A. INTRODUCTION

OVERVIEW

The North River Wastewater Treatment Plant (WWTP) is owned and operated by the New York City Department of Environmental Protection (DEP) and serves approximately 550,000 people on the west side of Manhattan. The Plant is a secondary treatment plant with a design dry weather flow of 170 million gallons per day (MGD), and a peak wet weather flow of 340 MGD. The North River WWTP is located in the Borough of Manhattan, at 725 West 135th Street, New York, NY; approximately bounded by the Henry Hudson Parkway (Route 9A) to the east, the Hudson River to the west, and West 145th and West 135th Streets to the north and south, respectively. It treats a combination of wastewater and stormwater collected along the west side of Manhattan treated through a series of wet-stream treatment and solid-stream processing systems that require significant heat and power. One by-product of the solid-stream processing is methane gas, which can be used to generate heat, power, or both.

The Plant currently implements cogeneration of heat and power through direct drive engine driven pumps and aeration blowers that are necessary for providing treatment. The existing plant's ten tri-fuel pump and blower engines are nearing the end of their useful life and will require a major overhaul or replacement. The proposed project is the replacement of the ten old existing tri-fuel engines with electrification of the Plant and the installation of cogeneration facilities to improve operations and reliability, reduce greenhouse gas emissions (GHG), eliminate approximately 1.652 million gallons of diesel fuel per year, and provide cost effective solutions over the existing engine driven pump and blower systems. Additionally, the proposed project includes improvements to the WWTP's electrical infrastructure and other related equipment, which would be made to allow the plant to operate based on digester gas, natural gas, electricity, or a combination of any of these energy sources. Thermal recovery systems would also be upgraded to utilize the heat produced by the engine generators and distribute it throughout the North River WWTP. Digester improvements are also included with this project to increase digester gas production and to provide gas cleaning to ensure compliance with air permit requirements.

The existing plant is a major stationary source of air emissions operating under a New York State Department of Environmental Conservation (NYSDEC) Title V permit with an expiration date of 12/19/2017. The modification to the existing facility will be in compliance with non-attainment New Source Review (NANSR) and Prevention of Significant Deterioration (PSD) requirements. The five new spark ignited engines will meet USEPA's New Source Performance Standards (NSPS) and NYSDEC's oxides of nitrogen (NO_x) Reasonably Available Control Technology (RACT) regulations. The proposed spark ignited engines meet all the state and air regulatory requirements, and overall, there would be a net decrease in criteria pollutant emissions.

This environmental justice analysis has been prepared to identify and address any potential disproportionate adverse impacts on minority or low-income populations that could result from the proposed modification and operation of the cogeneration plant that is the subject of the modified Title V Facility Air Permit being sought from NYSDEC. The need for performing an environmental justice analysis is related to the establishment of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations* (February 11, 1994). Certain state agencies, such as NYSDEC, have developed their own policies for incorporating environmental justice concerns into environmental review. NYSDEC's environmental justice policy is provided in *Commissioner Policy-29 Environmental Justice and Permitting* (CP-29). CP-29 was issued on March 19, 2003 to address environmental justice concerns and ensure community participation in the NYSDEC environmental permit review process and the NYSDEC application of the State Environmental Quality Review Act. CP-29 is intended to encourage meaningful public participation by minority or low-income communities in the environmental review process and to assist NYSDEC in addressing any disproportionate adverse impacts on minority and low-income communities.

Pursuant to CP-29, NYSDEC reviews issues related to environmental justice prior to issuing permits or approvals. This environmental justice analysis has been prepared pursuant to CP-29 to address any potential environmental justice issues related to emissions from the proposed modification to the existing tri-fuel pump and blower engines that will be permitted by NYSDEC under the proposed facility's modified Title V Air Permit. In order to provide the information necessary for such NYSDEC review, this document discusses the potential effects of the proposed project on minority and low-income residents in accordance with CP-29, and determines whether these populations would be disproportionately affected by adverse environmental impacts resulting from the proposed project.

METHODOLOGY

As set forth in CP-29, "Environmental justice means the fair treatment and meaningful involvement of all people regardless of race, color, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences."

This analysis was prepared following the methodology set forth in CP-29. This methodology involves (1) identifying potential adverse environmental impacts and the area to be affected (i.e., establishing a study area); (2) determining whether potential adverse environmental impacts are likely to affect a potential environmental justice area (i.e., whether low-income and/or minority populations are present in the study area); (3) identifying the potential for cumulative environmental burdens in the study area; and (4) identifying whether potential adverse environmental impacts of the proposed action would disproportionately affect low-income and minority populations. Projects that are seeking permits from NYSDEC and which have environmental justice (EJ) areas must also seek public participation from the affected community. A separate public participation plan has been developed for the proposed project, the key details of which are summarized below. In addition, this analysis identifies other environmental burdens within the EJ study area.

