DRAFT SCOPING DOCUMENT

for the

CITY OF NEW YORK

COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

DRAFT ENVIRONMENTAL IMPACT STATEMENT

CEQR No. 03-DOS-004Y

May 2004

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1.0 BACKGROUND

1.1 Introduction

The New York City (City) Department of Sanitation (DSNY), as lead agency, is preparing a Draft Environmental Impact Statement (DEIS) in accordance with City Environmental Quality Review/State Environmental Quality Review Act (CEQR/SEQRA) to support the adoption of the City's Comprehensive Solid Waste Management Plan (New SWMP) for the next 20-year planning period. DSNY has determined, through a Notice of Determination/Positive Declaration dated May 3, 2004, that the New SWMP has the potential to result in one or more significant adverse environmental impacts. Accordingly, DSNY is issuing this Scope for the preparation of a DEIS. The Scope describes: (i) the Proposed Action and reasonable alternatives thereto that may be undertaken pursuant to the adoption the New SWMP; and (ii) the methodologies and the types of information needed to evaluate potential impacts.

1.2 Purpose and Need

Each day, the City's 8.1 million residents, businesses, commuters and visitors generate very large and diverse quantities of solid waste material. The purpose of the New SWMP is to set forth a plan for the long-term management of the City's solid waste in a cost-effective and environmentally responsible manner. The City's Comprehensive Solid Waste Management Plan, as modified (Existing SWMP), expires at the end of October 2004. The New SWMP is required pursuant to New York State's Solid Waste Management Act (New York Environmental Conservation Law [Section 27-0707]) and implementing regulations (6NYCRR Subpart 360-15). The Existing SWMP defines the activities, initiatives and programs that constitute the City's current solid waste management program. Building on the foundation of the Existing SWMP, the New SWMP will define the City's goals and objectives for solid waste management over a 20-year period and will describe the major new programs that will be implemented to supplement existing successful City programs to accomplish these goals. The New SWMP will

incorporate Existing SWMP programs and provide an update on the status of these current programs. In addition to providing updated waste generation data and projections, among other things, the New SWMP will include the following important features:

- A definition of the long-term objectives and scope of the City's programs to reduce waste and reuse, compost and recycle waste materials. These programs will include the development of long-term contractual arrangements for the processing of recyclables within the City that present cost efficiency and potential economic development opportunities, and improve the operational efficiency of the Curbside Program[1];

- A definition of the City's program for long-term export by shifting from the current Interim Export contracts that rely primarily on transfer to out-of-City disposal sites with diminishing capacity, to a more flexible system of barge and/or rail based transfer. The DSNY-managed Waste[2] averages approximately 11,000 tons per day (tpd) or 3,322,000 tons per year (tpy) of waste generated by the City's households, public agencies, non-profit institutions and DSNY special collection operations;

- The identification of measures that DSNY is implementing, which result from the recently completed Commercial Waste Management Study mandated by Local Law 74 of 2000 (LL74) to improve the system for commercial waste management in the City[3].

- Recommendations regarding containerization of commercial putrescible waste at the proposed Converted Marine Transfer Stations (MTSs) for export by barge and/or rail from the City;

- Status reports on the current programs described in the Existing SWMP, including construction of the Staten Island Transfer Station for containerization and long term export of DSNY-managed Waste generated on Staten Island; and

- A waste characterization study.

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[1]The Curbside Program is the collection of source-separated materials designated by DSNY as recyclables from residences, City, state and federal agencies and not-for-profit institutions in the City.

[2] DSNY is responsible for the collection and/or arranging for disposal of all waste generated by City households, as well as waste from City, state and federal agencies and not-for-profit institutions in the City (DSNY-managed Waste).

[3] This system currently relies on private carters, private waste Transfer Stations and recyclables processors and brokers for the collection, recycling, export and disposal of approximately: (i) 9,900 tpd or approximately 3,090,000 tpy of putrescible waste and the recyclables diverted from this waste stream that is generated by business establishments in the City; (ii) approximately 8,600 tpd or 2,690,000 tpy of non-putrescible waste (construction and demolition debris or C&D), and (iii) approximately 19,100 tpd or 5,950,000 tpy of clean fill, such as dirt, rock and concrete.

1.3 Proposed Action

1.3.1 Existing Conditions/No Action

Since delivery of waste to the Fresh Kills Landfill ceased in 2001, the City has relied on interim export contracts for disposal (Interim Export). Under these existing Interim Export contracts, all DSNY-managed Waste is: (1) tipped at in-City, private Transfer Stations and transferred primarily by trailer (except for approximately 1,800 tpd transferred by rail from the Harlem River Yard in the Bronx) to out-of-City disposal sites; or (2) direct-hauled in collection vehicles to out-of-City transfer stations or disposal facilities. For purposes of environmental review, Interim Export constitutes Existing Conditions/No Action. Table 1.1-1 lists both the in-City and out-of-City transfer stations or disposal sites that receive waste delivered by or on behalf of DSNY under current Interim Export contracts.

1.3.2 Long Term Export – Proposed Action and Alternatives

In July 2002, the Administration outlined the Long Term Export Program that is proposed to replace the Interim Export contracts that were initially implemented to phase out waste deliveries to the City's last remaining disposal site -- the Fresh Kills Landfill on Staten Island. One primary objective of the Long Term Export Program is to stabilize the City's long-term waste disposal costs by developing a system to export DSNY-managed Waste out of the City by barge or rail based on the following reasons:

- 74% of DSNY-managed Waste is moved to out-of-City disposal sites by transfer trailers.
- 14% of DSNY-managed Waste is moved to out-of-City disposal sites by rail.
- 12% of DSNY-managed Waste is moved to out-of-City disposal sites in DSNY collection vehicles.
- Reducing the City's dependence on transfer trailer transport to disposal sites is a priority because 93% of all truck-transferred DSNY-managed Waste is disposed in landfills. All but 11 of these landfills are in neighboring states within a radius of

Table 1.1-1
Facilities Utilized for Interim Export

Borough Served	Facility Name/Operator	Facility Address	Maximum Capacities Available for DSNY-managed Waste (tpd)
Bronx	**Waste Management/ Harlem River Yard**	68 Lincoln Street, Bronx, NY	1,800 tpd
	Waste Services	920 East 132nd Street, Bronx, NY	1,500 tpd
Brooklyn	**Waste Management of NY**	215 Varick Street, Brooklyn, NY	1,400 tpd
		485 Scott Avenue, Brooklyn, NY	1,400 tpd
	IESI NY Corp.	110 50th Street, Brooklyn, NY	1,000 tpd
		577 Court Street, Brooklyn, NY	500 tpd
	BFI – Waste Services	598-636 Scholes Street, Brooklyn, NY	220 tpd
	Solid Waste Transfer and Recycling	444 Frelinghuysen Avenue, Newark, NJ	500 tpd
	LIPCo (Covanta)	1499 Route 1 North, Rahway, NJ(1)	125 tpd
	ONYX Waste Services, Inc.	301 Maltese Drive, Totowa, NJ	250 tpd
Manhattan and Staten Island	**Waste Management of NY**	666 South Front Street, Elizabeth, NJ	635 tpd
		864 Julia Street, Elizabeth, NJ	625 tpd
	Solid Waste Transfer and Recycling	444 Frelinghuysen Avenue, Newark, NJ	200 tpd
	TransRiver Marketing L.P.	American Ref-Fuel, Essex County, NJ(1)	1,700 tpd
Queens	**ONYX Waste Services, Inc.**	30-35 Fulton Street, Patterson, NJ	1,000 tpd
		301 Maltese Drive, Totowa, NJ	480 tpd
		264 Broadway, Jersey City, NJ	350 tpd
	Solid Waste Transfer and Recycling	444 Frelinghuysen Avenue, Newark, NJ	1,025 tpd
	Tully Environmental	127-20 34th Avenue, Queens, NY	900 tpd
	TransRiver Marketing L.P.	American Ref-Fuel, Hempstead, NY(1)	300 tpd
	Waste Management of NY	38-50 Review Avenue, Queens, NY	958 tpd

Note:
(1) Denotes a waste-to-energy facility.

200 miles of the City, and a combination of factors is causing the depletion of nearby landfill capacity and an increase in disposal price. As a consequence, the recent re bidding of some Interim Export contracts that rely on truck transport to landfills has resulted in an average increase of 19% over the initial bid prices.

- While nearby landfill disposal capacity is depleting, remote disposal capacity is not. However, remote capacity is not economically accessible by truck-based transfer.
- Developing a barge/rail transport system capable of accessing this remote capacity is a strategy the City can employ to offset inflationary increases in disposal costs at nearby landfills (associated increases in transportation costs can be managed).

The New SWMP's proposal for long-term export and disposal of DSNY-managed Waste is:

- Converting the City's eight existing MTSs into facilities capable of containerizing waste for export by barge. This entails the design, engineering and construction of new Converted MTSs at the existing MTS sites for loading and placing sealed, leak-proof containers onto container barges for transport out of the City. The Converted MTSs would use in-City or out-of-City intermodal facilities to transload containers onto ocean-going barges or railcars. Alternatively, the containers could be towed directly to out-of-City disposal sites. (In addition to processing DSNY-managed Waste from the historical wastesheds served by the existing MTSs, these facilities will also be considered in terms of their potential to process commercial waste. (See discussion in Section 1.3.4.)

The location of the existing MTSs and former Fresh Kills Landfill is presented in Figure 1.

Several Alternatives to the Proposed Action will also be evaluated.

DSNY-managed Waste could be containerized and exported by barge or rail from existing or new in-City private Transfer Stations. Long-term contracts would enable the operators of these facilities to amortize any necessary investment in equipment for containerization and barge or rail transport over longer periods, and could also induce these private operators to containerize commercial waste processed at these facilities with a consequent reduction in in-City truck traffic.

Nearby waste-to-energy disposal facilities, such as those now used by the City in New Jersey and on Long Island under Interim Export, are not subject to the same capacity depletion that affects landfills. These facilities achieve a 70% to 80% volume reduction in waste material processed, and can be continually refurbished to operate over many years. Such facilities have the potential to provide the City with a degree of insulation from the price trends affecting truck-accessible landfill capacity.

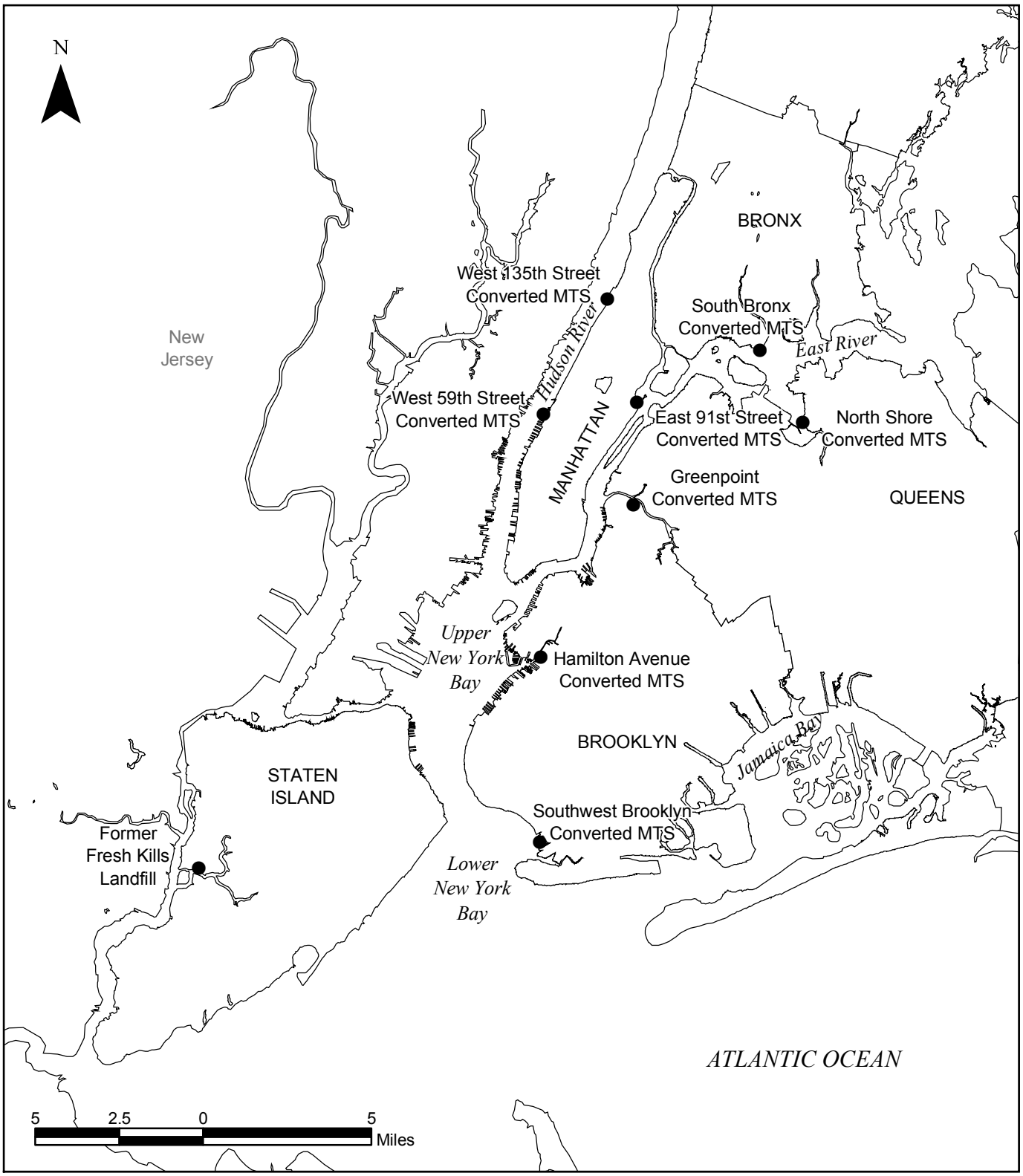

Figure 1
Location of MTSs

CITY OF NEW YORK
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The construction of a fully-permitted, out-of-City, enclosed barge unloading facility (EBUF) would potentially allow the City to refurbish and reuse its existing MTSs to send barge loads of waste to this facility for containerization and transport to remote disposal sites.

Sections 1.3.2.1 and 1.3.2.2 describe the Proposed Action and Alternatives in more detail.

1.3.2.1 MTS Conversion Program – Proposed Action

To implement the MTS Conversion Program, new Converted MTSs are being designed at the eight existing MTS sites. In general, these are three-level facilities (except for the new West 59th Street MTS, which is a two-level facility) that would move waste deposited by collection vehicles into intermodal containers that are watertight, leak-proof and specifically designed for rail or barge shipment of waste. After loading, the containers would be moved to the facility's pier level where empty and full containers would be shifted by crane off/onto a deck barge designed to carry containers. Barges would be towed by tugs between a new MTS and: (1) an intermodal facility where the containers would be transloaded again for rail or coastal barge transport to an out-of-City disposal destination; or (2) directly to an out-of-City waste processing facility.

In December 2003, the City issued a Request for Proposals to Transport and Dispose of Containerized Waste from One or More Marine Transfer Stations (MTS Containerization RFP) to solicit proposals from companies for barge towing, container transport, waste disposal and other related services over a 20-year contract term. These proposals, received on March 31, 2004, will enable the City to fully evaluate the most favorable transport and disposal arrangements obtainable under the MTS Conversion Program.

Development of the Converted MTSs, which would continue to be City-owned, requires a number of permits from federal, state and City agencies, as set forth in Section 1.6. The MTS Conversion Program also contemplates the resumed use (as is the case with the existing MTSs) of the 52nd Street pier in Brooklyn as a barge staging area. Table 1.3-1 lists the Converted MTSs that are the Proposed Action.

Table 1.3-1
Proposed Action
List of Converted MTSs

Facility/Location	Design Capacity (tpd)	Average Peak Day Deliveries of DSNY-managed Waste (tpd)[(1)]
Bronx		
South Bronx Converted MTS	4,290	2,804
Brooklyn		
Southwest Brooklyn Converted MTS	4,290	1,388
Greenpoint Converted MTS	4,290	3,387
Hamilton Avenue Converted MTS	4,290	2,248
52nd Street Barge Staging Area	N/A	N/A
Manhattan		
West 135th Street Converted MTS	4,290	1,416
West 59th Street Converted MTS	2,145	1,068
East 91st Street Converted MTS	4,290	1,093
Queens		
North Shore Converted MTS	4,290	2,672

Notes:
N/A = Not applicable.
(1) Average Peak Day deliveries are based on scale data from Fiscal Year (FY) 1998 received from the DSNY Bureau of Cleaning & Collection with a 20% contingency allowance, except for the South Bronx MTS. South Bronx MTS data is based on FY 1997 with a 20% contingency allowance. This contingency allowance provides a margin of conservatism for environmental review purposes.

1.3.2.2 Long-Term Export Alternatives to the Proposed Action

As a basis for deciding upon the elements of the City's Long Term Export Program, the City is investigating Alternatives to the Proposed Action, contemporaneous with its continued development of the MTS Conversion Program. The environmental review of these Alternatives will be reported in the New SWMP DEIS.

The Alternatives to the Proposed Action are to enter into long-term export contracts with:

1. One or more private Transfer Stations in the Bronx for the containerization and export by rail or barge of all DSNY-managed Waste from the Bronx (an average of approximately 2,000 tpd) that was historically delivered to the South Bronx MTS.

2. One or more private Transfer Stations in Brooklyn Community Districts (CDs) 1, 3, 4 and 5 for the containerization and export by rail or barge of approximately 1,000 tpd of DSNY-managed Brooklyn waste that was formerly delivered to the Greenpoint MTS.

3. One or more private Transfer Stations in Queens CDs 1 through 6 for the containerization and export by rail or barge of approximately 1,200 tpd of DSNY-managed, Queens waste that was formerly delivered to the Greenpoint MTS.

4. Nearby regional waste-to-energy facilities for delivery of DSNY-managed Waste in collection trucks or in hopper barges.

5. An out-of-City host community to support construction of an EBUF that would receive and containerize deliveries of barge loads of waste from the City's existing MTSs (not converted) for transport to disposal sites.

Alternatives #1, #2 and #3

Request for Proposals (RFPs) were issued[4] that elicited proposals that are potential Alternatives to the development and reactivation of the Converted South Bronx and Greenpoint MTSs. The RFPs require, among other things, that proposers containerize all waste received at their respective Transfer Stations (both DSNY-managed Waste and commercial waste), obtain capacity offsets for any proposed expansion of existing private Transfer Stations or development of new Transfer Stations, and export all waste processed at their facility from the City by barge or rail. These Alternatives proposals were received by DSNY on March 31, 2004. They are now the subject of proposal evaluation, selection and environmental review processes to determine whether certain of these Alternatives to the Proposed Action would be proposed in the New SWMP Long Term Export Program to provide containerization and barge or rail export services.

[4] (1) Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-managed Waste from Brooklyn Formerly Delivered to the Greenpoint MTS; (2) Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-managed Waste from Queens Formerly Delivered to the Greenpoint MTS; and (3) Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-managed Waste from the Bronx.

Alternative #4

Should contracts for long-term capacity at nearby, regional waste-to-energy facilities prove feasible, the environmental review of this Alternative would evaluate any potentially significant adverse impacts that would be associated with DSNY collection vehicle trips out of the City, if deliveries were by truck. If DSNY-managed Waste deliveries were by barge, the environmental review of this Alternative would be addressed as part of Alternative #5 below.

Alternative #5

Should contracts with host communities in nearby jurisdictions to support the development of an EBUF prove feasible, the environmental review of this Alternative would evaluate any potentially significant adverse impacts that would be associated with the reuse of the City's existing MTSs to receive waste from DSNY collection vehicles and load hopper barges that would be towed out of the City for unloading, containerization and transport, and ultimate disposal at out-of-City disposal sites.

