FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE CATSKILL/DELAWARE UV FACILITY METHODOLOGIES

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3.7. SOCIOECONOMIC CONDITIONS

3.7.1. Introduction

This analysis addresses the potential socioeconomic impacts of the proposed Catskill/Delaware Ultraviolet Light Disinfection Facility (UV Facility). Socioeconomic impacts may occur when a project would directly or indirectly change population, housing stock, or economic activities in a given area. Construction activities could also have temporary direct impacts. A one-half-mile study area radius was identified for the proposed facility, to assess potential direct impacts.

The socioeconomic evaluation also addresses potential indirect impacts, including an examination of the displacement of residences and/or businesses, changes in water rates, and changes to the regional economy. Indirect displacement is defined as the involuntary displacement of residents, businesses, or employees that result from changes in socioeconomic conditions created or spurred by the proposed facility. In most cases, indirect residential displacement occurs when a proposed facility increases property values of the surrounding area, which, in turn, result in higher rents. However, in the case of the proposed facility, the issue is not whether increasing property values may cause indirect residential or business displacement, but whether the increase in the cost of water would be passed along to consumers, which would lead to higher rents and operating costs and potentially to indirect displacement. The analysis also considered indirect displacement that could result from potentially significant impacts in the areas of neighborhood character, traffic, and noise.

In addition, construction and operation of the proposed facility could have an indirect beneficial effect on the regional and New York State economies. Such effects were estimated using the Regional Input-Output Modeling System (RIMS II), developed by the U.S. Department of Commerce for counties within the State of New York. The indirect effects on employment, wages and salaries, and tax revenues were evaluated for both the construction and operation periods. For this analysis, a larger study area was examined since many of these benefits would be regional in nature.

3.7.2. Baseline Conditions

Baseline Conditions describe past, current, and future data and trends regarding the population and housing stock in the study area, in addition to employment on the Eastview Site and economic trends of businesses in the study area and in the larger region. For the most part, the analysis focuses on the half-mile study area of the Eastview Site. However, many factors, such as employment, extend beyond the boundaries of the study area. Where appropriate, data from a larger region are provided.

3.7.2.1. Existing Conditions

3.7.2.1.1. Eastview Site

This section describes the socioeconomic characteristics of the project site, including a property tax analysis that provides information on the current taxes generated by the site. The most recent taxes paid, equalization rate, and tax rates were collected from the Tax Assessor and Tax Collector of the Towns of Greenburgh and Mount Pleasant, the affected municipalities (No employment is currently generated by the site).

3.7.2.1.2. Study Area

This analysis of the study area relies upon 1990 and 2000 U.S. Census data to characterize the population within approximately one-half mile around the project site. Where necessary, the study area was adjusted to conform to census tract and block group boundaries. The data have been supplemented by field visits. The population statistics offer a description of the residents in the study area and across Westchester County. Data include population, number of households, racial composition, and age composition. Measures of economic well-being and employment include median household income, numbers of persons below the poverty line, and the unemployment rate (the threshold varies depending upon family size and age). Additional information on the study area's workforce (residents only) has been obtained from census data on the occupational sectors and means of transportation to work. Housing statistics provide information on the housing stock in the study area. These statistics include the number of units in the structure, number of owner- or renter-occupied units, vacancy rates, age of housing stock, year the householder moved in, median housing value (MHV), and median contract (monthly) rent (i.e., not including such expenses as electricity, gas, and telephone service). Note that the U.S. Census Bureau data collection of the MHV was conducted differently during the 1990 U.S. Census and the 2000 U.S. Census. The 1990 U.S. Census included the MHV in the 100 percent survey, however, these data were only included in the sample survey during the 2000 U.S. Census. Therefore, comparisons made between these data sets may not be entirely accurate. Nonetheless, these statistics are valuable in describing not only the character of the study area, but also the stability of the population over time.

Data sources include published U.S. Census tables accessed through the Internet and summary U.S. Census reports for Westchester County.