DELINEATION OF STUDY AREA

The study area for this EJ analysis was defined to include all census block groups substantially within ½-mile of the proposed project site, or the area where any potential adverse impacts resulting from the proposed project could occur. While the proposed project site is the existing engine room and associated exhaust stacks located within the larger North River WWTP facility, where all of the proposed engine and other associated mechanical and electrical equipment replacement work would occur, the ½-mile radius has conservatively been drawn from the boundaries of the entire North River WWTP site.

Because the minority and low-income analysis rely on different data sets (the minority analysis relies on data from the *2010 Census* for *2010 Census* block group boundaries; the low-income analysis relies on data from the *2000 Census*—the latest decennial census for which low-income data is available—for *2000 Census* block group boundaries), slightly different study areas were established for the minority and low-income analyses, as explained in greater detail in the section below.

The study area for this environmental justice analysis was defined to include the area where any potential impacts resulting from the proposed project could occur. Because the North River WWTP is in Upper Manhattan, is adjacent to the Henry Hudson Parkway, and is in a densely developed residential area of the city, the environmental justice study area was chosen in consultation with NYSDEC, and has been defined as the area within ½-mile of the North River WWTP. The ½-mile study area around the WWTP includes portions of Manhattan between Tiemann Place and West 155th Street, west of St. Nicholas Avenue.

IDENTIFY POPULATION OF CONCERN

The next step in the analysis is to determine whether low-income or minority populations ("populations of concern") are present in the study area. Following NYSDEC's methodology to identify minority and low-income populations within the study area, demographic information from the 2000 and 2010 Census was used. The United States Census Bureau collects information using various geographic units such as census tracts, block groups, and blocks. For the purposes of this analysis, demographic data on total population, race, and poverty status were compiled at the census tract level within the environmental justice study area. Because census tract boundaries changed in some locations between the 2000 and 2010 Census, the analysis requires two different sets of study areas for 2000 and 2010. Each study area is made up of census tracts that have at least 50% of their total area within the ½-mile project study area. The 2010 Census study area was used to collect data on total population and minority populations. The 2010 Census study area includes eight census tracts—Census Tract 219; Census Tract 223.01; Census Tract 223.02; Census Tract 225; Census Tract 227; Census Tract 229; Census Tract 233; and Census Tract 237. **Figure F-1** depicts the eight census tracts in the 2010 Census environmental justice study area. The 2000 Census study area was used to collect data on low-income and poverty populations. The 2000 Census study area includes nine census tracts—Census Tract 219; Census Tract 221.01; Census Tract 223.02; Census Tract 225; Census Tract 227.01; Census Tract 229; Census Tract 233; Census Tract 237; and Census Tract 313. **Figure F-2** depicts the nine census tracts in the 2000 Census environmental justice study area. In addition, corresponding census data were compiled for Manhattan and New York City as a whole, to allow for a comparison of study area characteristics to a larger reference area.