These Alternatives will also be assessed in terms of the following potential benefits:

- **Timing:** By using existing private Transfer Stations in the City to export waste by barge or rail, or by delivering directly to out-of-City waste-to-energy facilities, it may be possible to implement some long-term export options on a faster timetable.
- **Increased Rail or Barge Transport of Waste:** The potential use of private Transfer Stations for containerization and barge or rail export could also induce the containerization and export of commercial waste from some of these facilities by barge and/or rail. The three RFPs issued in December 2003 that solicited proposals to accept waste formerly delivered to the Greenpoint and South Bronx MTSs require that all commercial waste handled at proposed Transfer Stations also be containerized and transported out of the City by barge or rail.
- **Cost Savings:** Long-term contract(s) to deliver directly to out-of-City waste-to-energy facilities, or barge delivery of DSNY-managed Waste to an out-of-City EBUF, would enable the City to avoid the cost of capital investments in Converted MTSs as well as the operation and maintenance costs associated with the Converted MTSs, and could represent potential savings to the City.

- **Comparative Economics:** A comparative evaluation of economics and other factors would provide the City with information to choose from among the following Alternatives those that best meet the long-term export needs of the City: (1) the development and operation of Converted MTSs and transport and disposal of containerized waste; (2) contracting long-term with: (i) in-City Transfer Stations for the containerization and rail or barge export of containerized waste; (ii) nearby, regional waste-to-energy facilities for processing of DSNY-managed Waste delivered in collection vehicles or by barge; and/or (iii) an out-of-City host community for development of an EBUF that would use one or more of the City's existing MTSs for barge transport of waste to this facility.

If designated in the New SWMP, certain in-City Alternatives to the Converted MTSs will be evaluated in the New SWMP DEIS and will also require a number of permits from federal, state and City agencies. The companies that the City proposes to contract with for long-term export would be responsible for obtaining these permits. If these subsequent permitting activities require a more detailed assessment of potential impacts than was provided in the New SWMP DEIS, this will be addressed in supplemental environmental reviews, as appropriate.

The potential Alternatives to the Proposed Action are listed in Table 1.3-2.

DSNY's consideration of Alternatives also evaluated the information obtained through a *Request for Expressions of Interest to Provide Waste Disposal Capacity* on February 17, 2004, that sought expressions of interest to: (1) sell or otherwise provide to DSNY, for its exclusive use, permitted waste disposal capacity in New York State; (2) sell or otherwise provide to DSNY, for its exclusive use, land in New York State that is suitable to service as a site for a waste disposal facility; and/or (3) serve as a host community for a disposal facility located in New York State that would receive waste managed by DSNY.

1.3.3 DSNY Recycling Program – Proposed Action and Alternative

DSNY issued an RFP in August 2003 to obtain proposals for 20-year processing agreements from companies that could offer to accept Curbside Recyclables collected by DSNY. Proposals were received by DSNY on November 26, 2003. The City intends to enter into a long-term contract with a company to process a significant fraction of the City's Curbside Recyclables, exclusive of Recyclables currently contracted to the Visy Paper Mill in Staten Island and other

Table 1.3-2
List of In-City Alternatives to the Proposed Action

Facility Name	Facility Address	Export Mode	Community District	Average Peak Day DSNY-managed Waste (tpd)	Permitted Facility Capacity (tpd)	Proposed Facility Capacity (tpd)	Proposed On-Site Capacitie to be Analyzed in the DEIS (tpd)
Bronx Private Transfer Station Alternatives							
Waste Services	East 132nd Street	Truck to Truck to Rail	Bronx 1	2,455(1)	2,999	2,999	0
Harlem River Yard	98 Lincoln Avenue	Truck to On-Site Rail	Bronx 1	2,455(1)	3,000	4,000	1,000
Brooklyn Private Transfer Station Alternatives							
Scott Avenue	485 Scott Avenue	Truck to Barge	Brooklyn 1	1,102(2)	1,500	1,500	0
Scott Avenue/ Scholes Street	72 Scott Avenue and 598 Scholes Street	Truck to Rail	Brooklyn 1	1,102(2)	220	Phase I: 1,368 Phase II: 3,000	2,780
Meserole	568 Meserole Street	Truck to On-Site Rail	Brooklyn 1	1,102(2))	NA	2,000	2,000
Queens Private Transfer Station Alternatives							
Review Avenue	30-58 Review Avenue	Truck to Barge/ Rail	Queens 2	1, 464(3)	958	1,200	242

Table 1.3-2 (Continued)
List of In-City Alternatives to the Proposed Action

Facility Name	Facility Address	Export Mode	Community District	Average Peak Day DSNY-managed Waste (tpd)	Permitted Facility Capacity (tpd)	Proposed Facility Capacity (tpd)	Proposed On-Site Capacities to be Analyzed in the DEIS
Collection Vehicle Transport to Out-of-City Waste-to-Energy Facilities							
Essex County Resource Recovery Facility	Newark, NJ	Direct DSNY vehicle delivery or delivery in hopper barges	N/A	1,700[(4)]	2,250	N/A	N/A
Hempstead Resource Recovery Facility	Westbury, Long Island	Direct DSNY vehicle delivery	N/A	300[(4)]	3,000	N/A	N/A
In-City Intermodal Transfer Sites for the MTS Conversion Program							
GATX Site	500 Western Avenue, Staten Island	Barge to Barge	Staten Island 1	N/A	N/A	N/A	N/A
Harlem River Yard	68 Lincoln Street, Bronx	Barge to Rail	Bronx 1	N/A	N/A	N/A	N/A
65th Street Intermodal Yard	Bay Ridge/ Sunset Park, Brooklyn	Barge to Rail	Brooklyn 10	N/A	N/A	N/A	N/A

Table 1.3-2 (Continued)
List of In-City Alternatives to the Proposed Action

Facility Name	Facility Address	Export Mode	Community District	Average Peak Day DSNY-managed Waste (tpd)	Permitted Facility Capacity (tpd)	Proposed Facility Capacity (tpd)	Proposed On-Site Capacities to be Analyzed in the DEIS
Existing MTS Facilities							
Existing South Bronx MTS	Farragut Street, Bronx	Truck to Barge	Bronx 2	2,804[(5)]	4,800	N/A	2,804
Existing Southwest Brooklyn MTS	Shore Parkway At Bay 41st Street, Brooklyn	Truck to Barge	Brooklyn 11	1,388[(5)]	4,800	N/A	1,388
Existing Greenpoint MTS	North Henry and Kingsland Avenue, Brooklyn	Truck to Barge	Brooklyn 1	3,387[(5)]	4,800	N/A	3,387
Existing Hamilton Avenue MTS	Hamilton Avenue at Gowanus Canal, Brooklyn	Truck to Barge	Brooklyn 7	2,248[(5)]	4,800	N/A	2,248

Table 1.3-2 (Continued)
List of In-City Alternatives to the Proposed Action

Facility Name	Facility Address	Export Mode	Community District	Average Peak Day DSNY-managed Waste (tpd)	Permitted Facility Capacity (tpd)	Proposed Facility Capacity (tpd)	Proposed On-Site Capacities to be Analyzed in the DEIS
Existing MTS Facilities							
Existing West 135th Street MTS	West 135th Street and 12th Avenue, Manhattan	Truck to Barge	Manhattan 9	1,416(6)	4,800	N/A	1,416
Existing West 59th Street MTS	West 59th Street and Marginal Street, Manhattan	Truck to Barge	Manhattan 7	1,068(5)	4,800	N/A	1,068
Existing East 91st Street MTS	East 91st Street and York Avenue, Manhattan	Truck to Barge	Manhattan 8	1,093(5)	4,800	N/A	1,093
Existing North Shore MTS	31st Avenue and 122nd Street, Queens	Truck to Barge	Queens 7	2,672(5)	4,800	N/A	2,672

Notes:

(1) Source: Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-managed Waste from the Bronx. Average of the highest day each week over 52 weeks for FY 2003.

(2) Source: Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-managed Waste from Brooklyn formerly delivered to the Greenpoint MTS. Average of the highest day each week over 52 weeks for FY 2003.

(3) Source: Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-managed Waste from Queens formerly delivered to the Greenpoint MTS. Average of the highest day each week over 52 weeks for FY 2003.

(4) Interim Export contracted amount of capacity made available for DSNY-managed Waste.

(5) Average Peak Day deliveries are based on scale data from FY 1998 received from the DSNY Bureau of Cleaning & Collection with a 20% contingency allowance, except for the South Bronx MTS. South Bronx MTS data are based on Fiscal Year 1997 with a 20% contingency allowance. This contingency allowance provides a margin of conservatism for environmental review purposes.

(6) Based on DSNY's reallocation of tonnages within Manhattan with a 20% contingency allowance.

paper vendors. DSNY anticipates that the certainty of a long-term supply of material, which the selected company would obtain under this contract, will provide the company with the ability to recover the necessary capital investment over the proposed contract term. This contract may also result in the selected company developing a recyclables acceptance/processing facility within the City. In addition, DSNY intends to explore the use of existing and new DSNY MTS facilities in Manhattan for the acceptance and barge transport of Recyclables in connection with the new long-term processing contract.

Note that pursuant to Title 6 of the New York Codes, Rules and Regulations (NYCRR) Sections 360-12.1 and 1.8(h), the New York State Department of Environmental Conservation (NYSDEC) authorizes recycling facilities by registration. Accordingly, recycling facilities conforming to this regulation are exempt from environmental review. However, at a minimum, the potential traffic, off-site air and off-site noise impacts that would be associated with changes in the delivery of Curbside Recyclables by DSNY collection vehicles from current destinations to the selected proposer's facility(ies) will be evaluated in the DEIS (Proposed Action). The Alternative to the Proposed Action that will be evaluated in the DEIS is Curbside Recyclables to existing or new MTSs in Manhattan.

1.3.4 Commercial Waste Management – Proposed Action and Alternative

In tandem with the City Council's approval of the Existing SWMP, LL74 was enacted on December 19, 2000. LL74 required that DSNY contract with a consultant to conduct a comprehensive study of commercial waste management in the City. DSNY conducted a series of meetings in November and December of 2002 to solicit comments, and issued a Draft Study Scope of Work on March 3, 2003 for further public comment. Comments were received and reviewed, and a Final Study Scope was issued on July 31, 2003.

In September 2002, the consultant began work on detailed analyses of a range of commercial waste management issues and submitted a report with recommendations, Volumes I through VI of the Commercial Waste Management Study (Commercial Waste Management Study or the Study), to the City Council in March 2004, as required. The Study included recommendations involving changes in current practices, laws and regulations affecting the design and operation of

privately owned and operated Transfer Stations in the City. These recommendations address improvements in the environmental control systems and practices used at existing permitted Transfer Stations in the City that have the benefit of improving potential effects associated with the operation of these facilities. DSNY has determined that many of those recommendations can be implemented under its existing regulatory authority. A summary of the recommended actions is contained in Volume I - *Consolidated Executive Summaries*. The entire Study can be accessed on DSNY's website: www.nyc.gov/sanitation. Printed copies of the Study are available at the List of Repositories in Section 1.5.2.

Volume III of the Study, Converted MTSs -- *Commercial Waste Processing and Analysis of Potential Impacts*, provides a discussion of the potential impacts associated with processing both DSNY-managed and commercial waste at these facilities and evaluates the potential for significant adverse environmental impacts associated with processing both types of waste. This report is available on the DSNY's website: www.nyc.gov/sanitation. Recommendations as to whether one or more of the Converted MTSs should be used for acceptance and processing of commercial waste will be included in the New SWMP. If that Alternative is recommended, containerizing commercial waste at the Converted MTSs will be included in the Converted MTS Proposed Action.

Should the Proposed Action for Long Term export not include Converted MTSs at certain MTS sites, the use of the existing MTS facility to receive commercial waste and load it into hopper barges that would be towed to an out-of-City containerization facility will be evaluated in the DEIS as an Alternative to the Proposed Action for commercial waste.

1.4 New SWMP DEIS

The New SWMP DEIS will provide an environmental review of the Proposed Action for consideration by involved decision-makers in connection with the adoption and approval of the New SWMP, and subsequent permitting of long-term export facilities.

The New SWMP DEIS review of the Proposed Action and Alternatives will comply with: (1) the requirements of the SEQRA regulations (6 NYCRR Part 617) and CEQR procedures set forth in Executive Order 91 of 1977, as amended; (2) the Rules of Procedure for CEQR found in Section 6, Title 62 of the Rules of the City of New York (RCNY); and (3) the guidance set forth in the 2001 CEQR Technical Manual.

1.5 Public Review Process – CEQR and SEQRA

Approval of the Proposed Action will provide the basis upon which proposed Long Term Export Programs and, if applicable, other solid waste management policies or programs, can be implemented. The City's commitment of resources to these programs is predicated upon the findings presented in the DEIS that, consistent with social, economic and other essential considerations of state and City policy, from among the reasonable alternatives, the Proposed Action is one that minimizes or avoids significant adverse environmental effects to the maximum extent practicable. In addition, any potential significant adverse effects disclosed would be minimized or avoided by incorporating mitigative measures that are identified as practicable (2001 CEQR Technical Manual, pages 1 through 11, Section 270, Agency Findings).

Pursuant to CEQR/SEQRA rules and procedures, DSNY is lead agency for the environmental review of the New SWMP; involved agencies with discretionary approval of the New SWMP are the City Council and NYSDEC.

1.5.1 Long Term Export

Agencies interested in the Long Term Export Program elements of the Proposed Action and assessments of facilities and services related to that program that are included in the DEIS are listed below.

1.5.1.1 Federal Agencies

- United States Army Corps of Engineers (USACE)
- United States Environmental Protection Agency (USEPA), Region 2

1.5.1.2 New York State Agencies

- Department of State
- Office of Parks, Recreation and Historic Preservation (OPRHP)

1.5.1.3 New York City Agencies

- City Office of Environmental Coordination (OEC)
- Department of Environmental Protection (NYCDEP)
- Department of Transportation (NYCDOT)
- City Planning Commission
- New York City Economic Development Corporation (NYCEDC)
- Landmarks Preservation Commission (LPC)
- Department of Health (NYCDOH)
- Department of Parks and Recreation (NYCDPR)

1.5.2 Preparation of the DEIS

The purpose of the DEIS is to provide decision-makers with an understanding of the potential environmental consequences of the Proposed Action so that they may make an informed decision about the actions they are asked to undertake. In addition, the DEIS provides the basis to make reasoned comparisons of the Alternatives to the Proposed Action. An initial step in the Environmental Impact Statement (EIS) process is the preparation of the DEIS for public comment.

A series of Public Scoping Meetings will be held between June 15 and July 1, 2004 to solicit comments and concerns from the public and regulatory agencies regarding the proposed approach to evaluation of the Proposed Action (see Section 1.7, Environmental Justice Program,

for a description of the public participation and outreach program). In addition to comments received at the Scoping Meetings, written comments will be accepted until 10 calendar days after the last Scoping Meeting. A Final Scoping Document, revised to address public comment, will be prepared. The anticipated circulation dates of the Final Scoping Document are between July 15 and July 30, 2004.

An issuance of a Notice of Completion of the DEIS is required to initiate consideration of any required permit actions and approvals. A Public Hearing(s) to provide an opportunity for the public to comment on the DEIS will be held within approximately 30 days of the distribution of the DEIS. Copies of the DEIS will be available for viewing at DSNY, Bureau of Long Term Export, 44 Beaver Street, 12th Floor, New York, New York, and at the List of Repositories in Table 1.5-1.

Issuance of a Final Environmental Impact Statement (FEIS) is required for final approval of required permits. These findings will be used to support all other public actions and approvals inclusive of the anticipated potential permit actions listed in Section 1.6.

1.6 Required Actions, Permits and Approvals

Potential major permit approvals for the Proposed Action that are known to be required are listed below. If subsequent approvals or permit actions are identified, a determination will be made by DSNY and the respective interested/involved agency(ies) as to what subsequent environmental assessments and determinations are required, if any.

1.6.1 Federal

1.6.1.1 U.S. Army Corps of Engineers

- Section 10 (River and Harbors Act) for structures and work in navigable waters of the United States;
- Section 103 of the Marine Protection Research & Sanctuaries Act;

Table 1.5-1
List of Repositories

Repository Location	Repository Address	Days and Hours of Operation	Phone Number
Manhattan			
CD 8 Office	505 Park Avenue	call for days and hours	(212) 758-4340
96th Street Regional Public Library	112 East 96th Street	M & Th 12-8; Tu & F 1-6; W 10-4; Sa 10-5; closed Sun	(212) 289-0908
Manhattan CB 9 office	565 West 125th Street	call for days and hours	(212) 864-6200
George Bruce Public Library	518 West 125th Street	M 10-6; W 12-8; Th 11-6; F 1-6; Sa 10-5; closed Tu & Sun	(212) 662-9727
Manhattan CB 4 Office	330 West 42nd Street, 26th Floor	call for days and hours	(212) 736-4536
Riverside Public Library (CD 7)	127 Amsterdam Avenue at West 65th Street	M 10-6; W 12-8; Th 1-8; F 1-6; Sa 10-5; closed Tu & Sun	(212) 870-1810
Brooklyn			
Brooklyn CD 7 office	4201 4th Avenue	call for days and hours	(718) 854-0003
Sunset Park Public Library	5108 Fourth Avenue at 51st	M 1-8; T, Th & F 1-6; W 10-6; Sa 10-5; closed Sun	(718) 567-2806
Brooklyn CD 11 Office	2214 Bath Avenue	call for days and hours	(718) 266-8800
New Utrecht Public Library	1743 86th Street at Bay 17th Street	M & Th 1-6; T 1-8; W & Fr 10-6; Sa 10-5; closed Sun	(718) 236-4086
Brooklyn CD 1 Office	435 Graham Avenue	call for days and hours	(718) 389-0009
Leonard Public Library	8 Devoe Street at Leonard Street	M 1-8; T, Th & F 1-6; W 10-6; closed weekends	(718) 486-3365
Queens			
Queens CD 2 Office	43-22 50th Street, Woodside	call for days and hours	(718) 533-8773
Court Square Public Library	25-01 Jackson Avenue, Long Island City	M 12-7; Tu 1-6; W 10-6; Th & F 12-6; closed weekends	(718) 937-2790
Queens CB 7 Office	45-35 Kissena Boulevard, Flushing	call for days and hours	(718) 359-2800
Mitchell-Linden Public Library	29-42 Union Street	M & Th 1-8, Tu 1-6, W & F 10-6; closed weekends	(718) 539-2330
Bronx			
Bronx CB 2 Office	1029 East 163rd Street	call for days and hours	(718) 328-9125/6
Hunts Point Regional Public Library	877 Southern Boulevard at Tiffany Street	M 12-7; Tu & Th 10-6; W & F 1-6; Sa 10-5; closed Sun	(718) 617-0338
Bronx CB 1 Office	384 East 149th Street	call for days and hours	(718) 585-7117
Woodstock Public Library	761 East 160th Street, west of Prospect Avenue	M & Tu 10-6; W 11-6; Th 12-7; F 1-6; closed weekends	(718) 665-6255

- Section 404 (Clean Water Act) for discharging of dredged or fill material in waters of the United States; and
- Section 401 (Clean Water Act) Water Quality Certification.

1.6.2 New York State

1.6.2.1 Department of Environmental Conservation

- Article 27, Title 7 (6 NYCRR 360) Environmental Conservation Law solid waste permit to construct and operate a solid waste management facility;
- Article 15, Title 5 (6 NYCRR 608 – Protection of Waters) Environmental Conservation Law permit for the disturbance of a streambed or banks or excavation in or fill of navigable waters;
- Article 15, Title 5 (6 NYCRR 608 – Protection of Waters) Section 401 Water Quality Certification;
- Article 25, (6 NYCRR 661 – Tidal Wetlands Act) Environmental Conservation Law;
- Article 36 (6 NYCRR 500 – Flood Plain Management) Environmental Conservation Law permit for a facility located in a floodplain;
- Article 17, State Pollution Discharge Elimination System (SPDES) General Permit (Section 402 of Clean Water Act) for stormwater discharges from construction activities; and
- Coastal Zone Consistency Certification (19 NYCRR 600).

