street. The main building includes personnel facilities, centralized residual handling facilities, a boiler room, the main sewage pumps, and the screen chamber. Two electrical substations and an emergency generator building are also located on the northern edge of the site along Ryawa Avenue.
- The wastewater process facilities are located in the central and eastern portions of the site, including the primary settling tanks, the aeration tanks, the final settling tanks, the chlorine contact tanks, and the chlorination building.

- The solids handling facilities are on the western portion of the site, including 12 sludge thickeners, the grit removal building, the sludge thickener building, four conventional sludge digesters, five sludge storage tanks, a gas holding tank, and three open gas burners.
- A series of pipes and pumps throughout the site connect the various wastewater treatment and sludge handling facilities. The influent to the plant enters the site through a large influent tunnel near the main building. The effluent is discharged to the East River through an outfall in the center of the southern site boundary.
- In addition to these wastewater process facilities, the Hunts Point WPCP has a dewatering building that processes sludge received from the plant and from other WPCPs. Digested sludge from the Hunts Point WPCP and other NYCDEP water pollution control plants is sent to the dewatering building for centrifuge dewatering. The remaining centrate stream is redirected to the Hunts Point WPCP for treatment, and the resulting dewatered biosolids (sludge cake) are sent off-site and in some cases are suitable for land application.

The Hunts Point WPCP facilities range in height from at-grade settling tanks to the taller sludge storage tanks at approximately 65 feet. The main building is 50 feet in height, the dewatering building is 45 feet in height, and the digester and sludge storage tanks are 32 feet in height.

C. BACKGROUND AND PLANNING CONTEXT

INTRODUCTION

The proposed action is part of a multi-phased upgrade program at the Hunts Point WPCP. The Hunts Point WPCP upgrades were recommended after a series of planning exercises, which include the original Stabilization Program, Additional Facility Planning, and Interim Plant Upgrade Preliminary Design. The improvements follow a priority system developed under the original Stabilization Program and have been scheduled to ensure compliance with the schedules in several consent orders. As discussed in the following sections, the Phase I and Phase II Upgrades address consent order mandated improvements to the wastewater process and effluent quality, while the Phase III Upgrade addresses solids handling facilities at the plant, and is not mandated by consent order. Carbon and polymer addition facilities of the proposed action would also address compliance with consent order mandates.

WET WEATHER FLOW REQUIREMENTS

OMNIBUS IV CONSENT ORDER

The Omnibus IV Consent Order required the Hunts Point WPCP to have the capacity to convey, deliver and treat two times the design dry weather flow (i.e., 400 mgd) during wet weather events, effective by October 31, 2004.¹ These requirements were addressed by the Phase I Upgrade. Additional information about the requirements and facilities installed to improve the overall wastewater treatment process reliability and operation as a result of the Omnibus IV Consent Order is described below under the Phase I Upgrade.

¹ Improvements have been made at two other WPCPs—Tallman Island and 26th Ward—in response to the Omnibus IV Consent Order. The Omnibus IV Consent Order required improvements to be made to the City's WPCPs so that each WPCP would have the capacity to treat two times its design dry weather flow.

NITROGEN REMOVAL REQUIREMENTS

LONG ISLAND SOUND STUDY

In 1985, EPA and the States of New York and Connecticut began the Long Island Sound Study to assess water quality and to address hypoxia in Long Island Sound (hypoxia is a condition in which water does not have enough oxygen to support fish and other aquatic life; hypoxia can be caused by the presence of excess nutrients in water).

The Long Island Sound Study showed that excessive nitrogen discharges have contributed to hypoxia in Long Island Sound by encouraging the growth of planktonic algae, which consumes oxygen during the decaying process. During summer months, natural stratification of the Sound prevents mixing of the surface water and the bottom layer. Decaying algae in the bottom layer can consume oxygen at a rate faster than the oxygen replenishment rate, resulting in low dissolved oxygen (DO) levels. New York State standards require that measured minimum DO concentrations are “never less than” the corresponding New York State water quality standard (4.0 mg/l in the East River and 5.0 mg/l in Western Long Island Sound and Eastchester/Little Neck Bays). Levels below these standards can result in substantial harm to marine habitats, including population reduction, reduced disease resistance, and death of certain species. Although DO levels have improved relative to pre-1990 results, there are still chronic violations of the standards.

The Long Island Sound Study proposed a three-phase nitrogen reduction schedule to achieve a 58.5 percent reduction over a 15-year period for 11 management zones; two of these zones are within New York City (Zone 8—Upper East River and Zone 9—Lower East River). In 1988, EPA and the States of Connecticut and New York adopted the following nitrogen reduction schedule: 40 percent of the 58.5 percent by August 2004; 75 percent of the 58.5 percent by August 2009; and 100 percent of the 58.5 percent by August 2014.

The Hunts Point WPCP is among the Upper East River plants to implement the nitrogen program.

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES)

Reacting to the information from the Long Island Sound Study in the early 1990s, the New York State Department of Environmental Conservation (NYSDEC) determined that there was a need to cap NYCDEP’s nitrogen discharges for plants discharging to the East River to levels discharged prior to commencement of sludge dewatering in 1992. The sludge dewatering process results in discharges of centrate which contain elevated nitrogen levels that adds to the overall nitrogen loadings to the WPCP. NYSDEC thus established limits and other regulatory requirements through modifications to the 1988 State Pollutant Discharge Elimination System (SPDES) permits for certain City WPCPs. The limits that NYSDEC established were aggregate standards, which were developed for both the Upper East River and Jamaica Bay watersheds. These modifications to the 1988 SPDES permit limits required NYCDEP Upper East River WPCPs to comply with the aggregate monthly maximum limit of 88,600 lbs/day by January 1996 and the aggregate 12-month rolling average of 73,900 lbs/day by January 1997.