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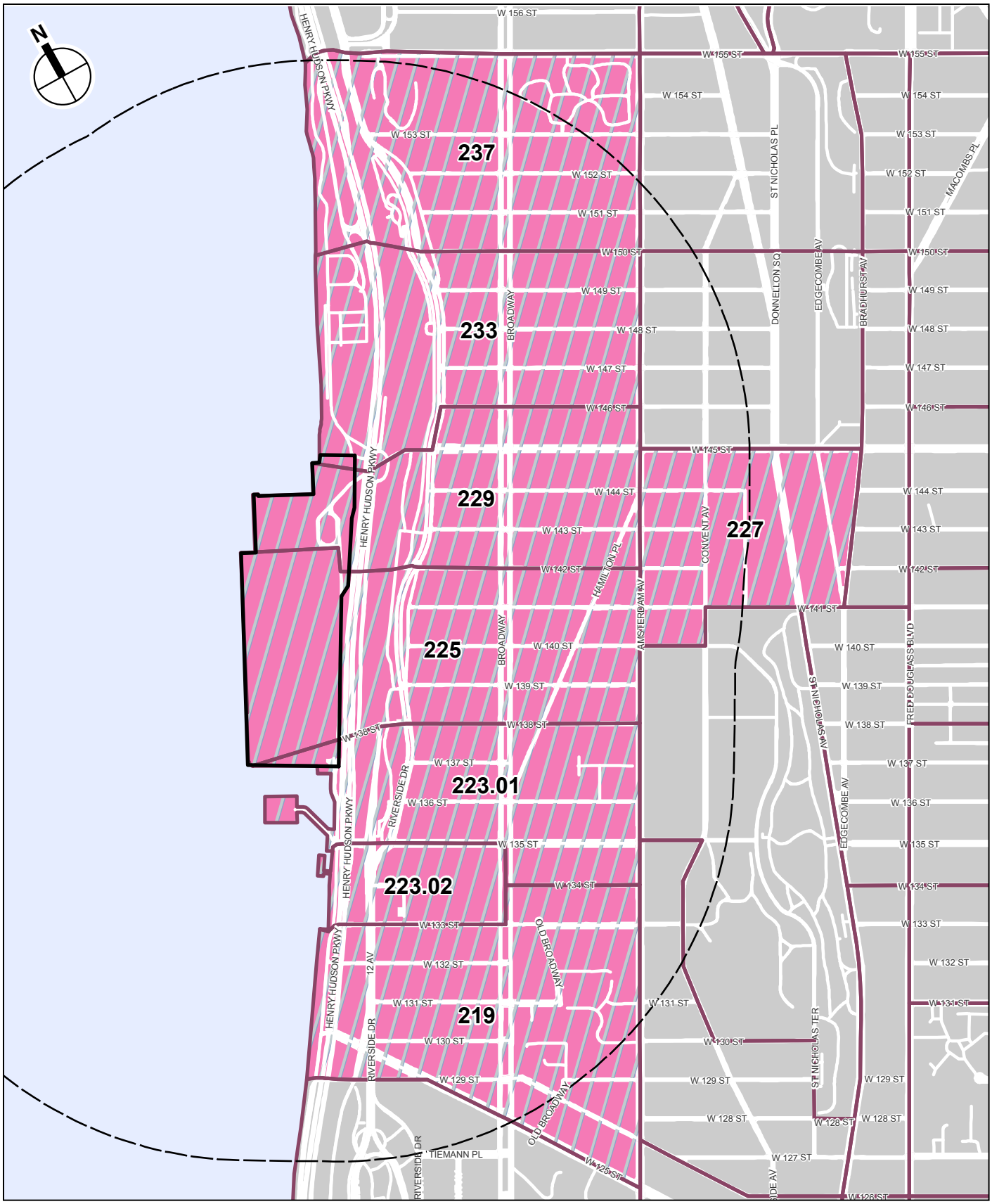

Project Site Boundary

Study Area Boundary (1/2-Mile Perimeter)