1.6.2.2 Department of State

- Article 42 of the State Executive Law;
- Consistency with Federal Coastal Zone Management Act (15 CFR Part 930);
- New York State Office of Parks, Recreation and Historic Preservation (OPRHP); and
- Consultation under Section 106 (National Historic Preservation Act) and New York State Historic Preservation Act Section 14.09 compliance requirements.

1.6.3 New York City

1.6.3.1 City Planning Commission

- Consistency with local Waterfront Revitalization Program (WRP); and
- Conformance with the Uniform Land Use Review Procedure (ULURP) for a Site Selection Action will be required in connection with the development of Converted MTSs at the existing MTS sites.

1.6.3.2 Department of Environmental Protection

- Sewer connection permit under Title 24 of the New York City Administrative Code (NYCAC) and Title 15 of the RCNY; and
- Industrial Pre-Treatment Approval.

1.7 Proposed Public Outreach Process/Environmental Justice

1.7.1 Introduction

NYSDEC issued policy guidance on Environmental Justice (EJ) and Permitting in March 2003 (EJ Policy). The Policy applies to certain NYSDEC permitting actions where NYSDEC is the lead agency, including the permits for New SWMP facilities sought by DSNY under 6 NYCRR Part 360. This section describes DSNY's enhanced public participation and outreach program (EJ Program), now underway for the New SWMP facility permitting processes that are part of the Proposed Action under consideration in this Scoping Document. The EJ Program focuses on: the Public Scoping Meetings for the New SWMP DEIS; the Public Hearing(s) that DSNY will hold on the New SWMP DEIS; and the Hearings expected to be held by NYSDEC on the New SWMP facility permits, including permits required to develop Converted MTSs and other potential private waste containerization facilities.

The EJ Policy is being implemented in the potential EJ Communities that are identified in project area maps appended as Attachment A to this Scoping Document. These project area maps were prepared using the USEPA database, as prescribed in the EJ Policy, to identify the census block groups with populations that meet the EJ Policy criteria (EJ Community). The project area maps

also identify the facilities in the project area that would be included in an environmental burden analysis conducted in the event that significant impacts from the project are found. The maps also provide information about the environmental review analyses to be provided in the DEIS. The EJ Communities would be the focus of the EJ Program described herein. For reference, a copy of the EJ Policy is included as Attachment B.

The EJ Policy is specifically intended to ensure that the New SWMP facility permitting processes, including the Scoping process undertaken for the environmental review for the New SWMP facilities that are part of the Proposed Action (including Alternatives to the Converted MTSs), consider EJ issues and promote the participation of EJ Communities in this process. Both the New SWMP and the facilities to be developed as the New SWMP is implemented are subject to environmental review pursuant to CEQR/SEQRA. The Converted MTSs also require permits and other authorizations that would be issued by NYSDEC, the USACE and other parties.

1.7.2 The EJ Program

DSNY, as lead agency for the DEIS for the Proposed Action, is implementing this EJ Program to provide opportunities for citizens to be informed about and involved in the review of the facility permitting portions of the Proposed Action (including Alternatives to the Converted MTSs). The EJ Program described herein includes enhanced public outreach, information dissemination and community meetings accessible to each EJ project area. Upon completion of these activities, DSNY will submit a written certification that it has complied with the outreach plan, and will submit a report detailing activities occurring in each EJ project area.

1.7.2.1 Public Scoping Phase

In the initial stage of implementing its EJ Program, DSNY, as a basis for enhancing the participation of EJ Communities in Public Scoping Meetings, has done the following:

- Identified stakeholders to the EJ projects in the Proposed Action (including Alternatives to the Converted MTSs);
- Distributed and posted written information on the EJ projects in the Proposed Action (including Alternatives to the Converted MTSs) and related permit review processes in an easy-to-read format, and translated, as appropriate. (See Attachment C for copies of outreach materials circulated in advance of the Public Scoping Meetings);

- Complied with the CEQR timetable for advance notice of the Scoping Meetings; and
- Established easily accessible document repositories near or in potential EJ Communities at which draft Part 360 Solid Waste Facility Permit applications for the Converted MTSs are available for review by the public.

Because nine of the ten potential project areas are located within EJ Communities, DSNY has elected to implement the EJ Program in all ten project areas, beginning with Public Scoping Meetings in locations accessible to each of the EJ project areas.

Locations for written information include, but are not limited to:

- Official document repositories;
- Public libraries;
- Community liaison offices within pertinent state and federal agencies;
- Borough halls; and
- Legislative offices.

In addition, the following toll-free hotline has been established: 1-888-NYC-SWMP. Messages are to be documented and substantive comments considered by DSNY.

Subsequent to the completion of the Public Scoping Meetings, and prior to the publication of the DEIS, DSNY will submit final permit applications for the Converted MTS projects, addressing all comments received in consultation with NYSDEC. The final permit applications for the MTS projects will be placed in the document repositories for public review, along with any NYSDEC Notices of Complete Application or Notices of Hearing that are issued subsequent thereto.

1.7.2.2 DEIS Publication Phase

The EJ Policy requires a description in the DEIS of the existing environmental burden on the potential EJ Community and the evaluation of the additional burden of any significant adverse environmental impact on the potential EJ Community. This Scoping Document includes project area maps that identify facilities in the EJ Communities that would be included in any

environmental burden evaluation that may be required as part of the DEIS. Note that these evaluations are required to be conducted and included in the DEIS only if the DEIS finds that the project would result in a significant unmitigatible adverse environmental impact.

Like this Scoping Document, the DEIS will identify on project area maps the facilities that potentially place an environmental burden on the EJ Community. The facilities and land uses shown on the project area maps, in addition to the Converted MTSs and Alternatives to the Converted MTSs, include private waste Transfer Stations and major industrial or transportation facilities (including railyards and DSNY garages) or utilities infrastructure (such as power plants, substations, water pollution control plants [WPCPs], etc.). The maps are not intended to imply that all facilities have the same potential effects on their environs, however, or that potential effects are identical to those impacts predicted for the Converted MTSs or Alternatives to the Converted MTSs. The maps serve as a starting point to provide the community with information that may be relevant to the EJ process. As such, they are not intended to depict the type or extent of any environmental burden in the EJ Community.

If potentially significant adverse impacts are disclosed for an EJ project in the DEIS, appropriate evaluation of other facilities that may impose similar environmental burdens will be presented.

Subsequent to issuance of the Final Scoping Document and after the issuance of the DEIS, enhanced public participation and outreach efforts will continue to provide a flow of up-to-date information that will include the following:

- **One-page topical fact sheets, including frequently asked questions (FAQs):** Distributed and posted on the DSNY website and translated, at a minimum, into Spanish. Other dominant non-English languages will be identified through conversations with stakeholders and materials will be translated, as appropriate.

- **Flyers/mailings:** Copies of mailings and public notices will be posted throughout potential EJ Communities. Mailings will be distributed to stakeholders after the Public Scoping Meetings and prior to the DEIS Hearing (three mailings in total).

- **Public notices:** These notices will be published in mainstream and local newspapers read both by the general public and by residents in potential EJ Communities. Lists of weekly and monthly newspapers will be compiled with the assistance of stakeholders and CD offices.

- **Electronic/websites:** The DSNY website (www.nyc.gov/sanitation) will post project-related documents and information. Other websites (including the New York City Environmental Justice Alliance, www.nyceja.org) will be invited to link to the DSNY website.

Public information materials are tailored to each EJ Community and: (1) describe the facility permitting activities that are part of the Proposed Action; (2) describe the design and operation of the proposed facilities (including the Converted MTSs and Alternatives to the Converted MTSs); (3) answer FAQs; and (4) present other pertinent information on the permitting process. During the interim period between the Public Scoping Meetings and the publication of the DEIS, brief informal informational presentations will be made upon request to respond to questions from the EJ Communities. The presentations will include updates on project status through a brief slide show presentation and distribution of outreach materials.

1.7.2.3 Joint Public Hearing Phase

The outreach documents have been and will continue to be distributed widely through various mailings, at informal presentations and the DEIS Public Hearings that will be held within or near each potential EJ Community. These hearings will be Joint Hearings held with the participation of NYSDEC and also invite public comment on the Part 360 Solid Waste Facility Permit applications that will be before NYSDEC for consideration. The Joint Hearings will also be the subject of enhanced, targeted outreach that will comply with CEQR requirements.

These Joint Public Hearings to obtain comments on the DEIS and pending permit applications will be held in or near the CD(s) in which each Converted MTS or Alternative to the Converted MTSs project area is located. (Note that if the SWMP includes Alternative facilities to the Converted MTSs, any permitting actions for those facilities will proceed on a separate schedule.) The schedule anticipates that at the time of the DEIS publication, NYSDEC and the USACE will issue Notices of Complete Permit Applications. Key stakeholders will be informed of the DEIS publication and the Joint Hearings no fewer than two weeks in advance.

2.0 SITE-SPECIFIC ASSESSMENTS OF CONVERTED MTSS

2.1 Converted MTS Site Descriptions

2.1.1 South Bronx Converted MTS, Bronx

The existing South Bronx MTS is in the Hunts Point area of the South Bronx. This site is bounded by Farragut Street (formerly Hunts Point Avenue) to the north, the East River to the east and south, and a small parcel of land owned by NYCEDC to the west. The gross acreage of the DSNY-owned lot is approximately 8.6 acres of upland area. In addition to the MTS, other existing DSNY facilities, including a salt storage shed and a DSNY self-help site (SHS) also occupy the site. The South Bronx site is roughly triangular in shape. The northern boundary follows Hunts Point Avenue and is approximately 400 feet in length. The eastern boundary is approximately 420 feet in length. The southern boundary is located along the East River and is approximately 380 feet in length.

The site and surrounding properties within both the primary and secondary study areas fall within an M3-1 heavy industrial district that extends north to approximately East Bay Avenue and Randall Avenue, where it abuts an M1-1 light industrial district. Most of the Hunts Point peninsula is zoned for manufacturing, with the exception of the 20-block residential area located at the northeastern end, about one mile from the site. North of the subject M3 district is an M1-1 light industrial zoning district that covers areas outside of the secondary study area surrounding Randall Avenue and east to approximately Longfellow Avenue.

All property immediately adjacent to the site is owned by the City or its agencies (e.g., DSNY, Department of Correction, NYCDEP, and NYCEDC). A small area with deteriorated paving that abuts the site near the East River's edge is used informally by local residents as a point of public access for fishing and viewing the water. An active SHS on the site is comprised of a paved area surrounded by concrete walls topped with cyclone fencing. Accessed through a 30-foot sliding gate facing Farragut Street (formerly Hunts Point Avenue), the SHS accepts materials such as tires, metal, wood, C&D materials, and glass from non-commercial vehicles. An office trailer is also located within this area.

The New SWMP DEIS will evaluate DSNY-managed Waste being delivered to the South Bronx Converted MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, including collection vehicles operated by DSNY and other City agencies (e.g., the NYCDPR, City Housing Authority [NYCHA] and non-profit institutions).

The waste will be containerized, the containers loaded onto barges with a net payload of approximately 1,056 tons (and a gross payload of 1,308 tons), and the barges will be towed to intermodal facilities where the containers will then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal sites.

2.1.2 Southwest Brooklyn Converted MTS, Brooklyn

The existing Southwest Brooklyn MTS site is located at Bay 41st Street and the service road of the Shore (Belt) Parkway in the Bensonhurst section of Brooklyn in CD 11. The site is bounded to the north by 25th Avenue (extended), to the south by Bay 42nd Street (extended), to the east by the DSNY CD 11 garage facility and to the west by Gravesend Bay. The site is located within Tax Block 6943, Lot 30, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The site location is approximately 6.4 acres of the total 23.5-acre DSNY-owned lot, running an average of 1,250 feet along its north-south parallel and approximately 1,100 feet from east to west. The existing Southwest Brooklyn MTS, located within Lot 30, is roughly rectangular in shape and covers an additional 0.6 acres along the Gravesend Bay waterfront. The existing incinerator, located adjacent to the existing MTS within the upland portions of the site, currently occupies approximately 1.3 acres. To the east of the site, the DSNY CD 11 garage facility, two salt storage sheds and an SHS occupy the remainder of the DSNY-owned lot.

The site is located in an M3-1 zoning district on Gravesend Bay, which allows for heavy industrial uses. The M3-1 zoning district extends to the north of the site. To the south of the site is a small section of M1-1 zoning, a light industrial zoning district, adjacent to a section of C3 commercial zoning. M1 zoning districts often serve as buffers for adjacent residential and

commercial districts. The surrounding residential communities of Bensonhurst, Gravesend and Coney Island (east and south of the site) are within medium density, residential zoning districts, specifically, R4, R5 and R6 designations. In addition, a small section of C8-1 (automotive-related) commercial zoning is found to the northeast of the site, surrounded by the R5 and R6 residential zoning in the community of Gravesend. Directly to the northeast and east of the site are DSNY facilities, including one salt shed and DSNY garage.

There are no City, state or nationally designated landmarks or historic districts within a ½-mile radius of the site.

Historically, the original MTS was built and operated to allow for the transfer of loose (i.e., not compacted or containerized) DSNY-managed Waste from trucks to barges for transport to the Fresh Kills Landfill. The MTS has not operated since mid-1997 when Interim Export activities commenced in the Bronx.

The New SWMP DEIS will evaluate DSNY-managed Waste being delivered to the Southwest Brooklyn Converted MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, including collection vehicles operated by DSNY and other City agencies (e.g., the NYCDPR, NYCHA and non-profit institutions). The waste will be containerized, the containers loaded onto barges with a net payload of approximately 1,056 tons (and a gross payload of 1,308 tons), and the barges will be towed to intermodal facilities where the containers will then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal sites.

2.1.3 Greenpoint Converted MTS, Brooklyn

The existing Greenpoint MTS site is located on Newtown Creek in the Greenpoint section of Brooklyn. The site is bounded by Newtown Creek to the north, Whale Creek Canal to the west, Kingsland Avenue (Green Street) to the south and North Henry Street to the east. The site is located within Tax Block 2508 and Lot 1, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The gross acreage of the DSNY-owned lot is approximately 6.3 acres, of which approximately 3.5 acres is upland. The Greenpoint MTS and on-site, former Greenpoint incinerator occupy the majority of the site. The remaining 2.8 acres consist of water that extends to the pier and bulkhead line. The Greenpoint MTS site is irregularly shaped. The northern boundary of the site along the U.S. Pierhead Line measures approximately 150 feet, the southern boundary along Green Street is approximately 350 feet in length, the eastern boundary along North Henry Street is approximately 250 feet in length, and the western and northern boundary along Whale Creek is approximately 950 feet in length.

The site is located in an M3-1 zoning district, which allows for heavy industrial uses. This district extends along the shorelines of Newtown Creek in both Brooklyn and Queens. In Brooklyn, the district extends along the entire length of Newtown Creek. In Queens, the M3-1 zoning district extends from the head of Newtown Creek to Hunters Point Avenue on the eastern shore of the Dutch Kills. In Brooklyn, the M3-1 zone is primarily bordered by additional manufacturing districts, specifically areas of M1-1 and M1-2 zoning, which allow for light and medium manufacturing uses. An R6 zone borders the M3-1 zone for approximately 500 feet along Van Dam Street to the southeast of the site. On the northern side of the creek, in Queens, the M3-1 zone is also primarily bounded by additional manufacturing zones, specifically M1-1, M1-3, M1-4, M2-1 and M3-2. An area of R4 residential zoning, which encompasses Calvary Cemetery, is located northeast of Review Avenue and northwest of Laurel Hill Boulevard.

No archeologically significant resources are located at the site or within the study area. In addition, there are no registered historic structures located on-site.

Historically, the original MTS was built and operated to allow for the transfer of loose (i.e., not compacted or containerized) DSNY-managed Waste from trucks to barges for transport to the Fresh Kills Landfill.

The New SWMP DEIS will evaluate DSNY-managed Waste being delivered to the Greenpoint Converted MTS by a variety of collection vehicles, primarily consisting of packer and dual-purpose trucks, including collection vehicles operated by DSNY and other City agencies

(e.g., NYCDPR, NYCHA and non-profit institutions). The waste will be containerized, the containers loaded onto barges with a net payload of approximately 1,056 tons (and a gross payload of 1,308 tons), and the barges will be towed to intermodal facilities where the containers will then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal sites.

2.1.4 Hamilton Avenue Converted MTS, Brooklyn

The existing Hamilton Avenue MTS site is located off of Hamilton Avenue in the Red Hook section of Brooklyn. The site is bounded by the elevated Gowanus Expressway to the north and east, 17th Street to the south and Gowanus Canal to the west. The site is located within Tax Block 625 and Lot 2, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The gross acreage of the DSNY-owned lot is approximately 7.4 acres and consists largely of upland. In addition to the MTS, the site is also occupied by other existing DSNY facilities, including the former Hamilton Avenue incinerator. The Hamilton Avenue MTS site is roughly triangular in shape. The northeastern boundary of the site follows the configuration of the elevated Gowanus Expressway and is approximately 1,375 feet in length. The southern boundary of the site is approximately 830 feet in length. The western side of the site is approximately 800 feet in length and follows the Gowanus Canal shoreline.

The site is located within an M3-1 zoning district, which allows for heavy industrial uses. This district is bounded by Gowanus Canal and Bay to the north and northwest and the Gowanus Expressway, Hamilton Avenue and 3rd Avenue to the east and southeast. This M3-1 district extends to the south, terminating at 58th Street. The M3-1 zone is bounded by M1-2 and M2-1 zones to the north of the site, which allow for light and medium industrial uses, respectively. To the east and south of the site, the M3-1 zone is bounded by M1-2D zone districts, which allow for residential uses with the authorization of the City Planning Commission. Further east and south of the site, adjacent to the M1-2D zone, are areas of R6 and R5 zones. North and west of Gowanus Canal is another M3-1 zoning district.

The site is bordered on the west by the Gowanus Canal and on the northeast by an NYCDOT asphalt plant and storage yard. Hamilton Avenue, which is a busy arterial, and the elevated Gowanus Expressway define the eastern boundary of the site, separating it from various automotive service uses and warehouses beyond. The large, two-story parking lot/garage associated with a Home Depot on 19th Street borders the site on the south.

Large lots in the northeastern portion of the primary study area contain industrial and warehouse uses. Automotive services are located along Hamilton Avenue just east of the site, including DSNY's Brooklyn 2 Garage.

The New SWMP DEIS will evaluate DSNY-managed Waste being delivered to the Hamilton Avenue Converted MTS by a variety of collection vehicles, primarily consisting of packer and dual-purpose trucks, including collection vehicles operated by DSNY and other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions). The waste will be containerized, the containers loaded onto barges with a net payload of approximately 1,056 tons (and a gross payload of 1,308 tons), and the barges will be towed to intermodal facilities where the containers will then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal sites.

2.1.5 West 135th Street Converted MTS, Manhattan

The existing West 135th Street MTS is located at the terminus of West 135th Street, west of the West Side Highway (Henry Hudson Parkway) on the Hudson River in the Manhattanville section of Manhattan in CD 9. It is constructed almost entirely over water on a pile-supported structure within the Hudson River. Located north and adjacent to the MTS is the North River WPCP, to the east is Henry Hudson Parkway, and located immediately south and west of the site is the Hudson River. The site is located within Tax Block 2101 and Lots 117 and 120, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The gross acreage of the DSNY-owned lot is approximately 5 acres, with 0.6 acres occupied by the MTS. The MTS is centered within the boundaries of the site, which contains three elements: a small employee parking area located directly south of the access ramp entrance; a vehicle

access ramp extending at approximately a 45 degree angle from Marginal Street to the MTS; and the MTS, which is built on pier structures over the Hudson River. The West 135th Street MTS site is rectangular in shape. The northern site boundary of the MTS measures approximately 530 feet in length to the U.S. Pierhead Line, the eastern border along U.S. Bulkhead Line is roughly 400 feet in length, the site's southern border is approximately 500 feet in length, and the western site border along the U.S. Pierhead Line is approximately 420 feet in length.