LandView V, federal mapping software created by the U.S. Environmental Protection Agency (USEPA), U.S. Census Bureau, U.S. Geological Survey, and National Oceanic and Atmospheric Administration, was used to examine spatial information for the Eastview Site and surrounding area. Some recent data have been obtained from the U.S. Department of Commerce, Bureau of Economic Affairs.

Data from the 1990 and 2000 U.S. Census were presented at the county, municipal, and tract level. Trends within the study area were gauged by tract trends, as available. To characterize the study area in both 1990 and 2000, block group (a sub-unit of a tract) data were used. Often, a study area only includes a portion of a block group. Therefore, estimates were developed for

such study areas based on the size of the study area within each block group. For example, if the entire block group is ten square miles, but only one square mile is within the study area, then it is estimated that ten percent of the block group population is within the study area. This method was further refined based on field visits and aerial photo interpretation. The sizes of the block groups were obtained using LandView V, and the area of that portion of the study area within a block group was obtained using a Geographic Information System (GIS) analysis or direct map measurements.

While the analysis of the number of residents and households in the study area provide an actual number, the other calculations provide percentages, rates, or median values. It is assumed that these statistics reflect characteristics of the study area. In other words, if 50 percent of the population within a block group that includes the study area is reported in the census data to be of Hispanic origin, then it is assumed that 50 percent of the population in the study area portion of that block group is also of Hispanic origin. Exceptions are noted.

In some instances, data from the 1990 U.S. Census are not comparable to 2000 data. Where available, municipal and county census data are also presented to allow for comparisons that help identify those features and trends unique to the study area. Detailed census data and calculations are provided in Appendix A.

Property Value. Existing trends in residential property values are identified for the study area, or a larger geographic unit, as data allow. Housing values and trends have been gathered from the U.S. Census. Specifically, data on the sale prices of residential buildings and houses have been provided at the census block group level. Additional information on general sales and trends, when necessary, has been obtained from the Westchester County Department of Planning and the Westchester County Tax Commission.

Socioeconomic Conditions of Businesses. This section provides a general overview of existing conditions for businesses and industries. This information has been obtained at the county level. Data include employment, labor force, and general trends as provided by the Westchester County Department of Planning. Where applicable, a discussion of commercial property value and vacancy trends was included, based on information provided by the Westchester County Office Market Index Brief.

Water Rate Structure. Information on the current water rate structure for both City and upstate customers was collected. Different financing methods employed by the New York City Department of Environmental Protection (NYCDEP) to fund capital improvement projects were discussed. These methods include financing authorized by the New York City Municipal Water Finance Authority, and financing obtained through the State Revolving Loan Fund Program, which is administered by the New York State Environmental Facilities Corporation, with grant money provided by the USEPA. Information on the current City billing system and the classification of customers in the City service area was discussed.

Information sources include recent revenue bond filings that outline the City's water and sewer capital plan and revenue program and a history of water and sewer rates for both the City and upstate customers.

Existing Rates for City and Upstate Consumers. Average annual water and sewer bills for residential households in New York City are calculated based on current rates for water and sewer usage as applied to an estimated usage of 100,000 gallons per year (gpy) per household. Average annual cost for water to residential households using 100,000 gallons of water per year in upstate service areas is calculated based on the current wholesale rate the City charges upstate water suppliers. That rate is assessed on a per million gallon usage basis.

3.7.2.2. Future Without the Project

This section identifies trends and conditions in the study area for the peak construction year of the proposed facility (2008) based on the year for peak number of construction workers on-site, and the anticipated year of operation (2010). Local planning departments and the Westchester County Department of Planning have been contacted. For the discussion of water rates, the future analysis year is 2010, which is the year the majority of costs associated with the proposed facility would be included in the City's 2004 Ten-Year Capital Plan.

3.7.2.2.1. Eastview Site

Future conditions on the Eastview Site in the absence of the proposed facility have been described, based on information provided by NYCDEP, the property owner. The discussion includes changes in terms of potential new facilities at the site, employment, and property tax revenues.