2010 1/2-Mile Census Tracts

Environmental Justice Census Tract

NORTH RIVER Wastewater Treatment Plant

Figure F-1

Environmental Justice Study Area
2010 Minority Population Study Area

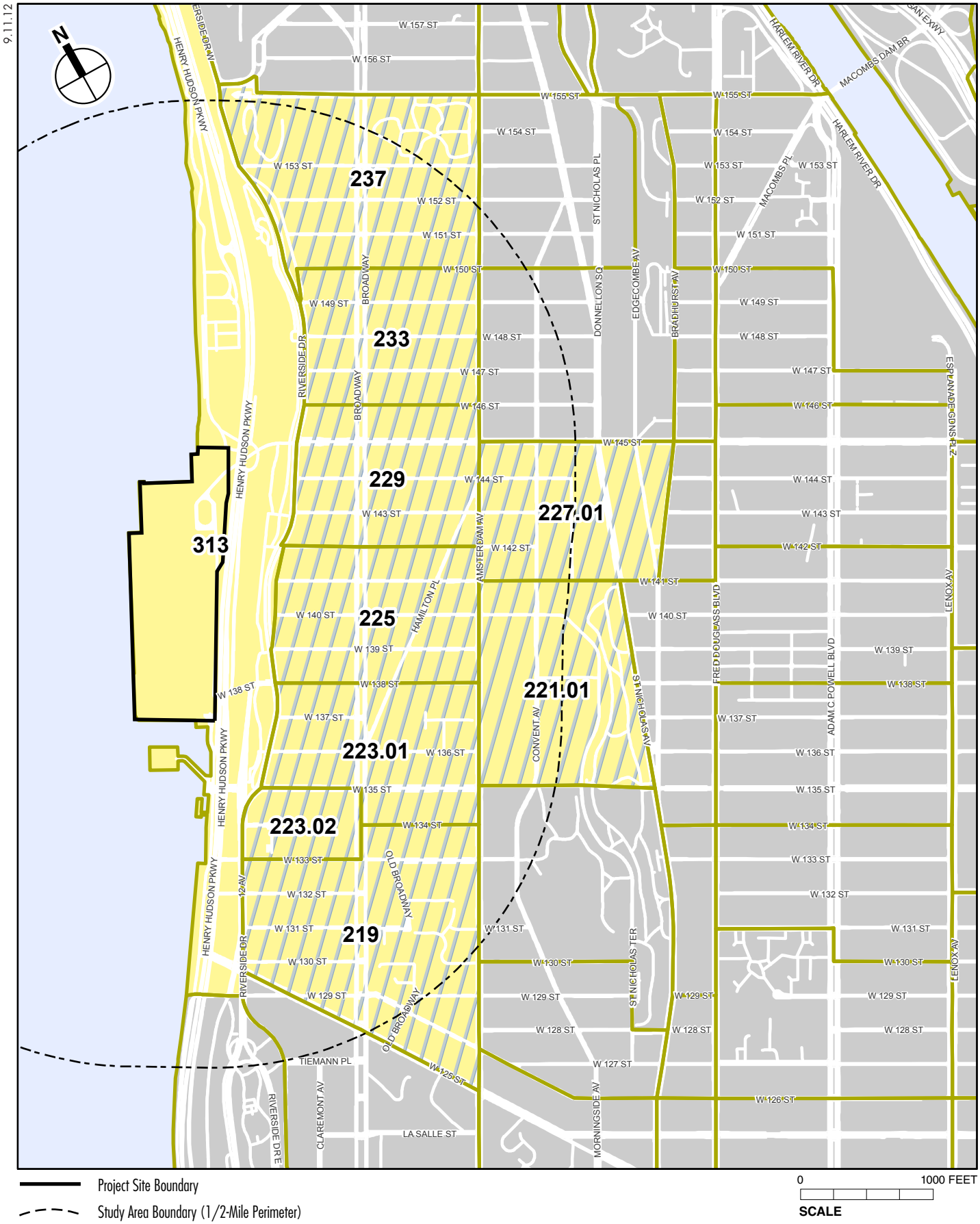

Figure F-2

Environmental Justice Study Area
2000 Poverty Population Study Area

NORTH RIVER Wastewater Treatment Plant

IDENTIFICATION OF MINORITY COMMUNITIES

NYSDEC's Policy defines minorities to include Hispanics, African-Americans, Asian Americans and Pacific Islanders, and American Indian or Alaskan natives. In identifying minority residents within the study area, data from the U.S. Census Bureau were used to determine the population characteristics for the study area. The following information was collected for each census tract block group:

- *Data on racial and ethnic characteristics:* The population in each census tract in the study area was characterized using the following racial categories provided in the 2010 Census: White, Black, Asian, and "Other." "Other" includes residents of American Indian, Alaska Native, Native Hawaiian and Other Pacific Islander descent, as well as those respondents who did not identify with any listed racial groups (White, Black, Asian), or who indicated that they are of more than one race defined in the Census. In addition to racial characteristics, the 2010 Census also includes information on Hispanic origin, which is considered to be an ethnic rather than racial characteristic. People of this ethnic category can be any race.
- *Total percentage of minority population:* Because Hispanic residents may be of any race, people who characterized themselves as White, Black, Asian, and Other in the 2010 Census may be non-Hispanic or Hispanic. To determine the total number of minority residents in each block group, the number of Black (both Hispanic and non-Hispanic), Asian (Hispanic and non-Hispanic), Other (Hispanic and non-Hispanic), and Hispanic Whites were tallied.

According to NYSDEC, a "minority community" is present when **51.1** percent or more of the population is minority.

IDENTIFICATION OF LOW-INCOME COMMUNITIES

CP-29 defines a low-income population as a population with an annual income below the poverty threshold as defined by the U.S. Census Bureau. Data were compiled on the percentage of persons in each census tract in the 2000 study area living below the poverty threshold. CP-29 defines a low-income community to be any area where the low-income population (i.e., percent living below the poverty threshold) is equal to or greater than **23.59** percent of the total.

B. IDENTIFICATION OF POPULATIONS OF CONCERN IN THE STUDY AREA

Using the methodology described above, the ½-mile study area contains a population of concern for environmental justice. As reported in the 2010 Census, more than 51.1 percent of the population in the study area is minority and according to the 2000 Census more than 23.59 percent of the population lives below the poverty level.

According to the 2010 Census, the study area has a total population of 53,976 residents, of which approximately 90.5 percent is minority (as shown in **Table F-1**). Hispanic residents are the largest group, comprising approximately 61.2 percent of the population in the study area. Individually, all census tracts in the study area qualify as minority communities. Overall, the study area meets NYSDEC's definition of a minority community; well exceeding the NYSDEC's 51.1 percent threshold. The EJ study area's minority population is also notably higher than in Manhattan or New York City as a whole.