The site is located in an M1-1 zoning district, which allows for light industrial uses. This zoning district extends from West 133rd to West 145th Streets, between the Hudson River waterfront and Riverside Drive, and includes the North River WPCP (and the Riverbank State Park on top of the WPCP). Additional areas zoned for manufacturing (M1-2, M2-3 and M3-1) are found south of the site to St. Clair Place and inland to the intersection of Broadway and West 132nd Street. East of the site and the Henry Hudson Parkway (9A) are residential areas zoned for high-density residential development (R7-2 and R8), with commercial overlays along the major north-south thoroughfares of Broadway and Amsterdam Avenues.

No archaeologically significant resources are located at the site or within the study area.

A historic district and several historic properties are located within an approximately ½-mile radius of the site. These properties are designated City landmarks and listed on the State Registers of Historic Places. These properties are: the Hamilton Heights Historic District, located east of the MTS; Croton Aqueduct Gatehouse, located at the junction of West 135th Street and Amsterdam Avenue; the Interborough Rapid Transit System Manhattan Valley Viaduct, situated on Broadway between West 135th and West 122nd Streets; Our Lady of Lourdes Roman Catholic Church, located northeast of the site on West 142nd Street; the New York Public Library, Hamilton Grange Branch, situated northeast of the site on West 145th Street; and City College, City University of New York, located east of Amsterdam Avenue.

Historically, the original MTS was built and operated to allow for the transfer of loose (i.e., not compacted or containerized) DSNY-managed Waste from trucks to barges for transport to the Fresh Kills Landfill.

The New SWMP DEIS will evaluate DSNY-managed Waste being delivered to the West 135th Street MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, and including collection vehicles operated by DSNY and other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions). The waste will be containerized, the containers loaded onto barges with a net payload of approximately 1,056 tons (and a gross payload of 1,308 tons), and the barges will be towed to intermodal facilities where the containers will then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal sites.

2.1.6 West 59th Street Converted MTS, Manhattan

The existing West 59th Street MTS site is located in the Clinton section of Manhattan in CD 4, at the terminus of 59th Street and the Hudson River. The site is located within Tax Block 1109, Lot 99, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The gross acreage of the DSNY-owned lot is approximately 2.8 acres, running approximately 780 feet from the U.S. Pierhead Line to 12th Avenue and approximately 160 feet from north to south along the U.S. Pierhead Line. Approximately 0.3 acre of the site is located on land and 2.5 acres are located over the Hudson River. The existing MTS is a pile-supported enclosed structure that comprises approximately 2.1 acres (1.8 acres of water and 0.3 acres of land).

The site is located in an M2-3 manufacturing zone, which extends more than ½-mile north and south along the Hudson River waterfront and inland to 11th Avenue. Northeast of the site, there is a mix of commercial zoning districts (C2-5, C4-7, C4-6A), industrial zoning (M1-6) and residential zoning (R10 and R8). Southeast of the site, there is also a mix of industrial (M1-5 and M3-2) and commercial (C4-7 and C6-2) districts. In addition, the Clinton Special Purpose District also extends west to 12th Avenue within ¼-mile of the site. To the east of the site, the Lincoln Square Special Purpose District extends within ½-mile of the site, between West 60th and West 65th Streets.

Land uses include a large surface parking lot located northeast of the site, West Side (Miller) Highway to the east of the site, and industrial uses and functional piers to the south along the Hudson River waterfront. Twelfth Avenue, immediately east of the facility, contains several larger industrial uses and warehousing operations in the vicinity of the site.

Land uses to the west of West Side Highway are dominated by transportation and utility uses, which utilize the piers to the south of the West 59th Street MTS. Consolidated Edison utilizes the pier immediately south of the site for fuel transfer operations. In addition, DSNY utilizes Pier 97 at the terminus of West 57th Street for vehicle parking and various storage operations. De Witt Clinton Park is located south of the site, between West 52nd and West 54th Streets and 11th and 12th Avenues.

To the north of the site, north of West 59th Street, there is a large surface parking facility, which serves as a buffer to the large Trump Riverside South Development that extends north from West 61st Street to West 67th Street. Other sections dominated by residential uses are located between 10th and 11th Avenues, north of West 63rd Street and south of West 56th Street.

The West Side Highway creates a buffer between the heavy industrial uses associated with the Hudson River waterfront in this section of Manhattan. Significant land uses to the east of the facility include the DSNY Manhattan CDs M1, M2, M3, M4 and M7 garage facility on 12th Avenue between 55th and 57th Streets and commercial warehouses located along 12th Avenue and on adjacent cross streets. In addition, a Consolidated Edison generating facility is located to the east of the site, at 59th Street and 12th Avenue. Small-scale commercial enterprises such as grocery stores and automotive sales establishments are located along 11th Avenue to the east of the site. Residential uses are located further east of the site (east of 10th Avenue), between West 56th and West 63rd Streets. Outside of these residential sections, the blocks between 10th and 11th Avenues are institutional in nature, featuring significant uses on both sides of 10th Avenue north of West 58th Street, such as John Jay College of Criminal Justice, Fordham University at Lincoln Center and St. Luke's/Roosevelt Hospital Center.

Historically, the original MTS was built and operated to allow for the transfer of loose (i.e., not compacted or containerized) DSNY-managed Waste from trucks to barges for transport to the Fresh Kills Landfill.

The New SWMP DEIS will evaluate DSNY-managed Waste being delivered to the West 59th Street MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, and including collection vehicles operated by DSNY and other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions). The waste will be containerized, the containers loaded onto barges with a net payload of approximately 1,056 tons (and a gross payload of 1,308 tons), and the barges will be towed to intermodal facilities where the containers will then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal sites.

2.1.7 East 91st Street Converted MTS, Manhattan

The existing East 91st Street MTS site is located in the Upper East Side section of Manhattan in CD 8. The MTS is constructed over water on piles in the East River and is situated at the foot of East 91st Street, between the Franklin D. Roosevelt (FDR) Drive and the East River. The site is bounded by the East River to the north and east, Carl Schurz Park to the south and FDR Drive to the west. The site is located within Tax Block 1587, Lot 27, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data.*

The gross acreage of the DSNY-owned lot is approximately 8.7 acres. The entrance to the East 91st Street MTS site is located at the foot of East 91st Street, and the building itself is located east of the FDR Drive on the East River. The East 91st Street MTS site is approximately rectangular in shape. The western boundary of the site conforms to the existing configuration of the FDR Drive. The northern boundary of the MTS extends approximately 240 feet in an east-west direction to meet the U.S. Pierhead Line, the eastern border along the U.S. Pierhead Line is approximately 1,000 feet in length, the western border along the U.S. Bulkhead Line measures approximately 1,400 feet in length, and the southern border measures approximately 128 feet in length.

The MTS site is located within an M2-2 zoning district, which allows for moderate industrial uses. This zoning district extends northward between the FDR Drive and the East River waterfront. Immediately west of the site is a small M1-4 zoned area that is situated east of York Avenue and encompasses most of the Asphalt Green Recreational Center. Immediately north and south of the site are high-density residential districts, R7-2 and R10A.

These zones are surrounded by a mix of mostly high-density residential (R8B and R10) and a wide array of commercial (C84, C28, C1-9, C4-6) zones. These areas are located to the west and southwest of the site and have many contextual regions and commercial overlays interspersed throughout the ½-mile radius.

There are no City, state or nationally designated landmarks or historic districts within a ½-mile radius of the site.

Historically, the original MTS was built and operated to allow for the transfer of loose (i.e., not compacted or containerized) DSNY-managed Waste from trucks to barges for transport to the Fresh Kills Landfill.

The New SWMP DEIS will evaluate DSNY-managed Waste being delivered to the East 91st Street MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, and including collection vehicles operated by DSNY and other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions). The waste will be containerized, the containers loaded onto barges with a net payload of approximately 1,056 tons (and a gross payload of 1,308 tons), and the barges will be towed to intermodal facilities where the containers will then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal sites.

2.1.8 North Shore Converted MTS, Queens

The existing North Shore MTS is located in the College Point section of Queens. It is bounded by 30th Avenue to the north, 31st Avenue and 122nd Street to the east and Flushing Bay to the west. The site is located within Tax Block 4346 and Lot 75, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The gross acreage of the DSNY-owned lot is approximately 12.5 acres, of which approximately 7.5 acres are land. DSNY's District 7 garage occupies the majority of this acreage; the remaining 5 acres are made up of water that extends to the U.S. Pierhead Line. The North Shore MTS is approximately rectangular in shape, with a bend beyond the U.S. Bulkhead Line extending south. The northern boundary of the MTS measures approximately 1,000 feet in length to the U.S. Pierhead Line, the southern boundary is approximately 800 feet in length, the eastern border along 122nd Street is approximately 550 feet in length, and the western border along the U.S. Pierhead Line is approximately 560 feet in length.

The site is in an M3-1 zoning district, which allows for heavy industrial uses. This district extends north to about 30th Avenue, west and south to the bay, and east beyond College Point Boulevard. Bordering the M3-1 zone to the north is an M1-1 zone, which allows for light industrial uses and extends from the bay to beyond ½-mile from the site. M1 zoning districts are often buffers for adjacent residential and commercial districts. North of the M1-1 zoning district are portions of larger residential R3X, R4, R5 and R4-1 zoning districts, and a C3 commercial zoning district.

No archaeologically significant resources are located at the site or within the study area. In addition, there are no registered historic structures located on site.

Historically, the original MTS was built and operated to allow for the transfer of loose (i.e., not compacted or containerized) DSNY-managed Waste from trucks to barges for transport to the Fresh Kills Landfill.

The New SWMP DEIS will evaluate DSNY-managed Waste that will be delivered to the North Shore MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, and including collection vehicles operated by DSNY and other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions). The waste will be containerized, the containers loaded onto barges with a net payload of approximately 1,056 tons (and a gross payload of 1,308 tons), and the barges will be towed to intermodal facilities where the containers will then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal sites.

2.2 Site-Specific Technical Studies

2.2.1 Land Use, Zoning, and Public Policy

The DEIS will assess the project sites described in Section 2.1 for existing land use and zoning patterns and recent development trends. In addition, relevant plans for development will be reviewed and considered for consistency with the Proposed Action and Alternatives. The DEIS will describe and map existing land uses and zoning on the project sites within the primary (the area within ¼ mile of the site) and secondary (the area between ¼ mile and ½ mile of the site) study areas. A general description of land use patterns using existing published sources of information and field reconnaissance will also be provided. The descriptions of Future No-Build Conditions will be based upon information obtained from DSNY and the City Department of City Planning (NYCDCP) concerning improvements planned and programmed for implementation.

Specifically, the DEIS will assess the Proposed Action's and Alternatives' effects on existing and planned land uses and zoning on or near the sites. In addition, the DEIS will include an assessment of the Proposed Action's and Alternatives' current land use controls and policies, where applicable.

2.2.2 Socioeconomic Conditions

The DEIS will include a description of the demographic characteristics of the project sites and study areas based on the most recently available data from the United States Census Bureau and data collected from NYCDCP, the NYCEDC and other agencies. Demographic conditions in the study areas (roughly based on census tracts within ¼ mile of the site) will be compared to demographic conditions in the appropriate borough and the City.

An evaluation of the potential impacts of the Proposed Action and Alternatives on direct and indirect economic output, jobs and earnings related to economic activity in a study area that generally covers a larger area, extending about ½ mile from the site, will be included. Estimates of temporary (construction-related) and permanent (operation-related) effects will also be included in the analysis. Available data and information from NYCDCP, NYCEDC and other public sources will be used as a principal basis for this evaluation. The economic impact assessment will include:

- Definition of Existing and Future No-Build Conditions, with estimates of City, borough and study area populations (by age, race, sex), numbers of households, income, housing and employment;
- Assessment of direct economic impacts, including direct on-site expenditures, such as payroll and other operating expenses;
- Assessment of the fiscal impacts of the Proposed Action and Alternatives, including anticipated changes in tax revenues; and
- Assessment of possible economic development impacts to areas adjacent and proximate to the Proposed Action and Alternatives sites.

2.2.3 Community Facilities and Services

Community facilities that will be assessed in the DEIS are public or publicly funded facilities, including schools, hospitals, libraries, day care centers, and fire and police protection services. A significant impact to these facilities could occur if the Proposed Action and Alternatives were to displace a facility, substantially disrupt delivery of a service currently available to the community or result in new demand for such services.

In the primary (the area within ¼-mile of the site) and secondary (the area between ¼-mile and ½-mile of the site) study areas, an inventory of these types of facilities and services will be conducted to determine if any will be displaced by the Proposed Action and Alternatives or if any are in close proximity to a proposed site, warranting more investigation into potential impacts. Adverse impacts could result if a project either: (1) alters a community facility (e.g., disrupts existing activity patterns within communities near an element of the Proposed Action and Alternatives or on its access/egress routes); or (2) causes a change in population that could affect the types and/or levels of service appropriate for the community. Additionally, information concerning police, fire and emergency medical services will be obtained from the responsible agencies.

2.2.4 Open Space

As CEQR calls for the analysis of both direct and indirect potential impacts to open space and parklands, the DEIS will include this assessment. Open space is defined as publicly or privately owned land that is publicly accessible for a variety of active and/or passive recreational pursuits. A direct impact physically changes, diminishes or eliminates an open space or parkland, or reduces its utilization or aesthetic value. (This includes a siting of a facility that causes increased air or noise emissions, odors or shadows that could adversely affect the resource.) An indirect impact could result if a siting of a facility introduces a substantial new user population that will create or exacerbate an over-utilization of existing open space resources.

An inventory of open space resources will be conducted to determine if any resources will be displaced or are located in close-enough proximity to the Proposed Action and Alternatives to warrant more investigation into potential impacts. The CEQR requirements for full open-space analyses are geared toward new residential or commercial projects in which significant numbers of additional residents or employees utilize open spaces. Since it is unlikely that these facilities will employ more than 500 employees (the CEQR threshold), no quantitative assessment will be required. However, consideration will be given to possible traffic, air and noise impacts attributable to the facilities and their possible impacts upon nearby open spaces, if applicable.

2.2.5 Cultural Resources

Cultural resources include any buildings, structures, sites and objects of historic and archaeological importance. Investigations into historic and architectural resources within ½-mile of the site, and the potential for on-site and archaeological resources, will be conducted, as they relate to the specific facility sites. National and State Historic Registers, the State Archaeological Site Inventory, the City LPC and historical atlases will be consulted in order to inventory known potential historic and archaeological resources in the study areas. If the Proposed Action and Alternatives requires new construction, including below-ground disturbance in an area deemed sensitive by these agencies, field survey and documentary research may be required to determine potential impacts and mitigation measures, in consultation with the appropriate historic agencies. Potential indirect impacts, such as increases in truck activity, related air quality and noise levels would also be examined for adverse effects on identified resources.

In completing this assessment, information will be obtained from several sources, including an inspection of the project sites and study areas, research of available archival documentation and data available from NYCDCP, LPC and the OPRHP. An assessment of potential impacts on historic and archaeological resources will be prepared, and, if necessary, mitigation measures will be evaluated. As appropriate, this assessment will include the following activities:

- Performing historical overviews of the study areas;
- Preparing a Stage IA report, based on the review of available literature, in conformance with City and state requirements; and
- If deemed necessary, performing a Stage IB excavation program report for the project sites, and consulting with the LPC and OPRHP.

2.2.6 Urban Design, Visual Resources, and Shadows

The DEIS will assess potential urban design, visual quality and shadows impacts of each site. The urban design and visual quality of an area are defined by a variety of factors including built forms, natural resources and the sensitivity of its views. Though manufacturing zones do not

typically possess sensitive visual resources, as, for example, a residential historic district may, a waterfront site or other unique setting, albeit industrially-zoned, may nonetheless contain a significant viewshed or other visual resource which will be identified and assessed for potential impact.

Since most of the Converted MTSs would be situated in inaccessible, non-sensitive manufacturing districts, they would not be expected to cast shadows on sensitive neighboring uses. All sites and Alternatives will be screened to determine the need for shadow studies.

In this assessment, the following steps will be taken:

- An inventory of the site and study area will be conducted to determine the potential for sensitive visual resources;
- If the facility will eliminate or substantially limit views, which are deemed to have aesthetic value from an adjacent neighborhood, of the waterfront, public parks, landmark structures or districts or natural resources (e.g., vegetation, topography, geologic formations, wetlands, rivers or other water resources), an impact would be identified and mitigation sought;
- The effect of increased truck activity on sensitive locations along the truck routes will also be assessed and impacts described within the DEIS, as appropriate; and
- If the facility casts new shadows or substantially increases existing shadows on a publicly accessible open space or park, historic landscape or resource (if the features that make the resource significant depend on sunlight) or important natural feature, shadow studies would be performed (per CEQR guidelines) to illustrate the times and extent of the potential impact. Where a significant impact is identified, mitigation would be proposed, in consultation with the relevant parties/agencies.

2.2.7 Neighborhood Character

The DEIS will assess the neighborhood character of the areas in which each element of the Proposed Action and Alternatives is located. Neighborhood character is comprised of various related conditions or elements that typically include: land use, urban design, visual resources, historic resources, socioeconomics, traffic and noise. Together, these elements create the context

and feeling of a neighborhood.[5] The conditions, as they exist in the study areas, will be described. Note that, as indicated in the EJ Section of this Scoping Document, DSNY has determined that the MTS projects are EJ projects pursuant to the state EJ Policy. Project area maps developed for the MTS projects (see Attachment A) identify facilities that would be considered in an environmental burden analysis conducted for an MTS project that discloses a significant adverse environmental impact for which no mitigation is proposed. The resulting environmental burden analysis would be set forth in the DEIS.

If the siting of an element of the Proposed Action results in a significant direct or indirect change to land use, urban design, visual resources, historic resources, socioeconomics, traffic, air quality and noise in the area of interest (i.e., along truck routes within ½ mile of the site), the degree and type of such change will be assessed. The potential for impacts, and the adverse cumulative effects from these individual impacts, will be examined. Any significant potential changes to overall neighborhood character will be investigated and characterized through field reconnaissance, photographic documentation and other available sources.

2.2.8 Natural Resources

2.2.8.1 Introduction

The DEIS project sites are located in manufacturing-zoned areas and are, therefore, unlikely to contain significant ecologically-sensitive areas or appropriate habitats for threatened and endangered species. However, because these sites are on or near the City's waterfront, potential effects to surface water bodies and habitats will be considered in the DEIS. Existing terrestrial and water resources will be characterized based on information derived from site visits, data research, and coordination with NYSDEC's Natural Heritage Program (NHP). Any significant effects of the Proposed Action (e.g., from the in-water construction of piers or bulkheads) will be documented and appropriate mitigation measures identified.

[5] Major public and private facilities in the vicinity of the MTS sites whose operation may already impose environmental burdens on the surrounding community are illustrated on maps in Attachment A to this Scoping Document. These facilities include major truck generators, WPCPs and power generators. (Should the DEIS analyses find significant adverse environmental impacts from the Proposed Action at any of the MTS sites whose

A natural resource is defined by CEQR as "plant and animal species and any area capable of providing habitat for plant and animal species or capable of functioning to support environmental systems and maintain the City's environmental balance." Natural resources consist of water, wetland, upland and built resources, and significant, sensitive or designated resources. The types of natural resources present on each site vary, depending upon location, and require evaluation on an individual basis. For the purposes of CEQR assessment, categorization of the City's natural resources follows:

- Wetlands: Freshwater and tidal wetlands;
- Water Resources: Surface waters (oceans, rivers, bays, streams, estuaries, ponds, lakes) and groundwater, drainage systems and floodwater systems/floodplains;
- Terrestrial Resources: Beaches, dunes, bluffs, thickets, grasslands, old meadows, fields, woodlands and forests, and gardens and other ornamental landscaping;
- Built Resources: Piers, waterfront structures and ruins that are habitats for marine species and nesting and foraging areas for birds, beach and flood protection structures and other structures offering habitat to various species; and
- Plant and Animal Species and Habitats.