TOTAL MAXIMUM DAILY LOAD REQUIREMENTS AND 2002 NITROGEN CONSENT ORDER

On April 3, 2001, EPA approved a Total Maximum Daily Load (TMDL) based on the recommendations of the Long Island Sound Study that mandates a 58.5 percent reduction of nitrogen from dischargers of nitrogen by August 2014, including New York City's East River WPCPs. An April 2002 Nitrogen Consent Order required that the City design and implement BNR upgrades in accordance with the TMDL requirements. Under the 2002 Consent Order, New York City was to implement Full Step Feed BNR at the Upper East River WPCPs by June 30, 2007 and achieve nitrogen limits specified in the Nitrogen Consent Order. This original program also included provisions to achieve additional nitrogen removals in the Upper East River to offset nitrogen discharges from the Newtown Creek WPCP, which does not have BNR capability and only contributes ¼ of an equivalent nitrogen loading as the Upper East River WPCPs that are closer to the Western Long Island Sound. NYCDEP committed, under the 2002 Consent Order, to achieve the 10-year Long Island Sound TMDL by 2014.

2006 NITROGEN CONSENT JUDGMENT

Following comprehensive discussions between NYSDEC and NYCDEP concerning nitrogen-related issues at the City's WPCPs, NYSDEC agreed to a modified nitrogen program proposed by the City and entered into a Nitrogen Consent Judgment on January 10, 2006 to modify the 2002 Nitrogen Consent Order. The Consent Judgment includes nitrogen upgrade activities, construction schedules and limits that collectively represent a reasonable and appropriate program to meet the long-term nitrogen reduction goals of the original Nitrogen Consent Order and the Long Island Sound TMDL. Specifically, the Consent Judgment identified a two-phase approach to achieve nitrogen reductions, including a 52 percent reduction of nitrogen by 2014 and 58.5 percent by 2017, which essentially provided NYCDEP with additional time to meet the same overall target identified by the Long Island Sound TMDL and 2002 Nitrogen Consent Order. At the Hunts Point WPCP, the construction of Full Step Feed BNR facilities under the Phase II Upgrade was to be completed by June 30, 2008 and the carbon and polymer addition facilities being proposed under this EIS were identified as critical elements in achieving the 52 percent reduction target by August 2014. No additional changes are foreseen at the Hunts Point WPCP to meet the 58.5 percent reduction target by 2017.

UPGRADE SCHEDULE AND MILESTONES PERTAINING TO THE HUNTS POINT WPCP

As a result of Omnibus IV and the 2006 Nitrogen Consent Judgment, the major schedule milestones related to the Hunts Point WPCP's wet weather flow and nitrogen requirements are listed below:

- Construction of all Phase I Upgrade facilities required for the plant to have the capability of delivering, accepting, and treating 400 mgd during any storm was tentatively completed on October 31, 2004, and certification is pending (per the Omnibus IV Consent Decree);
- Construction of Phase I Upgrade including stabilization elements to be completed by October 31, 2006 (per the 2006 Nitrogen Consent Judgment);
- Construction of Phase II Full Step Feed BNR Facilities to be completed by June 30, 2008 (per the 2006 Nitrogen Consent Judgment); and,

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- Construction of supplemental carbon addition facilities to be completed by August 1, 2014 (per the 2006 Nitrogen Consent Judgment).

HUNTS POINT WPCP PHASE I UPGRADE

An Environmental Assessment was prepared for the Phase I Upgrade, and a Negative Declaration was issued in October 2001. Construction for the Phase I Upgrade commenced on February 1, 2002, and in accordance with the Omnibus IV Consent Order, the construction of elements required to achieve the capability of delivering, accepting, and treating 400 mgd of wet weather flow (two times dry weather flow) was completed by October 31, 2004. The Phase I Upgrade also included stabilization elements to enable the plant to continue compliance with SPDES requirements as well as a portion of the BNR work that needs to be completed by October 31, 2006 in accordance with the 2006 Nitrogen Consent Judgment.

The Phase I Upgrade included the following elements:

- Improvements to the main building, including a new forebay gate chamber, screen chamber modifications, new main sewage pumps, personnel facilities expansion, new centralized residuals handling facilities with odor control, new boiler room, secondary screen replacement, and architectural repairs;
- Primary sludge and dewatering system improvements, including primary sludge pump and piping replacement, architectural repairs to primary sludge pump stations, and dewatering equipment replacement;
- Aeration system upgrade, including replacement of the foam spray system, new froth chlorination hoods, and architectural repairs to the north and south aeration buildings;
- Chlorination system improvements, including replacement of hypochlorite feed and storage equipment, new fill station spill containment, chlorine contact tank (CCT) sludge and floatables removal equipment, and architectural repair of the chlorination building;
- Return activated sludge pump, waste activated sludge pump, and east effluent pump replacements, new return activated sludge control room and variable frequency drives (VFDs), and upgrade of the east effluent pump station;
- New scum processing system, including new scum removal equipment in primary and final settling tanks, six new scum pumping stations, and a new centralized scum concentration system;
- Site work improvements, including raw sewage conduit modifications, city water service loop replacement, new site security booth, new handrails, paving and landscaping; and
- All associated controls and instrumentation, electrical, heating, ventilation, and air conditioning (HVAC), and plumbing work.

HUNTS POINT WPCP PHASE II UPGRADE

The Phase II Upgrade includes improvements required to enhance nitrogen removal. These improvements are to be implemented by June 30, 2008 according to the modified schedule and targets identified in the 2006 Nitrogen Consent Judgment.

An Environmental Assessment was prepared for the Phase II Upgrade, and a Negative Declaration for the Phase II Upgrade was issued in April 2003. Work on the Phase II Upgrade

commenced in June 2003. The Full Step Feed BNR Facilities and other elements associated with the Phase II Upgrade are scheduled to be completed by June 30, 2008.