Table F-1
Study Area Population Characteristics

Area	Population (2010)											
	2010 Total Population	Race and Ethnicity*										Total Minority (%)
		White	%	Black	%	Asian	%	Other	%	Hispanic	%	
Census Tract 219	6,023	165	2.7	2,042	33.9	92	1.5	80	1.3	3,644	60.5	**97.3**
Census Tract 223.01	7,917	729	9.2	436	5.5	219	2.8	126	1.6	6,407	80.9	**90.8**
Census Tract 223.02	3,385	207	6.1	820	24.2	76	2.2	34	1.0	2,248	66.4	**93.9**
Census Tract 225	10,149	1,078	10.6	2,034	20.0	231	2.3	193	1.9	6,613	65.2	**89.4**
Census Tract 227	4,864	672	13.8	2,468	50.7	142	2.9	166	3.4	1,416	29.1	**86.2**
Census Tract 229	8,300	697	8.4	1,889	22.8	144	1.7	200	2.4	5,370	64.7	**91.6**
Census Tract 233	6,527	862	13.2	1,827	28.0	188	2.9	175	2.7	3,475	53.2	**86.8**
Census Tract 237	6,811	715	10.5	1,999	29.3	92	1.4	134	2.0	3,871	56.8	**89.5**
Study Area Total	**53,976**	**5,125**	**9.5**	**13,515**	**25.0**	**1,184**	**2.2**	**1,108**	**2.1**	**33,044**	**61.2**	**90.5**
Manhattan	**1,585,873**	**761,493**	**48.0**	**205,340**	**12.9**	**177,624**	**11.2**	**37,839**	**2.4**	**403,577**	**25.4**	**52.0**
New York City	**8,175,133**	**2,722,904**	**33.3**	**1,861,295**	**22.8**	**1,028,119**	**12.6**	**226,739**	**2.8**	**2,336,076**	**28.6**	**66.7**

Notes:
* The racial and ethnic categories provided are further defined as: White (White alone, not Hispanic or Latino); Black (Black or African American alone, not Hispanic or Latino); Asian (Asian alone, not Hispanic or Latino); Other (American Indian and Alaska Native alone, not Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone, not Hispanic or Latino; Some other race alone, not Hispanic or Latino; Two or more races, not Hispanic or Latino); Hispanic
Sources: U.S. Census Bureau, Census 2010, SF1.

As shown in **Table F-2**, the 2000 Census reports that approximately 32.0 percent of the residents in the study area live below the poverty level (compared to approximately 20 percent in Manhattan as a whole and 21.2 percent in New York City). With the exception of Census Tract 313, Every Census Tract in the study area has poverty level greater than NYSDEC's threshold of 23.59 percent of the population. Census tract 313 abuts the Hudson River between West 125th Street and Dyckman Street, closely matching the boundaries of Riverside Park. The 2000 Census reports the total population of Census Tract 313 as only 113 persons. Overall, the EJ study area exceeds NYSDEC's 23.59 percent threshold for a low-income community.

Table F-2
Study Area Economic Characteristics

Area	Economic Profile (1999)
	Individuals Below Poverty Level (%) **
Census Tract 219	**39.5**
Census Tract 221.01	**43.3**
Census Tract 223.02	**34.0**
Census Tract 225	**38.2**
Census Tract 227.01	**32.0**
Census Tract 229	**39.1**
Census Tract 233	**34.6**
Census Tract 237	**34.5**
Census Tract 313	0%
Study Area Total	**32.0**
Manhattan	**20.0**
New York City	**21.2**

Notes:
** Percent of individuals with incomes below established poverty level. The U.S. Census Bureau's established income thresholds define poverty level.
Sources: U.S. Census Bureau, Census 2000, SF3.

C. ANALYSIS OF EXISTING ENVIRONMENTAL BURDENS IN THE STUDY AREA

In accordance with CP-29 guidance, other existing sources of pollution or facility types similar to the proposed project in the EJ study area should be considered in order to establish the baseline conditions against which project impacts will be assessed. In this case, the proposed project involves the replacement of the 10 existing tri-fuel pump and blower engines to improve operations and reliability and reduce greenhouse gas emissions (GHG), as well as upgrades to the WWTP's electrical infrastructure and other related equipment, including upgrades to thermal recovery systems (to utilize the heat produced by the engine generators for use throughout the WWTP) and digester improvements (to increase digester gas production and to provide gas cleaning to ensure compliance with air permit requirements). This section identifies any sources of air emissions not related to the proposed project that may be a burden on the community. Potential environmental burdens in the EJ study area are summarized below. Since the potential effects of the proposed project would be primarily related to pollutant emissions, the focus of this section is on other sources of emissions in the area.