3.7.2.2.2. Study Area

The predicted future conditions of the study area are described in this section. The most recent projections for population have been obtained, although they are available only for geographic units larger than the study area. Woods & Poole Economics, Inc. (W&P) provided county-level annual population forecasts for Westchester County through the year 2025. W&P's forecasts take into account age, sex, and racial-ethnic composition. The numbers are refined based on national and local agency projections and trends. Using the available projections, and an analysis of the land use trends and availability of potential residential growth areas within the study area, population estimates for the study area have been made for the future analysis years; it was assumed that the growth or decline would occur over each five-year period in even annual increments.

Property Value. Projections for housing are not available. The analysis gauges the future housing conditions based on current trends and the proposed facility within the study area, as identified in the Land Use, Zoning, and Public Policy analysis and based on the likely future scenarios for the project site and associated off-site work locations (see Section 3.2, Data Collection and Impact Methodologies, Land Use, Zoning, Public Policy).

Socioeconomic Conditions of Businesses. W&P provided projections on employment and labor force at the county level. Using these data and an analysis of the land use trends and

availability of potential commercial growth areas within the study area, estimates were calculated for employment (number of jobs) and labor force for the future analysis years.

Water Rate Structure. Projected capital expenditures, excluding the proposed facility and associated off-site facilities, through the year 2016 were calculated by the New York City Municipal Water Finance Authority to provide a basis for estimating City and upstate water rates per household in the Future Without the Project. The years 2004 to 2016 were used as the basis for presentation since these are the years when the majority of the capital costs are reflected in the City's 2004 Ten-Year Capital Plan and the largest rate increases are anticipated from the project.

Future Rates for City and Upstate Consumers. Estimates of City and upstate household charges, in the future year in the absence of the proposed facility, were calculated based on the rate of increase in the City's other projected capital expenditures.

3.7.3. Potential Impacts

This section discusses those potential impacts associated with the operation and construction of the proposed UV Facility.

3.7.3.1. Potential Project Impacts

This section describes capital and operation and maintenance costs, employment, property tax revenues, and other socioeconomic effects related to the proposed facility and associated off-site work locations, and then compares them to the Future Without the Project to determine potential socioeconomic impacts. In addition, potential impacts due to increases in water rates were analyzed.

3.7.3.1.1. Socioeconomic Conditions Associated with the UV Facility

Capital and Operation and Maintenance Costs. The estimated costs for the proposed facility were described.

Jobs. The number of anticipated employees at the site due to the proposed facility has been described in this section. Personal income tax information was collected at the State level. Using the anticipated payroll of the proposed facility and the appropriate income tax rates, an estimate of the total payroll tax revenue resulting from the operation of the proposed facility was developed. The economic impact from the potential new project-generated employment was reduced by the loss of jobs from any potentially displaced businesses. This figure represents economic benefits of the proposed facility to the area. Appendix A provides calculations.

Property Tax Revenues. The assessed valuation of the proposed facility was estimated based on the construction cost, as adjusted to arrive at an estimated taxable market value of the proposed facility. This method deducts those costs associated with the conveyance of water to and from the Catskill and Delaware Aqueducts. The commercial and industrial equalization rate (unique to each municipality) is applied to the cost to arrive at its assessed value. To determine

the potential property taxes generated by the proposed facility, the current tax rates, as applicable, are applied to the assessed value. It should be noted that this methodology very likely results in a conservative estimate. The local assessors' offices, Westchester County Tax Commission, and the New York State Office of Real Property Tax Services were consulted in developing the estimated property taxes.

Indirect Effects. The proposed facility's potential effects on local and regional businesses at the project site were evaluated in terms of jobs that the proposed facility would add, both directly and indirectly. A qualitative description of general benefits to the local area due to the new employment was provided in this section.