For the assessment of each site's natural resources, the limits of the study areas will be determined by the potential effects of the Proposed Action and the resources in question. In all cases, the facility site will be inventoried for these resources, based upon NYSDEC mapping and information from NHP. If such resources are identified on the site and are determined likely to be disturbed by the Proposed Action and Alternatives, additional assessments will be made, including the following:

- Collection of detailed identification of natural resources that could be impacted directly or indirectly by the MTS siting or modification;
- Field studies and documentary research to determine the value of the affected natural resource and its relationship to neighboring resources and the overall area ecosystem;
- Detailed analysis of the construction and operation activities of the Proposed Action and Alternatives and its interaction with, and impacts upon, the affected natural resource and the environmental support systems; and

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surrounding population meets EJ criteria, DSNY would then analyze the potential cumulative environmental burden posed by the combined operation of these facilities in the EJ assessment.)

- Development of construction-period and long-term mitigation, which could include techniques to control siltation and erosion during construction, re-vegetation programs, slope and surface protection, water pollution controls, wetlands replacement, etc.

2.2.8.2 Types and Sources of Information to Be Collected – Literature and Previous Studies

Field investigations of all the sites will be conducted by a team of terrestrial and aquatic ecologists who will observe the extent of the resource, the context of its surroundings and the area in which the Proposed Action and Alternatives will take place. Field notes and observations will be used to characterize the resources in the study areas. A literature search will also be utilized to identify any potentially valuable or sensitive resources. United States Geological Survey Topographic Maps, Federal Emergency Management Agency (FEMA) Flood Plain Maps, and National Wetland Inventory and State Wetland Maps will be used to identify and outline potential natural resource areas, wherever appropriate.

Information and data pertaining to the aquatic resources at each site will be obtained from literature and from the results of prior field studies. Over the past 20 years, all of the Proposed Action sites have had extensive aquatic biology programs conducted either on site, at an area substantially contiguous to the site, or in sufficiently close proximity to the site, to warrant inclusion. The existing database covering marine resources of project sites is sufficient to make scientifically sound judgments on the relative project impacts for the Proposed Action, given the comparatively modest alterations to the local marine resources.

Each site will be examined for the presence or absence of tidal wetlands. The tidal wetlands assessment will combine aerial photographic analyses, topography mapping and tidal wetlands mapping. Field investigations will be conducted to determine consistency with these data sources.

Additionally, NHP will be contacted to determine whether rare species of plants and wildlife or unique habitats were reported as occurring on or adjacent to each site. The NHP provides a database listing that identifies the species and/or habitats with state, heritage and global rankings, along with other information related to the species. The database list is confidential and cannot be released without written permission from NHP.

The United States Fish and Wildlife Service (USF&WS) will be contacted for any federally listed endangered or threatened species known to exist within any of the project areas. Notification of project activity will follow the guidelines under Section 7 of the Consultation of the Endangered Species Act (87 Stat. 884, as amended; 16 USC 531 et seq.). Response letters from both the USF&WS and NHP typically indicate the presence or absence of rare species and whether further on-site analyses will be required. Pertinent species information provided by these agencies will be included in each of the site descriptions in the DEIS, along with separate narrative descriptions.

2.2.8.3 Types and Sources of Information to Be Collected – Present Ecological Field Studies

During the fall of 2002, DSNY initiated planning of ecological field studies at the eight Converted MTS sites. This decision reflected the desire to have sufficient data on hand to answer any potential regulatory agency questions or concerns. The ecological subconsultant developed a scope of ecological studies. This scope was presented to the relevant review agencies, their comments incorporated, and a final version published. Because of its length and detail, the scope is included separately, as Appendix A. The field studies started in January 2003, and were completed in December 2003. Laboratory results and a Marine Ecology Study Report are being completed in the spring of 2004.

2.2.8.4 Screening Methodology

Each site will be assessed for Existing and Future No-Build Conditions to determine the value of the natural resource, as demonstrated by the variety and density of its species; its use for recreation, open space or commerce; its relationship to neighboring resources and to the overall area ecosystem; and its role in ecosystem cleansing or storm and flood management. Environmental systems that support the natural resources in the study areas will be examined for each site. The DEIS will include a detailed description of the proposed construction and operational activities associated with the Proposed Action and Alternatives along with an analysis of interactions with the natural resources and the environmental systems that support them.

2.2.8.5 Impact Analysis Methodology

Both the short- and long-term impacts of the Proposed Action and Alternatives on the natural resources will be evaluated in the DEIS. Direct impacts are identified as those that intervene or alter the resource immediately by impacting the site conditions, such as filling or draining areas; construction of bulkheads, piers and other structures in the water; or the removal of vegetation. Indirect impacts are those that affect a natural system or another resource that supports the resource under study. Alterations of groundwater flow or quality and increases in the transport of silt and sediments are examples of indirect impacts. The direct or indirect physical effects of the Proposed Action and Alternatives will be assessed as they modify the functioning of the resource. In addition, the effects will be evaluated and expressed in the context of the scarcity or abundance of the resource.

Project impacts will be predicted by analyzing changes resulting from similar programs in the past. Where there is no direct comparison to a past project available, the impacts will be predicted based upon generalized experience and modeling calculations.

2.2.8.6 Typical Mitigation Measures

Mitigation techniques can be applied during construction to control erosion and siltation, to maintain existing drainage patterns and to avoid activities that unnecessarily cause temporary or permanent damage. Such techniques include:

- Using silt fences, hay bales, mulches and other covers to limit areas of soil exposure and to stabilize slopes;
- Installing temporary drainage systems, including sediment traps, for the duration of the construction;
- Avoiding dredging in contaminated areas. Where this is not practical or feasible, such techniques as silt screens, turbidity curtains and modified dredging methods, such as restricting dredging to the areas of low current velocity, can be used;
- Limiting de-watering wherever possible and disposing of such waters properly so as to maintain the existing drainage system and avoid surface water pollution; and
- Limiting construction to periods during which breeding or spawning does not take place.

2.2.9 Hazardous Materials

2.2.9.1 Introduction

As part of the CEQR process, the DEIS will include a hazardous materials assessment that determines if:

- The Proposed Action and Alternatives could lead to the increased exposure of people or the environment to hazardous materials;
- There is any presence of existing hazardous materials on project sites (some sites may have hazardous materials from existing uses or residual contamination from past uses when there was less regulation of uses and disposal of such materials);
- Construction activities associated with the Proposed Action and Alternatives could result in human exposure to hazardous materials or a threat to the environment; and
- The Proposed Action and Alternatives could introduce an "at-risk population" to exposure to hazardous materials.

Activities that could lead to exposure include:

- Excavation or grading that creates fugitive dust from contaminated soils;
- Demolition of buildings or structures that contain hazardous materials;
- The introduction of new activities or processes that use hazardous materials; and
- The introduction of a new population to an area that contains hazardous materials.

2.2.9.2 Definition of Study Area

The facility sites are the focus of the study area in the CEQR evaluation of hazardous materials exposure to humans and the environment; however, potential contamination by hazardous materials is not limited by property boundaries. Chapter J (Hazardous Materials), Section 310, of the 2001 CEQR Technical Manual indicates that the study area for hazardous materials includes all other areas that might have affected or that might be affecting the project site. This is defined to include at least the adjacent properties and, generally, properties within 400 feet of the project site. The study area for record searches of spills and hazardous waste sites is defined as that which is within a 1,000-foot radius from the project site. The study area for record searches of underground storage tanks (USTs) includes the project site and adjacent properties.

If the Proposed Action involves excavation for utilities, the path of those utilities will become part of the study area. Final design plans will determine the need for additional underground utilities.

2.2.9.3 Types and Sources of Information Collected

In accordance with Chapter J, Section 322 of the 2001 CEQR Technical Manual, federal and state agency database searches will be performed for all Converted MTS sites and properties within a minimum of a 1,000-foot radius of the subject properties. Many of the federal and state records are available on computer databases through commercial service firms. Local records (e.g., City Fire Department [NYFD], NYCDEP) will be obtained as a result of filing Freedom of Information requests. Detailed maps and tables of the record searches will be compiled and reviewed.

2.2.9.4 Screening Methodology

The screening methodology applied for hazardous materials follows the guidelines set forth in Chapter J, Section 320 of the 2001 CEQR Technical Manual, which includes:

- Historical land use review;
- Regulatory agency list review; and
- Site and surrounding area reconnaissance.

2.2.9.5 Historical Land Use Review

The historical land use review seeks to identify past activities on the sites and adjacent properties that may have involved the use or disposal of hazardous materials. In accordance with Chapter J, Section 321 of the 2001 CEQR Technical Manual, this review extends back for at least 50 years at each site. The Sanborn historical fire insurance atlases are valuable sources for identifying historical land use in the City. Historical atlases for each of the sites have either been purchased or reviewed in the City Public Library. These documents (generally available since the early 1900s) indicate the structures present, any buried gasoline tanks that exist and the identification of uses (e.g., company name for industrial properties) at the time of preparation.

A search of the City Department of Buildings' (NYCDOB) records will be made to identify new building applications, records of major alterations, demolition records, certificates of occupancy and other records of or plans for additions and changes on file for the subject property. In addition, a search of NYFD records for the subject property will be conducted to identify the presence of underground or above-ground storage tanks.

Where feasible, interviews with individuals knowledgeable of past uses at the subject site will be conducted. Based upon the above-mentioned information sources, the DEIS will include a compiled history of site uses, identifying the potential for the prior usage of hazardous materials.

2.2.9.6 Regulatory Agency List Review

The regulatory agency list review involves accessing records of City, state and federal agencies that regulate the storage, handling, emissions and spill cleanup of hazardous materials. These records include:

- USEPA's National Priorities List (NPL) and Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) list, which will be reviewed to determine if the property or surrounding properties within the search radius appear on the lists. The NPL contains sites that are targeted for USEPA-mandated cleanup under the federal Comprehensive Environmental Responsibility and Compensation and Liability Act (CERCLA), which authorizes identification and remediation of uncontrolled hazardous waste sites. The CERCLIS list contains potential hazardous waste sites for which there is not enough information to determine if the site should be included on the NPL.

- The Resource Conservation and Recovery Information System (RCRIS) list identifies registered hazardous waste generators, transporters and treatment, and storage and disposal facilities, as defined by the federal Resource Conservation and Recovery Act (RCRA). (RCRA regulates management and disposal of hazardous wastes currently generated, treated, stored, disposed or distributed.) Inclusion on the RCRIS Notifiers List does not, in and of itself, indicate that the MTS is a source of contamination. For example, all dry cleaning establishments in the City are on the RCRIS list.

- The USEPA's Emergency Response Notification System (ERNS), a compilation of hazardous substance spills reported to federal and state authorities.

- NYSDEC databases, which will be reviewed to determine if: (1) the site or nearby sites are on the Inactive Hazardous Disposal Site Registry and are therefore subject to

a state consent order for assessment and possible cleanup; (2) there have been any large-scale landfilling operations on or near the site; and (3) there are records of leaking USTs, major oil storage facilities, petroleum bulk storage facilities, chemical bulk storage facilities or solid waste management facilities. Records of spills are listed as Active (under investigation) or Closed (no further action required).

This review is a routine part of the initial assessment that, as defined in the 2001 CEQR Technical Manual, is often referred to as a Phase I Environmental Site Assessment and does not include any testing for contamination. If warranted, Phase II subsurface testing will be recommended to confirm the presence of or to characterize the extent of potential contamination. Phase II is described in more detail in Section 2.2.9.8, herein.

2.2.9.7 Site and Surrounding Area Reconnaissance

Following completion of the historical land use review and the review of regulatory agency records, visits will be made to the sites to observe and document Existing Conditions and note any signs of potential hazardous material presence, usage and contamination. A reconnaissance survey of surrounding properties will also be taken, though it will be less detailed than the site survey. The reconnaissance surveys will be performed in accordance with the guidelines of Chapter J, Section 323 of the 2001 CEQR Technical Manual.

2.2.9.8 Impact Analysis Methodology

The 2001 CEQR Technical Manual indicates that the following two questions be applied in determining if a significant adverse impact will occur from the presence of hazardous materials:

- Is there the potential for human exposure to contaminants? This includes future on-site occupants, off-site occupants and construction workers.
- Is there the potential for environmental exposure to the contaminants? This includes contaminants entering on site and surrounding natural resources or exacerbating existing environmental contamination.

If both questions can be answered "no," it is unlikely that a potential for significant impacts exists. If the answer to either question is "yes," then a significant impact might occur.

The potential risk is dependent upon the nature and extent of contamination and the Proposed Actions at the site. The methodology outlined in the 2001 CEQR Technical Manual (Chapter J, Section 400) will be used in assessing the significance of impacts. If a potential for contamination is found during this Phase I Assessment, then Phase II surface and subsurface investigations may be recommended as part of the construction phase of project implementation in order to confirm the presence and extent of the contamination and to identify appropriate mitigation measures.

Given that the transfer and export of municipal solid waste (MSW) are not inherently hazardous activities and that Existing Conditions are not likely sources of soil or groundwater contamination, it is anticipated that any potential impact identified during an individual site's Phase I evaluation will rise to a level of significance only if on-site construction is undertaken. In these instances, a process of further detailed analysis, referred to as a Phase II investigation, will be conducted. Phase II investigations will be necessary if soil disturbance from new construction occurs and the Phase I investigation identifies the likelihood of hazardous material contamination from previous land uses. Project land parcels that have yet to be acquired will also be properly tested prior to any grading/excavation or construction activities.

The Phase II investigation may include several physical investigations that confirm the presence, type and extent of potential contamination. A Phase II sampling and testing plan is prepared based on findings resulting from the Phase I or Preliminary Assessment (which indicates the potential presence of contaminants of concern). Subsurface testing may include the following: (1) soil gas sampling with probes to test for volatile compounds; (2) soil borings to sample and test for a full range of potential contaminants; and (3) the installation of groundwater monitoring wells to test for groundwater contamination. Magnetometer or ground penetrating radar may be useful in locating buried storage tanks, underground piping, etc. The Phase II sampling protocol will be submitted to NYCDEP/NYSDEC for review and approval prior to conducting the investigation.

The results of the Phase II Investigation will be the basis for determining the necessity to mitigate contamination prior to commencing construction. If elevated levels of contamination exist, this soil will require appropriate remediation to ensure that no significant impacts to on- and off-site occupants occur. If unexpected contamination is encountered during construction (e.g., discovery of leaking underground tanks, etc.), then mitigation measures will have to be developed with the concurrence of regulatory agencies that have the appropriate jurisdiction (NYSDEC, NYCDEP, NYFD).

Construction on the site without the proper precautionary measures (e.g., worker Health and Safety Plan) and removal of associated contaminated material and USTs can also result in exposure to hazardous vapors, and workers can come into contact with potentially contaminated soils. Therefore, a NYCDEP- and/or NYSDEC-approved site-specific Health and Safety Plan will be prepared on the basis of the site sampling analysis and the expected risk of worker exposure to contaminants prior to any site disturbance (grading/excavation) or construction activities.

If any excavated soil is removed from a site, the soil will be properly tested in accordance with all applicable NYSDEC regulations prior to determining reuse and/or disposal options. Any tanks discovered during excavation will be removed in accordance with all applicable regulations, prior to construction. The contractor will maintain appropriate remediation measures, such as dust suppression, during grading/excavation and construction activities at the site.

Proposed demolition and construction activities may disturb surfaces with lead-based paint and asbestos-contaminated material. The handling and remediation of lead and asbestos will be handled in accordance with all applicable rules and regulations of the Occupational Safety and Health Administration (OSHA), and the City, state and federal governments.

2.2.9.9 Typical Mitigation Measures

Mitigation of potential adverse impacts to eliminate or reduce the sources of impacts to acceptable levels can include reduction or removal of contamination or altering the Proposed Action and Alternatives. Appropriate mitigation measures will be selected on a case-by-case basis. Consultation with the NYCDEP and/or NYSDEC will be advised in selecting appropriate mitigation measures. In the case of a Phase II Investigation, such investigation results in recommended mitigation measures that are specific to a project. If contaminated soil exists or is found, it will be removed and disposed of at a regulated disposal facility in a manner that minimizes exposure to workers and the public, in general.

In the City, inactive underground fuel oil tanks can be closed by first removing any residual fuel oil and tank bottoms, and then either filling the tank with a concrete slurry or other approved inert material, or excavating and disposing it off site following applicable standards.

2.2.10 Water Quality

2.2.10.1 Introduction

The water quality analysis will evaluate the impacts that the facilities would have on surface water and identifies mitigation, if applicable. For each site, Existing Conditions and potential impacts associated with the project will be evaluated. Recent water quality data in the vicinity of each site will be summarized and compared to local water quality standards. A mathematical model of New York Harbor will be used to predict the potential impacts of the project upon future water quality conditions. The water quality study area includes the receiving water body that is adjacent or as close as possible to each specific site.

2.2.10.2 Review of Existing Water Quality Data

As part of the Harbor Survey Program, NYCDEP has designated monitoring stations throughout New York Harbor, including the Hudson and East Rivers, which are sampled routinely. Water samples are typically analyzed for conventional pollutants and additional water quality parameters. In addition, ambient metals concentration data are available from sampling conducted by Battelle Ocean Sciences during 1991 for USEPA Region 2. For each of the Converted MTSs, data from the nearest monitoring stations will be compiled and summarized to develop a profile of No-Build water quality conditions. These data will be compared to the corresponding NYSDEC Water Quality Standards and guidance values. In addition, NYSDEC information on existing permitted discharges in the vicinity of each site will be investigated.

2.2.10.3 Pollutant Loadings

At each site, stormwater runoff will be discharged directly into the adjacent surface waters after passing through an oil/water separator. The volume of stormwater runoff and the associated pollution loading will be calculated using precipitation data and available databases on stormwater pollutant concentrations. The estimated pollutant loading will be developed for each site by calculating a runoff flow and assigning an average stormwater concentration for each water quality parameter. The runoff flow will be calculated using the following equation:

where: Q_R = CIA;

Q_R = Runoff flow (cubic feet per second [cfs]);

C = The runoff coefficient;

I = The average rainfall intensity (inches per hour [in/hr]); and

A = Site area (acres).

The runoff coefficient, C, is directly related to the amount of impervious surface, such as buildings, roads, parking lots or other similar features that water does not infiltrate. In order to be conservative in the analysis of potential impacts to surface water, it is assumed that all site runoff will discharge to surface waters; therefore, the runoff coefficient is equal to one. The

average rainfall intensity, I, is calculated from rainfall data measured at Central Park between 1969 and 2002. These data will be analyzed to determine statistics on the duration and intensity of storm events.

For each site, pollutant loading for each water quality parameter will be calculated by assigning a pollutant concentration to the runoff flow. Table 2.2-1 presents average concentrations for conventional pollutants and selected metals in urban stormwater runoff. Pollutant concentrations have been determined from the Nationwide Urban Runoff Program (NURP) and additional stormwater databases. These additional databases included studies funded by the Washington Council of Governments, the Federal Highway Administration (FHWA) and Santa Clara County, California. Studies in Jamaica Bay (Jamaica Bay Combined Sewer Overflow [CSO] Facility Planning Project, O'Brien and Gere, 1994), Alley Creek (East River Combined Sewer Overflow Facility Planning Project, URS Consultants and Lawler, Matusky & Skelly, 1996) and the Outer Harbor areas of the City (Outer Harbor CSO Facility Planning Project, Hazen and Sawyer and HydroQual, Inc., 1993) will provide additional stormwater runoff data. The average data from these programs will be deemed representative of stormwater from the Converted MTS sites. The three metals analyzed — copper, lead and zinc — are the predominant metals typically found in stormwater.