The proposed project is located on the Hudson River west of the Henry Hudson Parkway. The surrounding area is dominated by dense residential uses. Outside the existing North River WWTP and an area immediately adjacent to the south along the waterfront, there are no other areas zoned for manufacturing within a ½-mile the project site and therefore very few manufacturing uses. Because of the predominantly residential, open space/parkland, and to a lesser extent commercial uses present, and the lack of heavy industrial uses in the study area, there are currently no other Title V facilities found within the 1/2-mile radius of the project site. In addition, the study area also includes a portion of the Henry Hudson Parkway (Route 9A)—a major regional highway that contributes to mobile source air pollutant emissions in the study area.

All other air emission sources to be considered are related to the existing WWTP. These sources include stacks for boilers, emergency generators, and odor control systems related to the wastewater processes at the plant. Attachment C of the EAS, "Air Quality," analyzes the emission rates of the existing combustion sources that would remain at the plant.

D. ANALYSIS OF THE POTENTIAL FOR SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS IN THE STUDY AREA

OPERATION

The technical analyses in the other attachments in the EAS analyze the potential impacts of the proposed project in combination with conditions expected in the surrounding area in the future without the proposed project. These analyses consider the cumulative effects of the proposed project together with the baseline condition, which includes existing sources of emissions from the North River WWTP.

Based on a review of the technical analyses included in the EAS and supplemental studies, the proposed project is not expected to result in any significant adverse impacts and would not significantly affect the residential populations in the study area, including minority and low-income populations. However, because the study area is a low-income and minority community, a summary of potential air quality effects related to the proposed project is found below.

AIR QUALITY

Attachment D, "Air Quality," discloses the potential for air quality impacts from the proposed project. The analysis concluded that the proposed project would not result in any significant adverse air quality impacts. Overall, there would be a net decrease in criteria pollutant emissions.

The existing Plant is a major source facility currently operating under a renewed NYSDEC Title V permit. Additionally, the existing engine facilities do not meet NYSDEC's NO_x RACT regulations and operate under a variance. The modification of the existing facility will be in compliance with non-attainment New Source Review (NANSR) and Prevention of Significant Deterioration (PSD) requirements. The new spark ignited engines will meet USEPA's New Source Performance Standards (NSPS) and NYSDEC's NO_x RACT regulations and would greatly reduce NO_x emissions from the WWTPs engines.

The proposed spark ignited engines meet all the state and air regulatory requirements. Furthermore, the new upgraded WWTP engines would reduce the emissions of greenhouse gas (GHG) through increased use of digester gas and natural gas and by eliminating the use of fuel oil for the WWTPs engines. The proposed cogeneration plant would maximize the use of digester gas generated to maximize the potential GHG benefit. The GHG reduction potential has a direct relationship with the ability to generate and utilize digester gas. Improved digester gas production associated with digester process improvements can significantly reduce GHG emissions. The proposed cogeneration system will have a significant reduction in GHG emissions (between 27 and 49 percent, depending on the process improvements implemented) compared with existing baseline levels.

The reduction in GHG achieved by the proposed engine modifications would adhere to the New York City Climate Protection Act under Local Law No. 55 and Chapter 8, of Section 1, Title 24, of the NYC administrative code, which state that city government operations must reduce GHG emissions by calendar year 2017, achieved through applicable policies, programs, and actions included in *PlaNYC 2030*.

CONSTRUCTION

The proposed project involves the replacement of ten (10) existing tri-fuel engines with the construction of five (5) new dual-fuel engines—four (4) intended for regular operations, with one (1) as a back-up—with each of the new engines rated at up to 3.37 MW, as well as the other plant infrastructure and equipment improvements described above. These new engines will replace the WWTPs existing engines. These will be replaced by the new engines which have higher energy efficiency, lower emissions and higher reliability.