As part of the Phase II Upgrade, a higher degree of nitrogen removal will be achieved with the Full Step Feed BNR facilities. This improved nitrogen removal will enhance effluent quality from the Hunts Point WPCP and help reduce hypoxia in Long Island Sound. To complete the Full Step Feed BNR facilities, changes will be made to the aeration tank, blowers, and air mains. The proposed nitrogen removal systems will increase the plant's oxygen demand. The Phase II Upgrade will include replacement of the existing aeration tank diffuser system with a higher efficiency diffuser system. New alkalinity feed facilities, anoxic zone mixers and baffles, and centrate distribution facilities will also be installed to enhance nitrogen removal. The existing blowers and air mains will be replaced with larger capacity units since the existing blowers and air mains will not be able to meet the oxygen demands of the nitrogen removal process.

To address increased energy demands from these systems, the Phase II Upgrade will include changes to the plant's electrical power system. A new main electrical substation and emergency generators (diesel-fueled combustion engines) will be constructed to provide back-up power if utility service becomes unavailable (e.g., during blackout periods).¹ Six emergency generators will be constructed with the Phase II Upgrade. The emergency generators will also be exercised monthly for maintenance testing. In addition, as evaluated in the Phase II Negative Declaration, NYCDEP may utilize the emergency generators as part of a Peak Load Management (PLM) program, consistent with the existing air permit for the Hunts Point WPCP. PLM programs are agreements with local energy utility providers, such as Con Edison. These programs aim to reduce peak load demand and prevent the possibility of blackouts or brownouts due to insufficient electric supply. Between the issuance of the DEIS and the FEIS for the proposed action, NYCDEP has committed to the use of ultra low sulfur diesel (ULSD) fuel in the generators being installed under the Phase II Upgrade (and the new emergency generator associated with the Phase III Upgrade). NYCDEP has also agreed to reduce the maximum number of emergency generators participating in a PLM program to five of the six 2,000 kW generators.

The Phase II Upgrade includes the following elements:

- Process air system improvements, including new blowers, silencers, air filters, and diffusers;
- New channel air system, including blowers, filters, silencers, piping, and diffusers;
- Aeration tank improvements, including new anoxic mixers, baffles, and motor operated influent gates;
- New alkalinity feed and storage facility;
- New centrate pumping and distribution facilities;
- Associated instrumentation and control systems, including automatic dissolved oxygen control, flow monitoring and control systems, and ammonia, nitrate, and pH analyzers;
- New main electrical substation and emergency generators;
- Final grading, paving, and landscaping of land surrounding the new construction; and
- Associated electrical, HVAC, and plumbing work.

¹ Use of the emergency generators and other equipment will be in accordance with the NYSDEC Air Facility Permit, issued on May 7, 2004.

D. DESCRIPTION OF THE PROPOSED ACTION

PURPOSE AND NEED

The Phase III Upgrade is not required by consent order but is being proposed to improve the reliability of the solids handling process by refurbishing and/or replacing equipment that is at or near the end of its useful life. The Phase III Upgrade would provide improved digesters and sludge storage tanks, upgraded sludge thickener facilities, odor control, improved sludge collection mechanisms, and more efficient waste gas burners. The two new egg-shaped digesters, in conjunction with the four existing digesters (to be renovated), would be sufficient to treat the projected flow of 124 mgd for the year 2045. However, once the renovated digesters reach the end of their useful life, an additional two digesters—the four-digester scenario—would be required. See Section E, “Description of the Four-Digester Scenario,” below.

In addition to these project components, the proposed action would include construction of two elements to enhance nitrogen removal. Carbon addition facilities would be constructed to address a portion of the 2014 nitrogen reduction goals of 52 percent mandated in the 2006 Nitrogen Consent Judgment. Polymer addition facilities would be constructed to enhance nitrogen removal facilities being constructed as part of the Phase II Upgrade. The Full Step Feed BNR facilities being constructed under the Phase II Upgrade result in excess froth in the wastewater process; the addition of polymer would assist in froth control.

PROJECT APPROVALS

The proposed action may be subject to several potential State and City approvals, including the following:

- Financing under the State Revolving Fund Program, which requires review under SERP;
- Waterfront Revitalization (Coastal Zone) Consistency Determination from the New York State Department of State (NYS DOS);
- Approval by NYSDEC of a modification to the facility’s February 2006 air permit;
- ULURP site selection action. NYCDEP and the New York City Department of Citywide Administrative Services (DCAS) have initiated a ULURP action for locating or site selecting a public facility on previously undeveloped or vacant city-owned land (the ULURP application was certified as complete on February 26, 2007). A second ULURP application (with NYCDPR) for the mapping of Barretto Point Park is also following a parallel schedule. This mapping application consists of two separate application maps. The first is for Barretto Point Park and the second is for the 1.2-acre construction staging area. The application map for the construction staging area will be filed in the future (post-WPCP construction), and as such, the 1.2-acre parcel will not be given parkland status until NYCDEP determines that the parcel is no longer needed for work associated with its Hunts Point WPCP. NYCDEP has not yet determined when construction staging on the 1.2-acre staging area will no longer be necessary. Therefore, the exact filing date of the application map for the construction staging area is unknown but could be a minimum of 10 years from the ULURP application approval date.

COMPONENTS OF THE PHASE III UPGRADE

The Phase III Upgrade would include improvements to the sludge treatment and solids handling facilities. Two new egg-shaped digesters would be constructed to serve as primary digesters. The four existing conventional digesters would be renovated for use as second stage digesters (i.e., sludge would first enter the new egg-shaped digesters and then flow downstream to the renovated conventional digesters for additional digestion). Ten of the 12 existing sludge thickeners would be upgraded. The five existing sludge storage tanks would be renovated. The Phase III Upgrade construction is expected to begin in the third quarter of 2008 and finish in late 2014. For the purposes of the analyses in this EIS, the future analysis year for operation of the proposed action is 2014 (see “Content of the EIS and Analysis Framework,” below). The construction analysis analyzes intermediate years to identify the peak construction period and to determine the duration of potential impacts.

The Phase III Upgrade would include construction on an additional 4.3-acre City-owned parcel located to the northwest of the existing site (Block 2777 Lots 100, 105, and 600), resulting in a total plant site of 43.3 upland acres. The two new egg-shaped digesters and digester gallery would be constructed on Lot 100. During the construction period, a 1.2-acre portion of Lot 901 would be used as the construction staging area. This 1.2-acre construction staging area would be transferred to NYCDPR for inclusion in Barretto Point Park once it is no longer needed for construction staging. Figure 1-4 shows the block and lots, and Figure 1-5 shows the proposed site plan.