2.2.10.4 Modeling Evaluation of Stormwater Impacts

For each Converted MTS, the impacts of estimated stormwater pollutant loadings will be evaluated using the New York Harbor Seasonal Steady State Water Quality 208 Model (208 Model). This model was developed under Section 208 of the Clean Water Act to help state and local water quality management agencies integrate water quality activities and goals into a predictive tool. The 208 Model will be used to predict incremental changes in dissolved oxygen levels caused by biochemical oxygen demand (BOD) and incremental increases in the concentrations of other pollutants, such as fecal coliforms, nutrients, total suspended solids and heavy metals. The application of the 208 Model to heavy metals is deemed conservative because only dispersion is considered in determining concentrations. Other reactions that decrease ambient metal concentrations will not be included in the analysis. These other chemical and physical reactions may include complexation, oxidation, absorption and settling to sediments.

Table 2.2-1
Stormwater Runoff Quality for Various Studies

Pollutant	National Stormwater Data				NYC Stormwater Data			Average
	I [(1)]	II [(2)]	III [(3)]	IV [(4)]	V [(5)]	VI [(6)]	VII [(7)]	
Conventional Pollutants (mg/l)								
Biochemical Oxygen Demand (BOD)	**9**	5	14	8	12	10	18	11
Coliform Bacteria (MPN/100ml)								
Fecal Coliform	21,000	--	--	2,000	37,000	20,000	92,000	34,000
Heavy Metals (µg/l)								
Copper	34	–	39	31	–	–	–	35
Lead	144	18	234	37	–	–	–	28[(8)]
Zinc	160	37	217	200	–	–	–	154

Notes:

(1) USEPA, 1983. *Final Report of the Nationwide Urban Runoff Program.* USEPA Water Planning Division, Washington, D.C.

(2) T.R. Schueler, 1987. *Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs*. Metropolitan Washington Council of Governments. Washington D.C.

(3) E.D. Driscoll, 1990. *Pollutant Loadings and Impacts from Highway Stormwater Runoff. Volume III: Analytical Investigation and Research Report*. Federal Highway Administration, McLean, VA.

(4) *Loads Assessment Report*, Santa Clara County Urban Runoff Program, Woodward Clyde Consultants, 1991.

(5) *Jamaica Bay Combined Sewer Overflow Facility Planning Project.* O'Brien & Gere Engineers, Inc., 1993.

(6) *Outer Harbor CSO Facility Planning Project.* Hazen and Sawyer, P.C. and HydroQual, Inc., 1993.

(7) *East River Combined Sewer Overflow Facility Planning Project.* URS Consultants, Inc. & Lawler, Matusky, & Skelly Engineers, 1996.

(8) Lead concentrations monitored in the 1970s and early 1980s reflect leaded gasoline use. As a result, stormwater data for II and IV have been used to develop average concentrations.

To evaluate the potential impacts of operations at each Converted MTS, future water quality conditions will be estimated by combining the incremental difference in water quality calculated by the model with the existing data. These estimated water quality conditions will be compared with applicable NYSDEC Water Quality Standards and guidance values for the applicable waterways.

2.2.11 Waterfront Revitalization Program

2.2.11.1 Introduction

All sites to be evaluated within the DEIS will be evaluated to determine whether they are located within the designated coastal zone boundary established by the New York State Department of State, pursuant to the Federal Coastal Zone Management Act of 1972 and the New York State Waterfront Revitalization and Coastal Resources Act of 1981.

2.2.11.2 Governing Policy

"The New Waterfront Revitalization Program," prepared by the NYCDCP, identifies ten primary coastal policies that provide for local implementation of the state Coastal Management Program (CMP) in the event that a municipality adopts a local waterfront revitalization program (WRP), as is the case with the City.

Developed by the City, the goal of the WRP is to foster responsible development of the City's waterfront. The WRP embodies the policies of federal and state coastal management legislation. Its policies cover a comprehensive range of waterfront planning and environmental issues that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

Under the WRP, there are ten primary policies that address: (1) residential and commercial redevelopment; (2) water-dependent and industrial uses; (3) commercial and recreational boating; (4) coastal ecological systems; (5) water quality; (6) flooding and erosion; (7) solid

waste and hazardous substances; (8) public access; (9) scenic resources; and (10) historical and cultural resources. These ten policies are further broken down into several subpolicies. The new policies and subpolicies simplify and clarify the consistency review process without eliminating any policy components required by federal and state law.

Each of the sites will be evaluated for compliance and consistency with these ten primary waterfront policies and the 32 subpolicies set forth within the WRP, if applicable. These evaluations include consistency with the WRP and additional discussion or clarification. As necessary and required, appropriate mitigation measures to achieve consistency of a Proposed Action with applicable WRP policies will be identified and discussed.

In general, each of the WRP policies are either: (1) applicable to all of the Proposed Action sites; (2) not applicable to any of them; or (3) applicable on a strictly site-specific basis. A description of all of the policies and subpolicies and their general applicability to the Proposed Action is provided in Table 2.2-2. In general, under the WRP, the consistency of a Proposed Action needs to be demonstrated with respect to each applicable policy or subpolicy. Policies or subpolicies that are identified as not applicable are those in which the consistency of a Proposed Action does not need to be demonstrated.

In addition, a comprehensive plan for the management of the City's waterfront has been set forth in "The New York City Comprehensive Waterfront Plan – Reclaiming the Water's Edge" prepared by NYCDCP. Likewise, individual waterfront plans for the boroughs have also been developed to address activities and the development of facilities within the coastal zone boundary and provide recommendations for future activities within this zone. The DEIS will also consider such plans with regard to the proposed solid waste management activities that may occur within the coastal zone boundary area.

2.2.12 Infrastructure, Solid Waste and Sanitation Services, and Energy

2.2.12.1 Introduction

The DEIS will evaluate the potential impacts associated with the development of the Proposed Action and Alternatives on existing infrastructure, sewage, energy and solid waste systems for each site in accordance with CEQR guidelines. Issues covered will include an assessment of potential changes in the demand for electricity, water supply and sewage treatment, and the management of stormwater for each site. These analyses will include:

- An inventory of existing utility infrastructure (water, sewer, electric and gas) servicing each site;
- A comparison of the estimated project-generated demand on water, sewage, electric, gas and solid waste systems, with the infrastructure available to meet these demands;
- A qualitative examination of the need for additional infrastructure and utilities and the generation of solid waste during the construction period; and
- Identification of any significant impacts on the existing infrastructure and energy systems and examination and recommendation of mitigation measures, where appropriate.

2.2.12.2 Water Supply

The existing water supply distribution system and its conditions will be described based upon drawings and information from NYCDEP, Bureau of Water and Sewer Operations. For the West 59th Street MTS site that is currently staffed for barging of recycled paper, the water demand will be based upon the current number of on-site employees and a per capita (gallons per day [gpd] per employee) water usage. For the other Converted MTSs, water demand will be based upon the number of employees and the volume of water to be used for tipping floor wash-down and dust control. The employee demand will be 25 gpd for all shifts, with an average demand of 180 gpd required for tipping floor wash-down and dust control. The process water estimates, obtained from the 2001 CEQR Technical Manual for comparable facilities, will be compared to the amount of water supplied by the system, and its effects on the system's capacity will be analyzed.

Table 2.2-2
Local Waterfront Revitalization Policies and Subpolicies and Their Applicability

Policy Number	Policy Description	Applicability to Proposed Action
Policy 1	Support and facilitate commercial and residential redevelopment in areas well-suited to such development.	
	1.1 Encourage commercial and residential redevelopment in appropriate coastal zone areas.	Never
	1.2 Encourage non-industrial development that enlivens the waterfront and attracts the public.	Never
	1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.	Always
Policy 2	Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.	
	2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.	Site Specific
	2.2 Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas.	Site Specific
	2.3 Provide infrastructure improvements necessary to support working waterfront uses.	Always
Policy 3	Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.	
	3.1 Support and encourage recreational and commercial boating in New York City's maritime centers.	Never
	3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.	Always
	3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.	Always

Table 2.2-2 (Continued)
Local Waterfront Revitalization Policies and Subpolicies and Their Applicability

Policy #	Policy Description	Applicability
Policy 4	Protect and restore the quality and function of ecological systems within the New York City coastal area.	
	4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.	Always
	4.2 Protect and restore tidal and freshwater wetlands.	Always
	4.3 Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.	Always
	4.4 Maintain and protect living aquatic resources.	Never
Policy 5	Protect and improve water quality in the New York City coastal area.	
	5.1 Manage direct or indirect discharges to waterbodies.	Always
	5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.	Always
	5.3 Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.	Site Specific
	5.4 Protect the quality and quantity of groundwater, streams and the sources of water for wetlands.	Always
Policy 6	Minimize loss of life, structures and natural resources caused by flooding and erosion.	
	6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.	Always

Table 2.2-2 (Continued)
Local Waterfront Revitalization Policies and Subpolicies and Their Applicability

Policy #	Policy Description	Applicability
Policy 6	6.2 Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.	Never
	6.3 Protect and preserve non-renewable sources for beach nourishment.	Never
Policy 7	Minimize environmental degradation from solid waste and hazardous substances.	
	7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.	Always
	7.2 Prevent and remediate discharge of petroleum products.	Always
	7.3 Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.	Site Specific
Policy 8	Provide public access to and along New York City's coastal waters.	
	8.1 Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.	Always
	8.2 Incorporate public access into new public and private development where compatible with proposed land use and coastal location.	Always
	8.3 Provide visual access to coastal lands, waters and open space where physically practical.	Site Specific
	8.4 Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.	Always
	8.5 Preserve the public interest in and use of lands and waters held in public trust by the state and city.	Never

Table 2.2-2 (Continued)
Local Waterfront Revitalization Policies and Subpolicies and Their Applicability

Policy #	Policy Description	Applicability
Policy 9	Protect scenic resources that contribute to the visual quality of the New York City coastal area.	
	9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.	Always
	9.2 Protect scenic values associated with natural resources.	Always
Policy 10	Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.	
	10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.	Always
	10.2 Protect and preserve archaeological resources and artifacts.	Always

2.2.12.3 Sanitary Sewage and Stormwater

For each WPCP affected by the Proposed Action and Alternatives, the dry weather flow for the latest 12 months will be used. Sewage generation will be based upon all water used on the sites being sent to the WPCP, along with an estimate of process or MTS water usage. The incremental generation will be estimated with regard to both the average annual and the highest monthly dry weather flows. The impact on the WPCP's ability to meet the flow limits of its SPDES permit will be analyzed.

2.2.12.4 Solid Waste

The effects of the Proposed Action and Alternatives on the City's solid waste infrastructure and the conduct of the City solid waste management activities will be examined. In addition, a review will be conducted of the Proposed Action's conformance with the regulations and permitting of solid waste management facilities by NYSDEC and DSNY.

The existing DSNY solid waste collection and disposal practices will be described, and the future daily volumes of solid waste generated will be estimated. The volume of solid waste from the proposed converted facilities will be based on each employee generating 1.3 pounds per day for each shift. This solid waste generation is based on estimates provided within the 2001 CEQR Technical Manual for similar facilities. This volume of waste will be compared to the estimated volume of waste, and the impacts will be analyzed.

2.2.12.5 Energy

Consolidated Edison's capacity to supply electricity to the sites will be determined, and the current on-site demand will be estimated. Electricity consumption projections for the Proposed Action and Alternatives will be calculated for the processing equipment (compactors, cranes, etc.), auxiliary equipment and lighting. Power consumption projections for the facilities will be determined from data provided by the vendors and consultants for the facilities and equipment suppliers, based on the 24-hour operation of the process and ancillary equipment. Comparisons will be made between this estimated new demand and available capacity for the area network. At facilities in which anticipated incremental electrical demands will exceed 1.5% of the network projections, modifications to the network may be required.

Fuel amounts and boiler sizes will be estimated using average boiler fuel consumption and the conceptual designs for the facilities. Total fuel usage will be based upon the assumption that the heating value of No. 2 fuel oil is 140,000 British thermal units per gallon (BTU/gal), and that of natural gas is 1,000 British thermal units per cubic foot (BTU/CF).

Natural gas requirements will be compared with infrastructure capacities projected by Consolidated Edison and Brooklyn Union Gas (Keyspan Energy). The possible impacts of the facilities and the policies governing the conduct of solid waste management activities in the City will also be assessed.

2.2.13 Traffic and Transportation

Traffic and transportation analyses determine if the Proposed Action and Alternatives would generate measurable additional traffic in or near the areas surrounding the proposed sites, when additional traffic would be generated, and what impacts it may have on intersections and roadways. The results of the analysis are also used in determining impacts on air quality, noise quality, socioeconomic conditions, neighborhood character, community facilities and open space and parklands. The 2001 CEQR Technical Manual guidelines state that if the Proposed Action generates additional traffic, further analysis may be required. Pursuant to these guidelines, analyses will be performed to quantify which impacts, if any, the facilities would have upon traffic conditions. The approach to be taken will achieve the following objectives:

- Quantifying the level of additional vehicle trip generation (above Existing Conditions) projected for each Converted facility;
- Determining whether detailed traffic analysis is required, based upon the 2001 CEQR Technical Manual guidelines, given the level of additional trip generation projected;
- Determining if detailed traffic analysis is required;
- Describing Existing and Future No-Build Conditions in the study areas of each applicable site;
- Identifying and quantifying any potentially significant impacts on intersections and approaches to intersections in the study areas of each site;
- Suggesting reasonable mitigation to alleviate traffic impacts that would be generated by the proposed facilities;
- Identifying high accident locations where safety is a concern based upon the 2001 CEQR Technical Manual guidelines; and
- Suggesting reasonable mitigation to improve safety at high accident locations.

All facilities would generate new inbound and outbound collection vehicle and employee traffic, but no new outbound transfer trailer traffic. New vehicle trips generated by the facilities could potentially cause deterioration in the level of service (LOS) at intersections along the access routes in the vicinity of the sites. LOS levels are based upon the average stopped delay calculated for an intersection.

To determine if a detailed traffic analysis is required, the 2001 CEQR Technical Manual guidelines propose comparing the volume of new vehicle trips generated by the Proposed Action with the analysis thresholds that are specified in the 2001 CEQR Technical Manual. If the Proposed Action is projected to generate 50 or fewer peak hour vehicular trip ends (conservatively considered herein as passenger car equivalents or PCEs), further analysis may not be required.

2.2.13.1 Operational Assumptions

2.2.13.1.1 Existing Department Operations

DSNY has designated 59 CDs in the City from which waste is collected and transported by truck to a designated facility. Currently, waste is exported to local commercial waste vendors in and around the City under certain Interim Export contracts. DSNY schedules its collections and deliveries based upon three operational periods: priority, non-priority and relay.

- Priority loads are assumed for analysis purposes to originate in the center of the CD and are delivered by DSNY collection vehicles to the Transfer Station. The collection vehicles then return to the CD to collect additional residential waste.
- Non-priority loads are also assumed to originate in the center of the CD and are delivered to the Transfer Station by DSNY collection vehicles. The collection vehicles then return to the district garage.
- Relay loads return to the district garage and during the relay shift are driven to a disposal facility and unloaded. Relay loads originate at the district garage and DSNY collection vehicles return to the district garage.

2.2.13.1.2 Future Department Operations

Based upon the capacity and location of the Converted MTSs, DSNY has developed an allocation of the total number of loads that would be delivered to each Converted MTS in DSNY collection vehicles from each CD, and the tonnage associated with the loads to each Converted MTS. DSNY would continue to schedule its collections and deliveries based upon the three operational periods described in Section 2.2.13.1.1. The Converted MTSs would receive waste six days per week (Monday through Saturday), with a peak day each week (typically Monday or Tuesday) when the tonnage is, on average, approximately 10% to 15% higher than the weekly average. The loads (number of trucks) and tons allocated to the Converted MTSs are based upon this average peak tonnage, which represents typical worst-case conditions in terms of DSNY and other City agency collection vehicle deliveries. Table 2.2-3 shows the peak day total DSNY collection vehicle allocations for each of the eight Converted MTSs.

Table 2.2-3
Allocation of DSNY Collection Vehicles to MTSs

Facility	Peak Day DSNY Collection Vehicles
West 135th Street Converted MTS	222
East 91st Street Converted MTS	130
West 59th Street Converted MTS	124
South Bronx Converted MTS	362
North Shore Converted MTS	310
Greenpoint Converted MTS	352
Hamilton Avenue Converted MTS	240
Southwest Brooklyn Converted MTS	132

Future deliveries of DSNY-managed Waste under the Alternatives will be developed with DSNY based on the total tons of waste that might be delivered to the facilities.

2.2.13.2 Trip Generation

Using 1998 MTS scale data provided by DSNY, the temporal distribution of waste deliveries to the MTSs has been calculated for the average peak day. Using this average temporal distribution with the load allocation for the Converted MTSs, the temporal distribution of waste deliveries to the Converted MTSs will be calculated in terms of priority, non-priority and relay loads. To be conservative, trip totals will be increased by 20% to account for daily and seasonal variations. Following the approach described above, the Converted MTSs peak delivery hour and corresponding projected peak hour inbound and outbound DSNY truck trip totals will be derived. Table 2.2-4 shows the peak hour vehicle trips (inbound and outbound) generated by collection vehicles at each of the Converted MTSs for each facility's peak hour.

Table 2.2-4
Peak Hour Trips

Facility	Facility Peak Hour	Collection Vehicle Trip Ends[(1)]
West 135th Street Converted MTS	9:00 a.m. – 10:00 a.m.	30
East 91st Street Converted MTS	9:00 a.m. – 10:00 a.m.	28
West 59th Street Converted MTS	9:00 a.m. – 10:00 a.m.	21
South Bronx Converted MTS	11:00 a.m. – 12:00 p.m.	74
North Shore Converted MTS	10:00 a.m. – 11:00 a.m.	38
Greenpoint Converted MTS	9:00 a.m. – 10:00 a.m.	48
Hamilton Avenue Converted MTS	9:00 a.m. – 10:00 a.m.	27
Southwest Brooklyn Converted MTS	10:00 a.m. – 11:00 a.m.	19

Note:
(1) Represents the number of collection vehicles the Proposed Action would generate during the peak hour. The number must be multiplied by 1.5 to convert to PCEs.

Converted MTSs would generate vehicle trips from employees traveling to and from the facility during shift changes. It is assumed they will operate in the future using a three-shift operational structure: 8:00 a.m. to 4:00 p.m., 4:00 p.m. to 12:00 a.m., and 12:00 a.m. to 8:00 a.m., with 20 employees per shift.

Employee shift changes are assumed to occur 30 minutes before and 30 minutes after the start of a shift. Conservatively, employees are assumed to arrive within 30 minutes before the start of their shifts and all leaving employees are assumed to depart within 30 minutes after the end of their shifts. To estimate the number of vehicle trips that may be generated by these employees under the Proposed Action, the number of employee trips to each Converted MTS will be quantified and adjusted according to auto-mode share and auto occupancy factors. Auto-mode share is the percentage of employees expected to use automobiles for transport to and from work. Auto occupancy is the number of employees per vehicle. It will conservatively be assumed that all employees use automobiles and that there is one vehicle per employee.

Trip generation for the Alternatives will be developed with DSNY based on the total tons of waste that might be delivered to the facility.

2.2.13.3 Traffic Study Area

The study areas will include DSNY-assigned collection vehicle routes from each CD and district garage to each site. The study areas will include areas in close proximity to the district garages as well as areas close to the site.

2.2.13.4 Traffic Assignment in Study Area

After DSNY collection vehicle routes to commercial vendors under Existing Conditions and DSNY collection vehicle routes to the sites under Future Build Conditions are determined, existing numbers of DSNY collection vehicles to and from commercial waste vendors and proposed numbers of DSNY collection vehicles to and from the new sites will be identified to determine the net increase in DSNY collection vehicles in the study area. Intersections within the study area will be screened for further analysis using the procedure described in Section 2.2.13.4.1. The NYCDOT will review and approve the proposed study locations and the site-specific study areas.

2.2.13.4.1 Screening Methodology

Intersections along truck routes and district garage routes will be screened using three different criteria.

- The first criterion identifies intersections through which 50 or more additional PCEs are assigned during peak hours.
- The second criterion identifies intersections in which significant increases in delay result from less than 50 additional PCEs based on the type of traffic control and characteristics of the intersecting streets.
- The third criterion identifies intersections that are high accident locations, as defined in the 2001 CEQR Technical Manual on page 30-4, based on 2003 accident data provided by NYCDOT.