The potential economic impacts at the county level are quantified using RIMS II, which provides multipliers.[1] The multipliers used for the analysis represent regional data from 2004. These multipliers account for the inter-industry relationships in a county, and can help to determine numerous potential economic impacts of a proposed facility. The output (excluding property taxes), earnings, and employment that would be induced by this proposed facility are determined by applying the multipliers to the annual operation and maintenance costs. Output is the gross sales; earnings are the sum of wages and salaries, proprietors' income, and other labor income, minus employer contributions to private pension and welfare; and employment is the number of jobs. The results indicate the total potential jobs that may be added to the county's economy. Appendix A provides the calculations.

Property Values. To determine potential impacts to property values during operation of the proposed facility, literature was reviewed that covered a broad range of land uses perceived as undesirable or unwanted.

Potential Displacement Impacts. This subsection describes the methodology used to assess direct and indirect residential, business, and institutional displacement. The methodology is the same for both potential project impacts and potential construction impacts.

Water Rate Structure. The potential socioeconomic impacts on City and upstate consumers of the New York City Water Supply System due to potential water rate increases from the proposed facility were examined. If these rate increases were high enough, potential indirect socioeconomic impacts such as housing dislocation could occur.

Capital Costs. The anticipated capital costs for the proposed facility are shown. There are two types of financing that would be available to fund the construction of the proposed facility and associated off-site work locations: (1) bonds issued by the New York City Municipal Water Finance Authority; and (2) bonds issued through the State Revolving Fund.

Operating Costs. Operating costs for the proposed facility are shown. Operating costs include the labor required to operate and maintain the systems, as well as expenses such as electricity, chemicals, spare parts and property taxes.

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[1] Bureau of Economic Analysis. 2004. RIMS II Multipliers for Westchester County and Bronx County (software). United States Bureau of Economic Analysis, U.S. Department of Commerce. Washington, D.C.

Potential Impacts on City and Upstate Consumers. Potential socioeconomic impacts due to water rate increases on City and upstate consumers of the New York City Water Supply system are examined. The years 2004 to 2006 were used as the basis for presentation of potential effects on rates since that is the year when the majority of the capital costs are reflected in the City's 2004 Ten-Year Capital Plan and the largest rate increases are anticipated. While total costs over the life of the proposed facility would vary depending upon the type of financing method selected (due to the shorter repayment period but lower interest rate imposed by the New York State Drinking Water Revolving Fund Program [SRF] program), the actual difference between the Authority financing and the SRF financing is negligible. Therefore, the anticipated rate increases and the effect on charges to residential consumers have been developed for the project site and associated off-site work locations using only the Authority form of financing. To determine impacts, the annual costs of water to households in New York City and upstate for the Future Without the Project were compared to the incremental cost for water in the Future With the Project. The incremental changes in household water cost were then compared to monthly owner- and renter-costs to determine if the water cost would become a significant portion of the households' monthly expenses.

3.7.3.2. Potential Construction Impacts

This section evaluates the effects construction activities and construction workers could have on the municipality's and County's economies. A more detailed analysis for the site was conducted since the proposed activities would involve construction of a long duration that could affect nearby residents and businesses.

Jobs. The peak number of construction employees at the project site in the peak construction year (2008) was estimated. Income tax benefits that would accrue to either the City or County are provided based on a median salary.

Indirect Effects. The same analysis based on the RIMS II multipliers, as discussed under "Potential Project Impacts," was performed to determine indirect effects due to construction at the project site. The analysis is based on the capital and construction cost for the proposed facility.

Potential Displacement Due to Construction-Related Noise, Vibrations, Traffic, and Air Quality Impacts. This section summarizes the potential construction-related noise, vibrations, traffic, and air quality impacts of the proposed facility and determines whether they could lead to indirect displacement in the half-mile study area and influence overall socioeconomic conditions.

3.7.4. Mitigation

The need for mitigation is evaluated if any significant impacts are identified. Mitigation strategies are dependent upon the nature of the estimated displacement and the potential impacts causing such displacement.