The proposed Phase III improvements would include the following elements:

- Construction of two new egg-shaped sludge digesters and digester gallery, including sludge heat exchangers, transfer pumps, mixers, digester gas compressors, odor control units, and appurtenant equipment;
- Renovation of existing digesters, including sealing of liners and roofs, modifying overflow boxes, and miscellaneous improvements;
- Replacement of sludge collector mechanisms, pumps and piping for 10 thickeners, and construction of new thickener control building;
- Replacement of an existing Wiggins gas holding tank (the new gas holding tank, which would be approximately 50 feet above grade, would be constructed to replace the existing gas holding tank, located in the southwest corner of the facility, and the existing gas holding tank would remain inactive on the site);
- Replacement of existing open waste gas flares with three new enclosed waste gas burners;
- Renovation/replacement of existing sludge storage tanks, including new roofing and roof drains, and miscellaneous mechanical improvements;
- Installation of a 500 kW emergency generator to provide backup power to the digester building;
- Installation of odor control units on the primary effluent channels;
- Site work improvements, including new pipe tunnels, grading, paving, fencing, buried utilities, and landscaping; and



— Project Site Boundary

2777 Block Numbers

② Lots Numbers



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- All associated controls and instrumentation, electrical, HVAC, plumbing, and fire protection work.

The Phase III Upgrade elements are discussed in more detail below.

IMPROVEMENTS TO GRAVITY THICKENERS

The existing Hunts Point WPCP has a total of 12 gravity thickeners, which were constructed during the 1960s and 1970s. The existing gravity thickener sludge collection mechanisms and sludge pumps would be replaced in 10 of these thickeners under the Phase III Upgrade. The existing plunger pumps and grinders would be replaced with new progressive cavity pumps and grinders. A new control building, approximately 25 feet in height, would be constructed at the operating floor level to house new electrical equipment. Minor repairs would be made to the superstructure above the thickeners, and improvements would be made to floor drainage in the thickener gallery basement.

CONSTRUCTION OF NEW DIGESTERS

Two new egg-shaped digesters would be constructed on the additional 4.3-acre parcel, each with a volume of 3.0 million gallons. Egg-shaped digesters have steeply sloped bottoms that concentrate grit for easier removal, a sharply tapered top section that minimizes the open liquid surface area and concentrates scum for resubmergence or removal, and a relatively tall and narrow configuration for more efficient mixing. Egg-shaped digesters are normally mixed with a single large mechanical draft tube mixer, containing a non-clogging, screw-type impeller. Under the Phase III Upgrade, thickened sludge would be pumped into the hot digester liquor recirculation loops of the egg-shaped digesters for preheating. Heating during sludge digestion increases the anaerobic microorganism growth rate, the digestion rate, and gas production. Digested sludge would overflow from the egg-shaped digesters to the existing conventional digesters for second stage digestion. The sludge would then overflow by gravity through an overflow box to the existing sludge storage tanks.

CONSTRUCTION OF NEW EMERGENCY GENERATOR

As part of the Phase III Upgrade, a 500 kW emergency generator would be installed adjacent to the digester building. The generator would be used to provide backup power to the digester building for the elevators and fire pumps in the event of a power failure. This new emergency generator would undergo monthly testing, in conjunction with the testing program for the other on-site generators. As stated above, between issuance of the DEIS and the FEIS, NYCDEP has committed to the use of ULSD fuel in the new emergency generator associated with the Phase III Upgrade.

IMPROVEMENTS TO EXISTING DIGESTERS

The four existing conventional digesters would be improved as part of the Phase III Upgrade and used as second stage digesters. The roofing of the tanks would be reconstructed, and the roof leaks in the existing digester control building would be repaired. Liner plates would be sealed at the top and bottom to prevent gas and sludge leaks. The overflow boxes would be modified to lower the operating level in the tanks to provide additional storage volume for foam that may be generated by the Full Step Feed BNR Process (being constructed as part of the Phase II Upgrade). Miscellaneous deteriorated mechanical and electrical equipment, such as pumps,

valves, instruments, and motor control centers, will be replaced in kind. In addition, new floodlights and lightning protection would be installed.

IMPROVEMENTS TO DIGESTER GAS SYSTEM

Under the Phase III Upgrade, the gas produced during sludge digestion (digester gas) would continue to be used to meet the plant's heating demands. Excess gas would continue to be used first in the plant's three fuel cells with any excess flared (burned off). Three replacement waste gas burners (i.e., gas flares) would be constructed on site to replace the existing open waste gas flares. These gas burners would be 51 feet tall and 6 feet in diameter. They would be enclosed and designed to minimize air pollution emissions (the low nitrogen oxide burners would provide 99.9 percent destruction removal efficiency of hydrocarbons). During the cold months of the year, the excess digester gas would typically be beneficially used to meet the heating demands of the plant. During these months, the digester gas would be collected and used to fuel the plant boilers. The plant boilers would in turn provide hot water for the sludge digester operations and the building heating systems. Natural gas would be used to supplement the digester gas when additional demand exists. During the warmer months, the excess digester gas would be sent to the gas burners.

ODOR CONTROL

Under the Phase III Upgrade, odor control equipment would be installed at two new egg-shaped digesters and maintained at the existing digesters and thickeners. Exhaust air from the digested sludge overflow boxes (to be located at the new egg-shaped digesters and the existing conventional digesters) would be treated with activated carbon to control odors. The odor control system would adsorb hydrogen sulfide (H₂S) and other inorganic odor-causing constituents found in the air stream. One four-foot diameter, single-bed activated carbon absorption unit and one standby unit would be provided for each new egg-shaped digester overflow box. The activated carbon units would be located on the digester gallery roof and would exhaust to a stack. The existing activated carbon odor control system and enclosures for the sludge distribution boxes would remain in service to control odors from the gravity thickeners.