All intersections that meet one or more of the above criteria will be considered critical intersections and be subject to a traffic or safety analysis.

2.2.13.4.2 Analysis

Data for the analyses of the selected critical intersections will be collected and compiled according to 2001 CEQR Technical Manual guidelines. Data collection will also include traffic information required for other CEQR analyses, including off-site air quality and noise analyses. The data collection will consist of turning movement counts, vehicle classification counts, automatic traffic recorder (ATR) counts, travel speed surveys, physical inventories of the selected intersections, and official signal timing and phasing at the intersections. Data compilation will generate traffic information for Existing Conditions, Future No-Build, and Future Build Conditions.

Up to three time periods will be selected for analysis based upon the vehicle trips to be generated by the proposed operations at each Converted MTS:

- The AM peak hour that would experience the greatest impact from the projected net increase in collection vehicles (AM facility peak hour or AM background peak hour, whichever is greater) during the Build Year;

- The PM peak hour that would experience the greatest impact from the projected net increase in collection vehicles (PM facility peak hour or PM background peak hour, whichever is greater) during the Build Year; and
- The Facility peak hour.

These peak time periods will remain constant for all intersections analyzed in a study area. The time periods may differ, however, from site to site. Employee vehicles will be added to the analysis if such trips will occur during the peak time period analysis hours.

No weekend analysis will be conducted because: (1) the facilities would not operate on Sundays; and (2) the Saturday background traffic and Converted MTS traffic are lower than the weekday traffic.

Time periods to be analyzed for the Alternatives will be determined with DSNY based on the total tons of waste that might be delivered to the facility.

2.2.13.4.3 Impact Analysis Methodology

All analyses will be performed using the Highway Capacity Software (HCS) model version 4.1(c). Model runs will be conducted for the Existing Conditions traffic levels, Future No-Build traffic levels, and the traffic levels in the Build Year with the collection vehicles. For both signalized and unsignalized intersection analyses, impacts will be calculated by comparing the Future No-Build intersection delay and LOS with the intersection delay and LOS in the Future Build Condition. In addition to delay time, the 2001 CEQR Technical Manual guidelines also specify the use of volume-to-capacity (v/c) ratios as indicators of intersection LOS, with high v/c ratios (approaching 1.0) indicating the development of problem conditions. 2001 CEQR Technical Manual guidelines require the disclosure of both v/c ratios and average vehicle delays for each lane group at an intersection. For both the signalized and unsignalized intersection analyses, the changes will be compared with 2001 CEQR Technical Manual guidelines to test if the impacts can be classified as significant.

For safety impact analyses, the 2001 CEQR Technical Manual states “assessment of impacts can generally be made at a qualitative level, but should indicate the nature of the impact, the volumes affected by or affecting such impacts, and the likelihood of its severity, if possible.” Increasing

pedestrian traffic at high accident locations can lead to increasingly unsafe conditions, and generating measurable pedestrian crossings at non-controlled locations leads to unsafe conditions. High accident locations will be identified along truck routes using Appendix 1 of the 2001 CEQR Technical Manual and 2003 accident records provided by NYCDOT. Once high accident locations have been identified, mitigation measures will be explored based on the types and frequency of accidents.

2.2.13.4.4 Typical Mitigation Measures

If significant impacts are found under the Build Year analysis, CEQR requires the identification and evaluation of suitable mitigation measures that would restore traffic to the level outlined in the Future No-Build Conditions or to acceptable levels. The mitigation analyses will vary by study area and by individual intersections, based upon the severity of the impacts and the existing operation of the intersection. In general, all mitigation measures will be evaluated for suitability based upon severity of impact, relative cost of mitigation and the ease of implementation.

2.2.14 Air Quality

This section of the DEIS will evaluate impacts of on-site air pollution emissions and off-site emissions, generated by collection vehicles approaching and departing the sites.

Air pollutants to be analyzed in this study will include several "criteria" air pollutants, which are pollutants for which the USEPA has established National Ambient Air Quality Standards (NAAQS). The criteria pollutants to be analyzed include nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$).

The analysis will also consider the potential for impacts from several non-criteria air pollutants, referred to as "air toxics." NYSDEC has issued guidance to establish maximum acceptable short-term guideline concentrations (SGCs) and annual guideline concentrations (AGCs) for various non-carcinogenic air toxics, as well as inhalation risk thresholds for known or suspected carcinogenic air toxics. The SGCs, AGCs and inhalation risk thresholds are considered to be

"significance thresholds" below which a level will be deemed insignificant. The air toxics to be evaluated in this study will include those for which the USEPA has published emissions factors for the types of emission sources that will exist at the facilities.

The methodology for the on-site and off-site air quality analyses will be, in general, the same as that which was performed for the 2000 FEIS for the 2001 Plan. One notable exception is that the 2000 FEIS did not include an analysis of $PM_{2.5}$ impacts, and the current study will evaluate both on-site and off-site $PM_{2.5}$ impacts.

Because the USEPA is still implementing the $PM_{2.5}$ NAAQS, it has not yet made a formal determination on which areas of the United States will be classified as meeting this relatively new NAAQS. However, much of the City is expected to be designated as "non-attainment" with respect to the NAAQS for $PM_{2.5}$. Therefore, this study will evaluate such impacts in comparison to interim screening thresholds. Normally, the USEPA would publish significance thresholds for every criteria pollutant. Such thresholds are used as a basis for determining when a source's impact is small enough to dismiss it as an insignificant part of an air quality problem. Because USEPA has not yet developed such thresholds, this study will use a proposed interim methodology for assessing $PM_{2.5}$ impacts, developed by NYCDEP. NYCDEP has proposed the following interim screening threshold values (STVs):

24-Hour Maximum Receptor Project Impact:	5 $\mu g/m^3$
Annual Neighborhood-Average Project Impact:	0.1 $\mu g/m^3$

For the on-site emissions analysis only, the annual neighborhood-average impacts will be calculated as the average concentration occurring within an area of 1-kilometer (km) by 1-km, centered on the point of maximum annual concentration impact from the on-site sources. If impacts are predicted above the interim screening values proposed by NYCDEP, mitigation measures to reduce project-related $PM_{2.5}$ impacts will be evaluated. Although NYSDEC's maximum receptor annual value of 0.3 $\mu g/m^3$ for $PM_{2.5}$ is not technically applicable to the Proposed Action and Alternatives, results will be presented for comparison to this value.

For criteria pollutants that are designated as "attainment" with respect to NAAQS, the analysis will add existing background concentrations to projected Converted MTS impacts, and the total concentrations will be compared to the applicable NAAQS. For $PM_{2.5}$ and air toxics, the analysis will focus on determining the incremental project impacts, and on comparing this with an established de minimis level of impacts; any impacts analyzed as below this level will be deemed "insignificant."

2.2.14.1 On-Site Emissions Impact Analysis

2.2.14.1.1 Emissions Sources and Pollutants

On-site emissions at the facilities will include emissions from various activities occurring both inside and outside of the processing building. Emissions at the Converted MTSs occurring or emanating from equipment inside of the building will include:

- Exhaust emissions from moving and idling collection vehicles;
- Dust emissions (PM_{10}) due to re-suspension of dust by moving collection vehicles;
- Exhaust emissions from diesel-powered wheel loaders used to move waste;
- Exhaust emissions from diesel-powered tampers used to compact waste in containers;
- Dust emissions generated by the dropping and handling of solid waste; and
- Exhaust emissions from small boilers and/or space heaters.

Emissions occurring on site, but outside of the processing building will include:

- Exhaust emissions from moving and idling collection vehicles;
- Dust emissions (PM_{10}) due to re-suspension of dust by moving collection vehicles;
- Exhaust emissions from diesel-powered sweepers; and
- Exhaust emissions from tugboats used to move barges to/from the Converted MTSs.

Emission sources for the Alternatives will be identified based on the individual facility designs. The off-site analyses will evaluate impacts of exhaust emissions of CO, PM_{10} and $PM_{2.5}$ from collection vehicles, together with existing and projected motor vehicle traffic.

2.2.14.1.2 Modeling Methods

Emission rates for the above sources will be input into the USEPA-approved Industrial Source Complex Short Term (ISCST3) dispersion model, along with other required model inputs, to estimate project air quality impacts with respect to criteria air pollutants and air toxics. Background concentrations will be based on the most recent data available from the nearest representative monitoring sites, as provided by NYCDEP. Meteorological data used for model input will include the most recent available five years of LaGuardia surface and Brookhaven mixing height data. Receptors will be placed at land-side property lines, and beyond the controlled property area of each site, out to approximately 0.5 km in all directions from the center of the site. Receptors will be included over water, but will not be placed in areas within the bulkhead line of the site, or where barge and tug operations occur adjacent to the site.

2.2.14.1.3 Comparison of Results

Project impacts of criteria pollutants, other than $PM_{2.5}$, will be added to background concentrations and the total concentrations will be compared against NAAQS. For $PM_{2.5}$, project impacts will be compared against NYCDEP's 24-hour and annual neighborhood proposed interim screening values. Concentrations of $PM_{2.5}$ above the interim screening values will indicate a need to consider mitigation measures to reduce predicted impacts. Any predicted total concentrations of other criteria pollutants above NAAQS will require mitigation to reduce impacts below NAAQS.

Air toxic impacts will be compared against the SGCs and AGCs in NYSDEC's *Guidelines for the Control of Toxic Air Contaminants – Air Guide – 1* (1997). In addition, USEPA has developed the "Hazard Index Approach" to assess the potential acute and chronic impacts associated with non-carcinogenic air pollutants, which, in this case, could be released from on-site operating diesel-powered equipment, collection vehicles and tugboats. This approach will assess risk using the following procedures:

- Maximum toxic pollutant concentrations will be obtained by multiplying the estimated total hydrocarbon (HC) concentrations by the ratio of toxic pollutant/HC emission factors (per USEPA Publication AP-42, Section 3.3, October 1996);

- Ratios of the maximum estimated pollutant concentrations divided by respective SGCs and/or AGCs will be estimated for each applicable non-carcinogenic toxic pollutant;
- One-hour ratios will be developed to assess the potential for acute (short-term) risk exposure;
- Annual ratios will be used to assess the potential for chronic (long-term) risk exposures;
- The ratios for all of these pollutants will be summed;
- This total ratio will be compared with a hazard index of 1.0; and
- If the total ratio is less than 1.0, incremental air quality impacts associated with air toxics will be judged to be insignificant.

USEPA's "Unit Risk" approach will be used to determine impacts from the release of carcinogenic air pollutants. Unit risk factors for inhalation, as presented in USEPA's Integrated Risk Information System (IRIS) and/or USEPA's Health Effect Assessment Summary Tables, as adopted by NYSDEC, will be used in this study. Total incremental cancer risk due to the release of all carcinogenic toxic pollutants will be estimated by multiplying the maximum annual HC concentrations by the unit risk factor for each pollutant and then summing the risks for each of the pollutants to develop a combined risk.

If a facility generates an incremental cancer risk of less than one-in-one-million, NYSDEC considers the impact to be insignificant. Cancer risk as high as one-in-one-hundred-thousand is considered acceptable by NYSDEC, as long as Best Available Control Technology is installed at the facility as determined feasible.

2.2.14.2 Off-Site Emissions Impacts Analysis

2.2.14.2.1 Emissions Sources and Pollutants

The off-site impact analysis will evaluate potential air quality impacts at each site of project-related collection vehicles approaching and departing each site. These impact analyses will focus on intersections close to the sites at which collection vehicles converge. The pollutants included in the off-site analyses will be CO, PM_{10} and $PM_{2.5}$. With respect to other criteria and air toxics pollutants, localized impacts from collection vehicle traffic are expected to be insignificant and, therefore, will not be analyzed.

The off-site analysis will consider the project incremental and total CO concentration impacts from vehicle exhaust emissions. For PM_{10} and maximum 24-hour and annual average maximum $PM_{2.5}$ analyses, the analysis will consider the impacts of emissions from vehicle exhausts, brake and tire wear and re-suspended dust caused by vehicle movement on paved roads. For $PM_{2.5}$ annual neighborhood average, re-suspended dust will not be included in the impact analysis.

In addition to the NAAQS and significant impact thresholds set by USEPA, CO incremental impact criteria known as *de minimis* criteria have been established under NYCDEP's CEQR guidelines to estimate the significance of impacts from projects affecting off-site source operations. These are:

- An increase of 0.5 parts per million (ppm) or more for the eight-hour period, when Future No-Build concentrations are above 8.0 ppm; and
- An increase of one half of the difference between the Future No-Build and the standard concentration (9 ppm) for the eight-hour period when Future No-Build concentrations are below 8 ppm.

For $PM_{2.5}$, the off-site analysis impacts will be compared to the 24-hour and annual neighborhood receptor impact proposed interim screening values (see above).

2.2.14.2.2 Modeling Procedures

The off-site analysis will utilize USEPA's MOBILE5b/MOBILE 6.2, PART 5 emissions models and USEPA's CAL3QHC and CAL3QHCR dispersion models.

Background concentrations, where needed for the analysis, will be based upon the most recent data available from the nearest representative monitoring sites, as provided by NYCDEP. Meteorological data used for CAL3QHCR model input will include the most recent available five years of LaGuardia surface and Brookhaven mixing height data. Receptors will be placed at the sidewalk for all pollutants and averaging periods, except for annual neighborhood $PM_{2.5}$, for which concentrations will be predicted at "neighborhood scale" receptors.

2.2.14.2.3 Selection of Analysis Sites

2.2.14.2.3.1 Carbon Monoxide (CO)

The selection of analysis sites for detailed microscale modeling of CO impacts will be completed based upon the number of project-generated vehicles at signalized intersection locations during peak one-hour traffic conditions, and comparing these values to CEQR screening impact thresholds. These thresholds have been established to identify locations in which air quality levels may be potentially affected by the addition of project-generated vehicles. These impact thresholds, which are region-specific, are listed in Table 2.2-5.

Table 2.2-5
CEQR CO Screening Thresholds

Location	**Significant Number of Incremental 1-hour Auto Trips (Per Intersection)**
Manhattan between 30th and 61st Streets	75 or more
Downtown Brooklyn	50 or more
Long Island City	50 or more
All Other Areas	100 or more

These thresholds have been established for project-generated passenger cars. An appropriate factor of 1.5 will be applied to project-generated trucks to account for the difference in traffic operations (i.e., the effect upon approach capacity, queuing and operating speed from larger vehicles). This factor is based upon the information provided in the 2000 Highway Capacity Methodology (HCM 2000), which states that a heavy-duty vehicle is equivalent to approximately 1.5 passenger cars with respect to traffic impact. Locations exceeding the traffic impact thresholds will be identified, resulting in the selection of up to four analysis sites per facility to undergo detailed microscale air quality analyses using the following criteria:

1. Locations with high traffic volumes under the Future No-Build scenario that would experience the largest increases in incremental, project-generated, traffic volumes;
2. Locations with a Future No-Build LOS of C or worse that would experience a change in LOS between the Future No-Build and Build Conditions; and
3. Locations that would experience the largest increase in approach delays.

If the microscale analyses indicate potential violations of NAAQS at any of the analysis sites selected, additional representative intersections or roadways near each site will be analyzed based upon the site selection criteria described above.

2.2.14.2.3.2 Selection of PM_{10} Analysis Sites

A detailed mobile source PM_{10} analysis will be conducted at sites selected for the CO analysis.

If no CO analysis sites are selected, PM_{10} analyses will be conducted at up to four signalized intersections near the MTSs that experience a high volume of project-generated vehicles. In addition, unsignalized locations along designated collection vehicle routes that are projected to experience a substantial number of project-generated trucks and experience less than 5,000 vehicles on a daily basis will be considered in the site analysis selection process.

2.2.14.2.3.3 Selection of $PM_{2.5}$ Analysis Sites

A detailed mobile source $PM_{2.5}$ analysis will be performed for any intersections used for the combined on-site and off-site $PM_{2.5}$ analysis that will experience a project-related increase of 21 collection vehicles per hour or greater for the peak project traffic demand hour (intersections with less than 20 collection vehicles per hour will screen out). Prior sensitivity studies by the NYCDEP have found negligible $PM_{2.5}$ impacts with a project-generated increase of less than 21 collection vehicles per hour.

2.2.14.3 Analysis Years

Analyses will be conducted for the following years:

- 2003 to estimate air pollutant concentrations under Existing Conditions; and
- 2006 to estimate air pollutant concentrations under Future No-Build and Build Conditions for the Proposed Action.

2.2.14.4 Traffic Data

For each set of analysis conditions, traffic data will be developed using HCM 2000 for peak project analysis periods. For all of the roadway links within 1,000 feet of each of the selected analysis sites, the following traffic data will be collected:

- Peak hour traffic volumes (traffic volumes for the daily one-hour period with the highest background volumes) obtained from the traffic analysis;
- Traffic volumes during periods with the highest number of project-generated vehicles;
- Average peak hour free-flow travel speeds for signalized approaches and average travel speeds for unsignalized roadway approaches;
- Vehicle classifications (percent autos, sport utility vehicles [SUVs], medallion taxis [where applicable], and light-duty and heavy-duty trucks and buses);
- Width of traveled roadway (the effective width of the roadway);
- Signal timing data (cycle length, red time length);
- Number of effective moving lanes and exclusive turn lanes;
- Saturation flow rate (i.e., the maximum amount of vehicular throughput) per lane; and
- Arrival rate at signalized approaches.

2.2.14.5 Analysis Scenarios

The CO analysis will be conducted for three traffic periods for the Proposed Action: AM peak, facility peak and PM peak. The PM_{10} and $PM_{2.5}$ analyses will be conducted initially by conservatively assuming that the traffic volumes during the peak traffic period will occur for every hour of the 24-hour and annual average analysis periods. If the conservatively estimated (overestimated) PM_{10} and $PM_{2.5}$ impacts are above NAAQS or screening values, as applicable, the analyses will be further refined, accounting for diurnally varying traffic volumes. Analysis hours for the Alternatives will be selected with DSNY based on the total tons of waste that might be delivered to the facility.

2.2.14.6 Comparison of Results

Project impacts for CO and PM_{10} will be added to background concentrations; the total concentrations will be compared against NAAQS. For $PM_{2.5}$, on-site and off-site project impacts will be compared against the 24-hour and annual neighborhood receptor proposed interim screening values. Concentrations of CO or PM_{10} above the NAAQS or $PM_{2.5}$ concentrations above the interim screening values would indicate a need to consider mitigation measures to reduce predicted air quality impacts.

Ozone pollution is generally caused by emissions of precursor pollutants, namely nitrogen oxides (NO_X) and volatile organic compounds (VOCs), and this happens on an urban and larger regional scale. Emissions that occur on a local, project level do not significantly affect local ozone concentrations, except that NO_X emissions can actually consume ozone on a local scale. Because project emissions from the proposed facilities and from associated traffic will not adversely impact local ozone levels, ozone impacts will not be evaluated in this study.

2.2.15 Odor

2.2.15.1 Introduction

This section of the DEIS will evaluate impacts of odors emitted from on-site waste transfer operations at the facilities. The City's Air Code and NYSDEC Part 360 Solid Waste Facility Regulations require that odors be controlled effectively so that they do not constitute a nuisance or hazard to health, safety or property. Design of a modern solid waste transfer facility includes environmental controls within the processing building to minimize such odors. Effective odor control is implemented through a variety of design features (such as maintaining negative air pressure in the tipping floor area to prevent untreated odors from escaping outdoors) and operational procedures.

Design features of the Converted MTSs will include:

- Installation of building exhaust fans that create negative air pressure to minimize the escape of fugitive odors from the Transfer Station; and
- Installation of an automatic spray system that disperses odor-neutralizing agents into the ducts of the building exhaust air system.

Operational procedures that have been proven effective at reducing odors include:

- Requiring that all waste handling operations be conducted within the enclosed processing building, and limiting the length of time solid waste is retained on site;
- Requiring that the doors in the waste receiving area be kept closed, except during waste deliveries; and
- Using covered or enclosed collection vehicles for all waste delivery operations, along with covered or enclosed collection vehicles or containers used in transfer operations.