The proposed project is not expected to result in any significant adverse impacts. All of the proposed construction work for the cogeneration facility upgrades would occur within or adjacent to the existing WWTP's engine room. Construction of the additional improvements to the WWTP's electrical infrastructure and other related equipment would all occur within the existing WWTP structure (i.e., the "project site"). In addition, the separation of park electrical service from electrical service at the plant would be undertaken, which would occur on DEP property east of the WWTP building. This aspect of the project will require the replacement of the abandoned substation with a new substation, and that two (2) new concrete encased ductbanks be installed. The new concrete encased ductbank system could require up to approximately 1,500 feet of trenching on the North River property that will be up to 4 feet wide

and 6 feet deep to accommodate each of the two ductbanks. The excavation for the new ductbank may extend from the new substation in a northerly or southerly direction, but not both. This trenching and electrical separation work would occur on DEP property, mostly outside and to the east of the WWTP building; none of this work will occur within Riverbank State Park, and this work would not impact the operation of the Park. Overall, construction of the various elements of the proposed project would not affect users of the park above the plant, and would not significantly affect the residential populations in the study area, including minority and low-income populations.

While the project is still in the design phase for the installation of the new spark ignited engines and the associated supporting mechanical and electrical equipment and systems, as well as the other elements of the project upgrades, based on experience with other similar projects, it is estimated that there would be a peak of approximately four (4) trucks per day traveling to and from the site during construction of the cogeneration facility upgrades. It is anticipated that the construction deliveries or debris/rubbish removal would make use of the limited access service road to the WWTP that is accessible from West 125th Street. Trucks traveling to and from the WWTP via 125th Street, would take Broadway or Amsterdam Avenue (nearby local truck routes) north or southbound to other local crosstown truck routes, including 145th Street and 155th Street, ultimately connecting to the regional highway system to the east (I-87) or further north for access to I-95 and the George Washington Bridge. The small numbers of daily trucks anticipated to be traveling to and from the site on these roads and the nearby highway system during the construction period will be insignificant (less than one truck per hour) in comparison to the existing volumes of vehicles (trucks and autos) that are found on these roadways.

Similarly, during the project's construction, there would be an estimated average of approximately 24 workers at the site. For this project, it is anticipated that there would be one 8-hour shift per day, typically from 7 AM to 3 PM, during the five weekdays. This shift falls outside the typical peak traffic periods, and would therefore have even less effect on surrounding traffic levels than if it occurred during the local traffic peaks. Additionally, because of the proximity of mass transit service near the site (bus service on 145th Street, Broadway, Amsterdam, and St. Nicholas Avenues, and subway stops on 145th Street at Broadway and St. Nicholas Avenue), some of the workers would be likely to travel by bus or subway, further reducing the effect on local traffic conditions. While there may be some isolated days with higher peak numbers of workers, such as rigging days, those would be very rare instances. With the anticipated levels of trucking and worker activity during construction, any potential off-site effects would not be expected to be significant.

The anticipated locations for contractor staging and parking areas are located between the railroad tracks and the plant from the main entrance northward, along the WWTP access road from the southern entrance (at approximately 135th Street) to the very northern end of the facility (at approximately 145th Street). There are some existing construction trailers and parking currently along this service/access road. These staging and parking areas are all located within the DEP property and would not affect any publicly accessible areas at or adjacent to the WWTP facility.

Attachment C, "Hazardous Materials," addresses the potential for the presence of hazardous materials onsite, and potential risks resulting from the proposed project with respect to any such hazardous materials. The analysis in Attachment C concludes that no soil disturbance would be required to complete the project, with the exception of limited soil disturbance associated with the separation of park electrical service from electrical service at the plant, which will require

that two (2) new concrete encased ductbanks be installed. The new concrete encased ductbank system could require up to approximately 1,500 feet of trenching on the North River property that will be up to 4 feet wide and 6 feet deep to accommodate each of the two ductbanks. The excavation for the new ductbank may extend from the new substation in a northerly or southerly direction, but not both. This trenching and electrical separation work would occur on DEP property, mostly outside and to the east of the WWTP building; none of this work will occur within Riverbank State Park, and this work would not impact the operation of the Park. A sampling plan will be developed to determine the presence/absence of hazardous materials, relative to that aspect of the project. These limited excavation activities associated with the proposed project could temporarily increase pathways for human exposure. To reduce the potential for human or environmental exposure to known or unexpectedly encountered contamination during and following construction of the proposed project, supplemental testing and a Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP) would be prepared for implementation during the project's construction activities. Any hazardous materials encountered as a result of excavation activities would be handled and disposed of in accordance with applicable federal, state and local requirements. With the performance of the work in accordance with these procedures, no significant hazardous materials impacts would be expected to result from the proposed project. Therefore, the proposed project would not be anticipated to result in significant adverse impacts with respect to hazardous materials.