Between the issuance of the DEIS and this FEIS, NYCDEP performed an evaluation of odor control enclosures at the Hunts Point plant to determine if the enclosures meet the EPA Method 204 requirements for total enclosure. Based on this analysis, NYCDEP will implement enclosure modifications at three locations—the primary influent channel, the thickener distribution box, and sludge storage tank No. 10—to ensure 100 percent capture of fugitive odor emissions. In addition, NYCDEP has committed to install odor control units on the primary effluent channels.

SITE REMEDIATION

Approximately 5.25 acres (Block 2777, Lot 600 and part of Lot 901, and Block 2770, part of Lot 1) would be remediated during construction of the Phase III Upgrade. The remediation would be preformed in accordance with a Remedial Action Plan in a Record of Decision (ROD) issued by NYSDEC in 2003.

This ROD covered additional areas beyond those to be remediated during construction of the Phase III Upgrade. Specifically, the ROD covers 13 acres in Barretto Point, including the 5-acre Barretto Point Park, which has been remediated, and 2.75 acres on the additional NYCDEP parcel, which will be remediated in the future No Action condition (this remediation effort is

described in detail in Chapter 14, “Hazardous Materials”). The remaining area—the 5.25 acres—would be remediated as part of the Phase III Upgrade.¹

CARBON ADDITION AND POLYMER ADDITION

In addition to the Phase III Upgrade, the proposed action includes carbon and polymer addition facilities to enhance nitrogen removal.

The carbon feed facilities (including storage tanks, pumps, and piping) would be constructed at the northeast corner of the plant. The carbon source would be added to the wastewater treatment process at the aeration tanks. Various chemicals can be used as a carbon source in the denitrification process. The EIS considers the potential impacts from two carbon addition alternatives, including methanol (a water soluble wood alcohol) and ethanol (alcohol found in liquor and beer).² It is expected that approximately 2 additional trucks per day for the removal of sludge cake and an additional 6 trucks per day for delivery of chemicals (for carbon addition) for plant operations would be expected with the proposed action. The additional trucks for the removal of sludge cake would be required because the carbon addition would result in an increase in pounds of sludge cake produced.

In addition to a carbon feed system, polymer feed facilities, which would include storage tanks, feed equipment, and piping, would be installed in the basement of the centrate building (the centrate building is being constructed as part of the Phase II Upgrade and will be located within the plant site between the aeration tanks and the east final settling tanks, approximately south of Whittier Street).

SITE PLAN FOR THE PROPOSED ACTION

The proposed action improvements would be constructed in four areas of the WPCP site:

- On the 4.3-acre additional parcel, which is currently vacant and bordered by Barretto Point Park to the west;
- On the western portion of the existing plant to the south of the additional parcel (roughly west of Coster Street);
- At the northeast corner of the plant where the carbon feed facilities would be constructed; and

¹ If the proposed action were not implemented, NYCDEP will still proceed with the remediation of the remaining 5.25 acres as described in the December 2003 ROD.

² The Final Scope of Work stated that the EIS would consider the potential impacts from four alternatives (methanol, acetic acid, ethanol, and sodium acetate) for the carbon addition facility. Subsequent to publishing the Final Scope of Work, NYCDEP determined that neither acetic acid nor sodium acetate would be used at the Hunts Point WPCP (see Chapter 24, “Alternatives”). Acetic acid and sodium acetate have significantly different handling and storage requirements than methanol and ethanol. Specifically, sodium acetate would require the construction of storage facilities capable of storing approximately three times the volume of either methanol or ethanol. Acetic acid is more corrosive than either ethanol or methanol and would require construction of corrosion-resistant facilities. Acetic acid is also a substantially more odorous compound than either methanol or ethanol. Therefore, the EIS assesses the potential for impacts from the use of methanol and ethanol since neither sodium acetate nor acetic acid provide benefits beyond those provided by methanol and ethanol.

- Within the centrate building (to be constructed as part of the Phase II Upgrade) where the polymer addition facilities would be constructed.

Figure 1-5 shows the site plan for the proposed action including construction of Phase III Upgrade and carbon and polymer addition facilities.

The new egg-shaped digesters and the associated digester gallery would be constructed on the 4.3-acre parcel. The digester gallery would be a one-story building (with a basement), about 25 feet above grade, with a footprint of 13,200 square feet. The egg-shaped digesters would be large oval structures—approximately 130 feet above grade and 84 feet in diameter. An emergency generator housed in a weatherproof acoustic enclosure would be constructed on the 4.3-acre parcel, near the sludge pipe tunnel between the sludge thickeners and the proposed egg-shaped digesters. The carbon addition facilities would consist of underground storage tanks, a canopy overhead, and a small 14-foot by 30-foot control building. The polymer addition facilities would be constructed entirely within the centrate building.

E. DESCRIPTION OF THE FOUR-DIGESTER SCENARIO

Even after renovation of the four existing conventional digesters under the proposed action, these digesters will ultimately reach the end of their useful life. Therefore, an additional two egg-shaped digesters (for a total of four) would be constructed once these digesters are no longer useful to ensure that the plant is able to treat the projected flow for the year 2045. These two additional digesters would be constructed on Lot 100 to the north of the two digesters proposed as part of the Phase III Upgrade (see Figure 1-5). The additional two digesters proposed under the four-digester scenario would be constructed after 2014.

F. CONSTRUCTION

A detailed discussion of the proposed construction of the proposed action, including related potential impacts, is provided in Chapter 17, “Construction.” This section presents an overview of the construction activities and schedule.

The construction of the proposed action is scheduled to begin in the third quarter of 2008 and be completed by December 2014. As shown on the schedule (see Figure 1-6), there would be minimal overlap (approximately three quarters) between construction of the Phase II Upgrade and the proposed action. Work on the Phase II Upgrade commenced in June 2003 and is ongoing. The Full Step Feed BNR Facilities and other elements associated with Phase II Upgrade are scheduled to be completed in mid-2008 with some additional non-consent order related construction continuing through the first quarter of 2009. The Phase II Upgrade work will take place on the existing plant site. Staging for these activities (Phase II) will take place on the 1.2-acre construction staging area and on the existing plant site.

Mobilization of equipment for the proposed action would begin in second quarter of 2008 and would overlap with some of the Phase II construction. Construction of the proposed action would also overlap for a short period with remediation of the Barretto Point Site, which is scheduled to commence in the third quarter of 2008 and last for approximately one year. This construction will take place on a portion of the additional parcel. Staging for this portion of work will take place on the 1.2-acre construction staging area and on the additional parcel. The remediation of the Barretto Point Site is further described as part of the “No Action” condition in Section H, “Content of the EIS and Analysis Framework.”

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The construction for the proposed action has been planned to minimize disruption to the wastewater treatment operations during the construction period. Construction of the proposed action would commence in the third quarter of 2008. The renovation of the existing digesters and sludge storage tanks is scheduled to occur early in the construction period (between 2008 and 2009) to enable the plant to continue to provide reliable service while the new egg-shaped digesters are under construction. Renovation of the existing digesters and sludge storage tanks would occur on the existing plant site. The polymer addition facilities would be constructed at the same time as the digester renovation. This work would occur within the centrate building (the centrate building will be constructed as part of the Phase II Upgrade). The sludge thickeners would be renovated one at a time to allow for maximum continued operation; this element of the construction would occur between 2008 and 2012. The two new egg-shaped digesters would be constructed in parallel with the remaining construction elements between 2010 and 2014; the new digesters would be on line in 2014. The carbon addition facility would be constructed between 2011 and 2014. Remediation of 5.25-acres of the site as required under the ROD (see “Site Remediation,” above for a description of the ROD), would occur after construction and/or staging is complete. The additional two digesters proposed under the four-digester scenario would be constructed at some point after 2014, depending on the life of the rehabilitated digesters; the specific time frame for construction of the two additional digesters is not known.

Staging for all elements of construction would occur on the 1.2-acre construction staging area, except for those activities associated with the carbon and polymer addition facilities. Staging for the carbon addition facilities would take place on the plant site in the northeast section, and staging for the polymer addition facilities would occur within or adjacent to the centrate building.

G. PUBLIC PARTICIPATION

Below is a description of some of the outreach efforts NYCDEP has undertaken with the Hunts Point community. For a more detailed discussion of these efforts, see Chapter 23, “Environmental Justice.”

HUNTS POINT MONITORING COMMITTEE (HPMC)

In late 2003, the Hunts Point Monitoring Committee (HPMC) was established to ensure that community concerns are directly considered in the multi-phase upgrade program at the Hunts Point WPCP, and to incorporate community input into the decision-making process to the extent possible within NYCDEP’s mandated requirements. NYCDEP continues to sponsor this public participation effort which enables NYCDEP to provide regular updates to the HPMC about the upgrades and operations at the plant and to receive continuous feedback from HPMC members about community issues.

HPMC comprises community representatives, NYCDEP, and other New York City agency representatives. HPMC members are sponsored by Congressman Serrano, New York City Councilmember Arroyo, the Bronx Borough President, and the Community Board (Community Board 2). HPMC members include representatives from the following organizations: the Bronx Overall Economic Development Corporation, the Citizen Advice Bureau, the GAIA Institute, the Hunts Point Economic Development Corporation, Mothers on the Move, Sustainable South Bronx, and The Point Community Development Corporation.

As of December 2006, NYCDEP staff and HPMC members have met 33 times to discuss a variety of plant related issues and community concerns. Specifically, these meetings provide opportunities to:

- Provide information on the need, extent, requirements, benefits, design, and technologies of the upgrade work;
- Provide progress updates on the upgrade;
- Obtain community input and feedback on the upgrade project;
- Identify and address community issues, concerns, needs, and values with respect to the project and the community to ensure they are consistently understood and considered;
- Discuss upgrade, operational, and community-based alternatives that will have the least impact/greatest benefit reflecting community concerns and values both during construction and after the facility enters into normal operations at the completion of the construction;
- Identify community development/mitigation needs and opportunities;
- Provide feedback to the community as to how public input is influencing decisions related to the project.

OTHER NYCDEP AND CITY OUTREACH EFFORTS

In addition to the ongoing coordination with HPMC and the public participation efforts associated with review of the DEIS and ULURP application discussed below, the Mayor's Office and NYCDEP are working with the Hunts Point community to increase open space and improve the visual character of the neighborhood. Among the efforts being pursued by the City within the Hunts Point community are the Hunts Point Vision Plan, South Bronx Greenway, and roadway traffic improvements. NYCDEP-specific efforts are described below:

- Odor Source Study. The community odor surveys of the Hunts Point peninsula conducted by Malcolm Pirnie in November and December 2006 were a qualitative study to be used for informational purposes on the odors in the area. The findings were based on a snapshot in time. The community odor surveys did not quantify the odor emissions from any unit operations at the Hunts Point WPCP, and collection of the limited odor data during the study did not follow the rigorous procedures for quantitative analysis/data quality control that are required for use in a CEQR impact assessment. Therefore, this information could not be combined with data used in the DEIS.

The community odor surveys in November and December 2006 identified vehicle exhaust as the most predominant odor in the residential area. Odors from the Hunts Point WPCP (which still did not have all the odor mechanisms being installed under the Phase I Upgrade functioning at the time of the 2006 odor surveys) were localized along Ryawa Avenue and Halleck Street extension.

- Hunts Point Community Investment Project. In recognition that the Hunts Point WPCP and its long-term construction have placed a burden on the community, including the potential visual impact associated with the proposed digesters, NYCDEP is currently working with community members, a HPMC subcommittee, and a consultant to obtain community input in selecting a project that will improve conditions on the Hunts Point peninsula for area residents. A workshop was held with the community on December 9, 2006 to discuss options for the amenity. At that workshop, three priority options were identified: 1) a boathouse facility at Lafayette Park and streetscape improvements on Lafayette Avenue

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(described as the Lafayette Paseo in the South Bronx Greenway Master Plan); 2) a multi-use facility focused on maintenance uses and environmental education; 3) a floating swimming pool, the reconstruction of Tiffany Street Pier, shellfish habitat creation, or streetscape improvements on Ryawa and Viele Avenues. Results of the workshop, including discussions of potential amenity projects, have been shared with the Hunts Point community.