Construction equipment noise is regulated by EPA noise emission standards for construction equipment. These federal requirements mandate that (1) certain classifications of construction equipment and motor vehicles meet specified noise emissions standards; and (2) construction material be handled and transported in such a manner as not to create unnecessary noise. The New York City Noise Control Code contains sound-level standards for motor vehicles, air compressors, and paving breakers; requires that all exhausts be muffled; prohibits all unnecessary noise adjacent to schools, hospitals, and courts; and limits construction activities to weekdays between 7 AM and 6 PM. In addition, where feasible, appropriate low noise-emission-level equipment would be used and operational procedures implemented. Construction of the cogeneration and electrification project will follow these regulations and standards. Furthermore, the construction activities will be subject to New York City Local Law 77, which require the use of best available technology (BAT) for equipment at the commencement of the construction. All construction equipment would meet at least EPA Tier 2 emission standards. In addition, because the location where these new engines would be constructed is in an isolated area within the WWTP's existing engine room, and is separated from the area's closest residential population by about 400 feet, including intervening railroad tracks and the Henry Hudson Parkway any potential air emissions or noise from on-site construction equipment would likely dissipate or be masked by ambient train and traffic noise before reaching the minority and low-income residents located east of the parkway.

Therefore, no significant impacts would be expected from the construction or operation of the proposed project on area environmental justice communities.

E. SUMMARY OF POTENTIAL BENEFITS OF THE PROPOSED PROJECT

The proposed replacement of the old existing tri-fuel engines with electrification of the North River WWTP and the installation of cogeneration facilities will improve operations and

reliability, reduce greenhouse gas emissions (GHG), and provide cost effective solutions over the existing engine driven pump and blower systems. Overall, there would be a net decrease in criteria pollutant emissions as a result of the higher energy efficiency, elimination of the use of #2 fuel oil, and more advanced pollution controls (e.g., use of an oxidation catalyst). Additionally, the modification of the existing facility will be in compliance with non-attainment New Source Review (NANSR) and Prevention of Significant Deterioration (PSD) requirements. The new spark ignited engines will meet USEPA's New Source Performance Standards (NSPS) and NYSDEC's NO_x RACT regulations and would greatly reduce NO_x emissions of the WWTPs engines, from an existing average of approximately 332 tons per year (tpy) to a maximum of 131 tpy for the new cogeneration facility. In addition, the proposed cogeneration system will have a significant reduction in GHG emissions compared with existing baseline levels, with future GHG emissions ranging between 27 and 49 percent lower, depending on the process improvements implemented.

In addition, the project would improve the reliability of electrical service to the Riverbank State Park as a result of the park electrical separation aspect of the project.

The project would therefore provide energy and air quality benefits, and would result in an overall positive effect on air quality in the study area, including reductions in local criteria pollutants and GHG emissions, and would result in a more reliable dedicated power supply for the park above the WWTP.

F. CONCLUSIONS ON ENVIRONMENTAL JUSTICE

The study area population is a low-income and minority community, and is a population of concern for environmental justice. As noted above, the proposed project would not result in significant adverse impacts in any of the technical analysis areas. As discussed above, the construction of the cogeneration upgrades will be occurring in the existing engine room of the WWTP, with other elements of the proposed project also being constructed within the larger WWTP facility, which is generally isolated from surrounding residential uses, and which is not expected to result in any significant adverse impacts. This conclusion includes consideration of other existing pollutant sources located in the area (as described above in section C). Furthermore, as stated in the above section, the proposed engine modifications would result in a net decrease in criteria pollutant emissions.

Therefore, the proposed project would not adversely affect the population of the study area or any other area. Overall, the proposed project would not result in significant adverse impacts on potential environmental justice areas.

G. PUBLIC PARTICIPATION

As part of the NYSDEC permit process, public participation will be sought from the affected communities, in accordance with NYSDEC Commissioner Policy CP-29. A draft Public Participation Plan (PPP) has been submitted to NYSDEC in conjunction with the required permit application. A public outreach program to the affected communities, including minority and low-income populations in the study area, will be implemented, providing these groups with ample opportunity to have any of their concerns addressed. The proposed project's draft PPP includes a number of activities and tasks that will be undertaken to inform stakeholders about the proposed action and the permit being sought from NYSDEC, and to encourage dialogue and solicit input from all stakeholders involved. For example, stakeholders in the proposed action's

study area have been identified and include known community groups, and religious institutions and organizations. In addition, written information on the proposed action and the environmental permit review process will be prepared for posting and distribution to the public and other stakeholders. Selected project materials will also be translated into Spanish, as necessary. Easily accessible document repositories will be established within the study area. Also, a public information meeting will be held to provide information about the proposed facility and the associated NYSDEC permitting process. With implementation of the draft PPP, the proposed project will be consistent with the public participation requirements of NYSDEC Policy CP-29.✶