- Future Addition to Barretto Point Park. In 2001, NYCDEP transferred approximately 11 acres (5 upland acres and 6 acres of land under water) to NYCDPR to create Barretto Point Park. Barretto Point Park has since been constructed and is now open to the public. NYCDEP prepared a ULURP application to map the area as parkland (discussed below under “Public Outreach for CEQR and ULURP”). NYCDEP will transfer additional land to NYCDPR—the 1.2-acre construction staging area—when it is no longer needed for construction staging for inclusion in Barretto Point Park (the area will be mapped as parkland at that time).

PUBLIC OUTREACH FOR CEQR AND ULURP

The proposed action is undergoing public review as required by City’s ULURP and CEQR rules. Both of these procedures require extensive public review of a proposed action. As part of the public scoping process and review of the DEIS, NYCDEP undertook extensive outreach efforts.

The City’s ULURP, mandated by Sections 197-c and 197-d of the City Charter, is a process specifically designed to allow public review of the proposed actions at four levels: Community Board, Borough President, New York City Planning Commission (CPC), and City Council. The procedure sets time limits for review at each stage to ensure a maximum total review period of approximately seven months.

NYCDEP is undertaking two actions that require review under ULURP. NYCDEP and the New York City Department of Citywide Administrative Services (DCAS) have initiated a ULURP action for locating or site selecting a public facility on previously undeveloped or vacant city-owned land. A second ULURP application (with NYCDPR) for the mapping of Barretto Point Park is also being certified on a parallel schedule. This mapping application consists of two separate application maps. The first is for Barretto Point Park and the second is for the 1.2-acre construction staging area. The application map for the construction staging area will be filed in the future (post-WPCP construction), and as such, the 1.2-acre parcel will not be given parkland status until NYCDEP determines that the parcel is no longer needed for work associated with its Hunts Point WPCP. NYCDEP has not yet determined when construction staging on the 1.2-acre staging area will no longer be necessary. Therefore, the exact filing date of the application map for the construction staging area is unknown but could be a minimum of 10 years from the ULURP application approval date.

The required public hearing for the DEIS may be held jointly with the required CPC ULURP hearing. However, for the proposed action, two separate hearings—a CPC ULURP hearing and a DEIS public hearing—were held to ensure that the DEIS hearing was held in the Hunts Point community. The DEIS public hearing was held on April 12, 2007 at The Point Community Development Corporation in Hunts Point, and the CPC ULURP hearing was held on June 6, 2007. Once ULURP is complete, NYCDEP may take action on the proposed action.

For the review of the DEIS, HPMC was assisted by an independent consultant, provided by NYCDEP, but selected by HPMC. The consultant was tasked to review the DEIS and provide technical services in connection with the DEIS review. In connection with the consultant’s

review of the DEIS, NYCDEP held four technical meetings/conference calls with HPMC's consultant and met with HPMC to discuss the consultant's review (January 17, 2007, January 30, 2007, March 16, 2007, and March 19, 2007). NYCDEP also replied to over 125 questions and requests for additional data from the consultant. In coordination with the certification of the ULURP applications (which occurred on February 26, 2007), NYCDEP attended public hearings with the CPC (on June 6, 2007), the Bronx Borough President's Office (on April 27, 2007), and the local Community Board (on March 14, 2007, March 28, 2007, April 11, 2007 and April 25, 2007) to present the findings of the DEIS as related to the ULURP applications.

H. CONTENT OF THE EIS AND ANALYSIS FRAMEWORK

The lead agency and involved agencies are required to take a hard look at the environmental effects of a proposed action and, to the maximum extent practicable, avoid or mitigate significant adverse impacts on the environment, consistent with social, economic, and other essential considerations. The EIS identifies and analyzes the potential significant adverse environmental impacts of a proposed action and how those impacts could be avoided or minimized, providing a means for agencies to consider environmental factors and choose among alternatives in their decision-making processes.

In disclosing impacts, the EIS considers the proposed action's potential adverse impacts on the environmental setting. Because the proposed project would be operational in 2014, its environmental setting is not the current environment, but the future environment. Therefore, the technical analyses and consideration of alternatives assess current conditions and forecast these conditions to 2014 (the analysis year that was determined appropriate for this project) for the purposes of determining potential impacts. The EIS analyzes both the No Action and Build conditions and also includes other future developments. Thus, the technical analyses and consideration of alternatives in Chapters 2 through 24 describe conditions today, and forecast these conditions to the future/analysis year of 2014 without and with the proposed action.

For the purposes of the analyses in this EIS, the existing, No Action, and Build scenarios will be as follows:

- **Existing Conditions.** The Existing Conditions scenario includes the plant as upgraded under the Phase I Upgrade.
- **The “No Action” or “Future without the Proposed Action” condition.** The No Action scenario will be the plant as upgraded under the Phase II Upgrade.

In addition to the Phase II Upgrade, another project affecting the project site will be undertaken in the No Action condition—2.75 acres of the Barretto Point Remediation will be remediated on the additional parcel. This effort is further described in Chapter 14, “Hazardous Materials.” The remediation will include excavation of contaminated soils in the area of a former paint and varnish manufacturing facility (total area 0.7 acres); disposal of excavated material to an appropriate off-site NYSDEC approved treatment/disposal facility; the installation of a temporary structure and carbon filters to control dust and emissions; extraction and treatment of groundwater encountered during excavation of VOC-contaminated soils and discharge of treated groundwater to the Hunts Point WPCP for final treatment; and backfilling the excavation with clean fill. Two feet of clean fill will be placed on a total of 2.75 acres as part of the site remediation.

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Other developments expected to be completed in the future No Action condition will also be considered as part of the future condition, as appropriate. These projects include the following:

- Oak Point Detention Center. The New York City Department of Corrections proposes to construct a detention center at the Oak Point site. This project would be located at a distance of approximately a ½-mile from the Hunts Point WPCP site. This project is discussed qualitatively in the construction chapter; specifically, the EIS describes the potential overlap of construction of the plant with the detention center construction. Due to the distance from the plant, there would not be the potential for other significant cumulative impacts.
- Bruckner/Sheridan Reconstruction. The Federal Highway Administration (FHWA) in coordination with the New York State Department of Transportation (NYSDOT) is proposing to reconstruct the Bruckner-Sheridan Expressway Interchange. This project is located approximately 1.1 miles from the Hunts Point WPCP site. This project is discussed qualitatively in the construction chapter of this EIS, since an EIS is being prepared and no alternative has been selected. Specifically, the EIS discusses potential traffic measures that would be required under the alternatives being considered in the Bruckner/Sheridan EIS. No other potential significant cumulative impacts are expected.
- New York City Transit Facility Expansion. NYCT is in the preliminary stages of planning to expand the current storage warehouse capacity at the NYCT facility. If this project were to move forward, it would be under construction in 2012. While this site is located near the Hunts Point plant site (approximately 555 feet), the project is small and not expected to introduce much truck traffic. Therefore, this project would not result in potential significant cumulative impacts.
- Food Center Drive Projects. The New York City Economic Development Corporation (NYCEDC) has selected Baldor Specialty Foods and Anheuser Busch of New York for developments on Food Center Drive. Baldor Specialty Foods currently operates within the Hunts Point peninsula and will relocate to a 185,000-square-foot warehouse and distribution facility. Anheuser Busch will relocate its existing Long Island City, Queens, operations to a 167,000-square-foot warehouse and distribution facility. These projects are discussed in the construction chapter of the EIS. No other potential significant cumulative impacts are expected.
- Residuals Force Main. Residual solids from the Croton Water Treatment Plant at the Mosholu Site in Van Cortlandt Park in the Bronx may be transported to the Hunts Point WPCP. The anticipated year of operation for the Croton Water Treatment Plant is 2011. The material from the Croton Water Treatment Plant would consist of mixed floated solids from the plant's residuals handling facility, including waste backwash settled solids and floated solids. The design average mixed solids flow rate from the Croton Water Treatment Plant would be 121,000 gpd and the maximum would be 284,000 gpd. The mixed solids would be pumped approximately 7 miles south from the Mosholu site to the Hunts Point WPCP, via one proposed 6-inch force main. The mixed solids from the Croton Water Treatment Plant would be stored in the sludge storage tanks at the Hunts Point WPCP and sent to the dewatering facility. This project would consist of underground pipe construction. This project is discussed in the infrastructure and construction chapters of the EIS (Chapters 12 and 17, respectively).

- South Bronx Greenway. The South Bronx Greenway is a proposed bicycle/pedestrian greenway that would provide open space and waterfront access within Hunts Point (and Port Morris to the west). A master plan for the greenway was issued in November 2006. The master plan identifies a number of specific greenway projects—these projects are divided into short-term, mid-term, and long-term phases. The short-term projects are those that could proceed within the next 5 years depending on available funding; the mid-term projects are those that could proceed within 5 to 10 years; and the long-term projects are those that are likely to take greater than 10 years to be realized. Within the Hunts Point peninsula, potential projects include streetscape improvements on Lafayette Avenue, Hunts Point Avenue, Food Center Drive, Halleck Avenue, and Viele Avenue, Manida Street, and Ryawa Avenue. Waterfront destinations are proposed along the eastern shore of the peninsula, and access to North Brother Island is also proposed. Of the projects identified, only the Ryawa-Viele Connection and a portion of the Food Center Drive improvements would be located within ¼-mile of the plant. Both projects could be constructed within the five-year timeframe identified in the plan. The Ryawa-Viele Connection would involve the implementation of improvements adjacent to the plant boundary, specifically, along a portion of Viele Avenue (between Barretto Point Park and Manida Street), Manida Street (between Viele and Ryawa Avenues), and Ryawa Avenue (from Manida Street to approximately Halleck Street). The conceptual plan shown in the master plan for this element of the greenway includes improvements consisting of a 24-foot planted buffer between the plant site and the sidewalk along Ryawa Avenue, the introduction of a bikeway along all three streets, and extensive street plantings. The Food Center Drive improvements, which are located at a distance from the plant site (but within ¼ mile) would consist of the construction of a bikeway and pathway with plantings for the length of the roadway. Impacts related to the Ryawa-Viele Connection are considered for multiple analyses in the EIS, as appropriate.
- Hunts Point Special District and Rezoning. NYCDCP is currently contemplating a rezoning within the Hunts Point peninsula and the creation of a special district (the Hunts Point Special District). The purpose of the rezoning and special district is to enhance the environment for the expanding food industry sector in Hunts Point, to act as a buffer between the residential area and the heavier manufacturing district, to encourage the growth of retail services available to residents and employees, and to improve the appearance of the industrial area of the Hunts Point peninsula. The project site is not within the rezoning or special district boundaries. The Hunts Point Special District and Rezoning is discussed in Chapter 2.
- **The “Proposed Action” condition.** As discussed in this chapter, the proposed action consists of the Phase III Upgrade and the carbon and polymer addition facilities. This EIS assesses the potential for impacts from the proposed action during both the construction and operation phases. The analyses of the potential for construction-period impacts are provided in Chapter 17, “Construction.”

This EIS also considers a “four-digester” scenario in which two additional egg-shaped sludge digesters, for a total of four new digesters, are constructed (see “Description of the Four-Digester Scenario,” above). Although these two additional digesters would not be constructed as part of the Phase III Upgrade, the potential impacts from the implementation of these two additional digesters are addressed in the relevant technical impact study areas (e.g., visual and odor impacts) of the EIS. *