Designs of the Alternatives will be used to determine planned odor control measures.

2.2.15.2 Odor Emissions Sources

Odors generated from residential MSW are dependent upon the composition of the waste disposed, which varies widely from day to day and household to household, as opposed to odors from decomposed MSW in a landfill, which can be attributed to specific chemical compounds such as hydrogen sulfide (H_2S), as the waste undergoes decomposition. In addition, waste from other City and state agencies (e.g., office waste and furniture) will be transported to the MTSs and mixed in with the MSW, thus contributing to the heterogeneous nature of the MSW. Odor is also affected by the residence time of the waste before disposal, its moisture content and its ambient temperature. Based on the 2000 FEIS, the average H_2S concentration of samples collected from building exhaust fans without the addition of neutralizing agents is slightly above (0.0117 ppm) the New York State Ambient Air Quality Standard (NYSAAQS) for H_2S of 0.01 ppm. Therefore, no dispersion modeling will be performed for H_2S at the sensitive-receptor locations since, through atmospheric dispersion, vent concentration will decrease by an order of magnitude or more and below the 0.01 ppm H_2S NYSAAQS within a short distance downwind of the vent.

The 2000 FEIS odor study included odor sampling from the following types of sources:

- Full barges (containing uncovered, loose, solid waste) moored outdoors;
- Empty barges (with solid waste debris) moored outdoors;
- Processing building vents/stacks; and
- Waste shipping container vent openings.

Only the last two types of sources are relevant to the Converted MTS study, since open-top barges with loose, uncovered waste will not be used for waste collection and transport. Under the Proposed Action, barges will only be used for transport of full and empty closed intermodal shipping containers. In the 2000 FEIS, sampling of the MTS vents yielded detectable odors, while shipping container vents yielded no significant odor emissions. Therefore, the modeling analysis for the current study will consider odor emissions from Converted MTS building exhaust fans only (the Converted MTSs will be designed to maintain negative pressure within the building and exhaust all air through the exhaust fans when the access/egress doors are open). Odor sources for the Alternatives may include full and/or empty barges that will be included in the analysis, if applicable.

Odor emission rates for the DEIS for the Proposed Action will be based upon each Converted MTS's maximum ton per hour waste throughput capacity, and a worst-case odor emission factor based on MTS sampling conducted for the 2000 FEIS. Odor emission rates for the Alternatives will be developed based on the design of the facility.

2.2.15.3 Modeling Procedures

The dispersion modeling procedures for the odor analysis will be similar to those used in the 2000 FEIS, with the exception of the odor emissions calculation. The most recent version of the ISCST3 model will be used to estimate odor concentrations at the closest sensitive receptor to each site. As noted above, the only emission sources to be modeled for the DEIS will be the roof vents of the facilities. The meteorological data set to be used has been updated to include the most recent available five years of surface data for LaGuardia, along with mixing height data for Brookhaven. Placement of these receptors will be consistent with that of the ambient air impact analysis for on-site operations (see Section 2.2.14).

2.2.15.4 Presentation of Results

For each facility, odor dispersion analysis results will be presented in comparison to multiples (or fractions, as applicable) of detection threshold in odor units (OU), where one OU is defined as the amount or mass of odor needed to generate a concentration at the detection threshold (DT) in a volume of one cubic meter of air. Given background odors measured in the Commercial Waste Management Study which were on the order of 5 OU, a level of 5 OU is expected to create an odor that is on the threshold of detection, meaning that an average individual might just begin to perceive the odor over background odor levels. If the impacts are greater than 5 OU at the nearest sensitive receptor, it is expected that odors would be detectable and mitigation measures to reduce predicted odor impacts will be evaluated.

2.2.16 Noise

2.2.16.1 Introduction

This section briefly outlines the methodology that will determine the extent to which the facilities could affect noise levels during operations. Each of the proposed sites is located in manufacturing-zoned districts, but has the potential to generate noise that could affect nearby noise-sensitive receptors, such as residential land uses and outdoor areas (e.g., parks). Noise sources to be evaluated include both mobile and stationary sources operating within the site boundary, and waste collection vehicles traveling on roads leading to and from the site. The analysis includes:

- A screening step to determine if further analysis is warranted; and
- If warranted, a detailed analysis, including a monitoring task to determine existing noise levels near the site, based upon guidance found in the 2001 CEQR Technical Manual, City Noise Code, Section R, and modeling techniques for on- and off-site noise.

The on-site source analysis will utilize a spreadsheet with standard noise calculations that account for multiple indoor noise sources with attenuation provided by building walls and multiple outdoor sources. Attenuation due to propagation (geometric spreading) toward off-site receptors and shielding provided by intervening buildings is applied to noise emitted by both indoor and outdoor sources.

The off-site source analysis will utilize the FHWA Traffic Noise Model Version 2.1 (TNM 2.1) or field simulations of DSNY collection vehicles along routes near sensitive receptors.

2.2.16.2 Background

Noise is often described as unwanted sound. Factors affecting the physical characteristics of sound when it is perceived subjectively as noise by the human ear are:

- Actual level of the sound (perceived loudness);
- Distribution of sound energy among individual frequency bands in the audible range;
- Period of exposure to the noise; and
- Changes or fluctuations in the noise levels during the period of exposure.

L_{eq} is the continuous equivalent sound level that, if constant over the measuring period, would contain the same sound energy as the actual monitored sound that is fluctuating in level over the measurement period. The one-hour L_{eq}, as recommended by CEQR and the City Noise Code, is used as the noise descriptor. Maximum one-hour L_{eq} sound levels are used to provide an indication of expected sound levels during the loudest hour of operations. Minimum one-hour L_{eq} sound levels provide a basis for impact assessment during the quietest hour of operations. The one-hour L_{eq} sound level allows for comparison with federal and local noise standards and indicates to what extent local residents will be affected by changes in project-related noise levels.

In addition to the L_{eq}, statistical descriptors of L_{10}, L_{50} and L_{90} are also used in this analysis. These descriptors represent noise levels that are exceeded 10%, 50% and 90% of the time. Therefore, an L_{10} of 60 dBA means that during 10% of the measurement period, the noise levels will be higher than 60 dBA. Similarly, an L_{50} of 60 dBA means that during 50% of the measurement period, the noise levels will be higher than 60 dBA.

For a more detailed background description of noise, please see Section 3.1.3.2 of the 2000 FEIS.

2.2.16.3 Criteria

The noise analyses are based upon CEQR standards, the City Noise Code sections that set limits on facility-generated noise levels at adjacent properties, and the City Zoning Regulations. The impact criteria used include a determination of the following:

- If the existence of the facilities and on-site project-related activities (from fixed and mobile equipment) would raise the existing hourly nighttime noise levels by 3 dBA or more;
- If the existence of the facilities and on-site project-related activities would raise the daytime noise levels significantly, by more than: (1) 3 dBA, if the Future No-Build L_{eq} (one-hour) is 62 dBA; (2) 5 dBA, if the Future No-Build L_{eq} (one-hour) is 60 dBA; or (3) a total of 65 dBA;
- Full adherence to the City Noise Code requirements at the plant boundary, and
- Full adherence to the City Zoning Noise Regulations at the plant boundary.

2.2.16.3.1 New York City Noise Code

The following section of the City Noise Code will be applied:

- City Noise Code 24-243 (Ambient Noise Quality Zone), which specifies a 24-hour L_{eq} (one-hour) level less than or equal to 70 dBA for noise emitted from land use zoned M3, measured at the property line of the impacted site.

2.2.16.3.2 New York City Zoning Regulations

The following section of the City Zoning Regulations will be applied:

- City Zoning Regulation 42-213, which specifies maximum permissible octave band sound pressure levels from plant equipment operations, including the operation of rooftop ventilators and air circulation devices.

2.2.16.3.3 Council Environmental Protection Order (CEPO)-CEQR Noise Standards

This noise analysis is based on Section R of the 2001 CEQR Technical Manual, which includes definitions of environmental acoustics concepts, guidance for determining if a noise analysis is appropriate, assessment methods, impact thresholds and mitigation guidance. The noise requirements of the 2001 CEQR Technical Manual would be met in this analysis. These requirements follow:

On-Site Noise

- If the Future No-Build Condition traffic noise level is less than 60 dBA L_{eq} (one-hour), and the analysis period is during the day, the threshold for significant impact will be an increase of 5 dBA L_{eq} (one-hour).
- If the Future No-Build Condition traffic noise level is equal to or greater than 62 dBA L_{eq} (one-hour), or if the analysis period is during the nighttime, the threshold for significant impacts will be an increase of 3 dBA.

Off-Site Noise

- The threshold for significant impacts is an increase of 3 dBA or more over the existing minimum noise at the nearest sensitive receptor, when impacts are analyzed for cumulative noise effects from facility-related truck traffic and noise.

A screening analysis will be performed for on- and off-site noise sources to evaluate the potential for noise impacts and to determine if additional refined noise analyses will be required. Refer to Section 2.2.16.5 for a discussion of the screening analyses, Section 2.2.16.7 for a discussion of the detailed noise analyses and impact thresholds, and Section 2.2.16.8 for a discussion of typical mitigation measures for impacted locations.

2.2.16.4 Noise Sources

2.2.16.4.1 On-Site Noise Sources

Solid waste management facilities may include a variety of on-site noise sources, such as gantry cranes and ventilation equipment. For practical purposes, certain mobile sources will be modeled as on-site sources, including collection vehicle loading/unloading at the facilities, front-end loaders moving waste on site and barge loading/unloading equipment. To be conservative, it will be assumed that typical daytime facility operation occurs 24 hours per day.

2.2.16.4.2 Off-Site Noise Sources

For the purposes of this analysis, collection and employee vehicles will be considered as off-site mobile sources.

2.2.16.5 Screening Methodology

2.2.16.5.1 On-Site Source Screening Analysis

The facilities and operations within the facility boundary will be treated as stationary sources for the purpose of the screening analysis.

To screen the facilities, the locations of equipment and activities at each site at each facility's peak capacity will be drawn on a scaled layout map. A reference noise level for each piece of equipment, both indoor and outdoor, will be obtained. These reference noise levels will be added together and the combined noise levels will be used to identify the 55 dBA noise contour line (i.e., the point at which on-site noise will attenuate to 55 dBA). As 55 dBA is a generally acceptable nighttime noise level, it will be used as a threshold for screening purposes. Noise-sensitive receptors located between the facility and the 55 dBA contour, if any, will be identified.

To calculate the 55 dBA contour line, a -6 dBA drop-off rate (i.e., level of attenuation per doubling of distance beginning 50 feet [location where noise levels are measured] from the source) will be assumed. The shielding effects of intervening buildings will be accounted for by applying 5 decibels of shielding for each row of buildings that provides 70% to 90% coverage (of the line of sight), with a 10 decibel limit (FHWA-RD-77-108, page 33). A 10 decibel attenuation will be used for buildings providing more complete coverage.

If noise-sensitive receptors are not located within the 55 dBA contour line, background noise levels will be measured at that noise-sensitive receptor, to determine if they are below 55 dBA. If the noise levels are below 55 dBA, a contour line for that noise level will be determined and a detailed stationary noise source analysis will be performed. If noise-sensitive receptors are not located within the 55 dBA contour line and the background noise levels at the receptor are 55 dBA or greater, the facility will be screened from further analysis and a qualitative discussion will be provided. If noise-sensitive receptors exist within the 55 dBA contour line, a detailed stationary noise source analysis will be performed.

The following will be considered noise-sensitive receptors:

- Parks/playgrounds;
- Schools and educational facilities;
- Residences;
- Churches and other places of worship;
- Outdoor performance facilities;
- Indoor performance facilities with windows;
- Healthcare facilities; and
- Libraries and community centers.

Noise analyses will also be conducted at noise-sensitive receptors that are non-conforming uses in particular zoning districts.

2.2.16.5.2 Off-Site Source Screening Analysis

The 2001 CEQR Technical Manual includes guidelines for a screening-level analysis of off-site sources to determine if additional refined analyses are required. The only off-site sources for the facilities are collection vehicles on local roads traveling to and from the facilities.

Noise screening will be performed at representative areas along a collection vehicle route along which noise-sensitive receptors exist. ATRs that are placed along roadways will measure existing background traffic volumes for 24 hours. This data will be used to determine the Future No-Build traffic volume, based on a Build Year of 2006, utilizing the annual growth rates provided in the 2001 CEQR Technical Manual's Section O: Traffic. The Future No-Build traffic volume will be converted to PCEs and compared to Future Build PCEs (with collection vehicles). The Future No-Build and Future Build Condition traffic volumes will be converted to PCEs using the vehicle count classification and the following factors:

- Each Automobile or Light Truck: 1 PCE;
- Each Medium Truck: 13 PCEs;
- Each Bus: 18 PCEs; and
- Each Heavy Truck: 47 PCEs.

If studies relevant to this project demonstrate that different PCE conversion factors are appropriate, they may be incorporated into this analysis. Heavy trucks will include those with a gross vehicle weight over 26,400 pounds and medium trucks will include those with a gross vehicle weight between 9,900 and 26,400 pounds.

As a result of the screening process, if the PCEs are either doubled or nearly doubled along a roadway, due to an increase in traffic volume resulting from the addition of collection vehicles at any time, then a detailed noise analysis is required per CEQR, Section 311.1.

2.2.16.6 Noise Monitoring

2.2.16.6.1 On-Site Monitoring

Noise-sensitive receptors near each proposed site will be identified using a combination of land use and zoning maps, aerial photography and field visits to each site. Noise monitoring will be conducted continuously for 24 hours to establish No-Build noise levels at the facility property line closest to the nearest sensitive receptor. Monitoring results will be expressed as L_{eq}, L_{min} (the minimum sound level), L_{max} (the maximum sound level), and the statistical descriptors of L_{10}, L_{50}, and L_{90}. For sites located near highways or airports, No-Build noise levels may include noise generated by these already existing sources. Since the facilities are on waterfront sites, no-build noise levels may include noise generated by marine activities, such as pleasure boats and tugboats, etc. If the screening process identifies the need for a detailed on-site analysis, then short-term, 20-minute readings will be taken at the closest noise-sensitive receptor during the hour in which the greatest difference between facility-related noise and background noise levels occur in order to estimate the maximum potential impacts on that receptor.

2.2.16.6.2 Off-Site Monitoring

If the screening analysis task for off-site sources determines that PCEs are either doubled or nearly doubled along a roadway, due to an increase in traffic volume resulting from the addition of collection vehicles, a detailed off-site noise source analysis will be performed. The detailed off-site noise source analysis will consist of noise monitoring and modeling to predict noise levels during the hours expected to receive the largest change in noise levels (when the difference between traffic noise and background noise levels is greatest). For each location in which PCEs are doubled, noise monitoring will be performed to determine the existing background noise level at the representative nearest sensitive receptors in the study area. The background noise level and the Future Build Condition noise level predicted by the FHWA's TNM 2.1 will be logarithmically combined to determine an overall facility-related noise level at that location. This noise level will be compared with 2001 CEQR Technical Manual noise impact thresholds, and reported in a tabular format.

2.2.16.7 Impact Analysis

2.2.16.7.1 On-Site Impact Analysis

On-site noise impacts will be evaluated during the hour in which the greatest difference between project-related noise and background noise levels will occur (on-site noise analysis hour). If the greatest incremental difference will occur at night, activities at the on-site sources will be largely, but not entirely, indoor operations with occasional collection vehicles delivering waste to the facility. However, to be conservative, typical daytime facility operations are also assumed to occur at nighttime. Indoor activities include collection vehicles dumping waste on the tipping floor, loaders moving waste toward the hoppers, the tamping down of waste into containers, and housekeeping. The outdoor analysis accounts for trucks queuing on site, container-handling activities by loaders, and barge loading by gantry cranes.

Since facility operations will be conservatively assumed to occur 24 hours per day, the quietest background hour will be the hour during which the greatest difference between project-related noise levels and background noise levels occur (i.e., the hour during which the greatest impact will occur). To determine this hour, the 24-hour background noise levels measured at the site boundary nearest to the closest noise-sensitive receptor will be reviewed for the lowest $L_{eq}(h)$. Short-term 20-minute readings will be taken at the closest noise-sensitive receptor during this hour in order to estimate the maximum potential impacts upon that receptor.

Noise levels from indoor and outdoor on-site activities will be predicted at the nearest noise-sensitive receptor and logarithmically combined for comparison with the CEQR threshold.

2.2.16.7.2 Off-Site Impact Analysis

As previously mentioned, the off-site analysis will use the FHWA TNM 2.1 or field simulations of DSNY collection vehicles along routes near sensitive receptors to predict traffic noise levels for the Future Build Condition. As appropriate, Future Build and No-Build Conditions will be included in the analysis, per the 2001 CEQR Technical Manual. Background noise monitoring at sensitive receptors will be used to calibrate TNM-predicted traffic noise levels.

At study areas where the TNM model is used, sensitive receptors within 200 feet and with an unobstructed view of the roadway will be identified and modeled to determine the predicted traffic noise levels for the Future Build Condition. In most cases, this limits the analysis to the first row of buildings along a roadway. If a sensitive receptor with an obstructed view is within 200 feet of a roadway, it will be evaluated on a case-by-case basis. If necessary, the FHWA shielding methodology will be applied when buildings obstruct the line of site between a roadway and a sensitive receptor.

The greatest off-site noise levels may occur during a different time of day than the on-site noise impacts.

2.2.16.7.3 Combined On- and Off-Site Impact Analyses

For those locations in which detailed on- and off-site source analyses are performed, a combined source analysis may also be conducted. The combined analysis study area will be defined by the 55 dBA isopleth contours from the on-site source and the bottom driveway entrance to the facility. The other limits for the combined analysis study area will be defined by the first row of buildings along the roadway between the 55 dBA contour and the driveway entrance to the facility. When a noise-sensitive receptor has a direct line of sight, but is not in the first row of buildings, predicted noise levels will be evaluated on a case-by-case basis.

If noise-sensitive receptors are not located in the study area, a combined analysis will not be performed. If noise-sensitive receptors exist in the study area, then the TNM model will be used to predict mobile traffic noise levels at that receptor. Noise levels from the on-site source will be estimated at each receptor using the spreadsheet model employed in the on-site analysis. The combined noise level will be calculated manually, using a spreadsheet. The combined analysis will be performed during the on-site noise analysis hour.

2.2.16.8 Typical Mitigation Measures

Mitigation measures available for this project are limited to those that affect the source, the propagation path or the receiver. Typical mitigation measures at the source include: (1) changes in operations schedules to reduce nighttime noise emissions; (2) using noise mufflers for the exhaust pipes of material handling equipment (e.g., side loaders, yard tractors, etc.); and (3) maintaining the equipment through regularly scheduled maintenance and repairs. The typical mitigation measure for the path of noise between source and receiver is a noise wall. Noise walls can be designed and built to provide noise attenuation for noise-sensitive areas located relatively close to the wall. Noise attenuation provided by the wall decreases as distance from the wall increases. Receiver treatments may include the construction of noise walls at residential property lines or the installation of replacement windows and air conditioning. The latter two mitigation measures are suggested in the 2001 CEQR Technical Manual.

If significant impacts are identified, noise attenuation measures will be explored and either included in the facility design or operations plans, if feasible, or evaluated to identify if the mitigation measures will avoid, lessen or mitigate the impacts.

2.2.17 Construction Impacts

The DEIS will include a description of construction methods, staging and sequencing, equipment needs and other construction-related activities to document possible construction impacts on the site or environs. Likely construction-phase impacts could potentially include localized and temporary noise and air quality impacts, and traffic congestion and re-routing on the nearby street network. Construction period impacts of the Proposed Action and Alternatives will be described, and reasonable and feasible mitigation measures identified. Such measures would include but not be limited to:

- Site inspection procedures to ensure that construction is conducted in accordance with permit requirements;
- Soil erosion and sedimentation control measures;

- Procedures for handling, transport and disposal of dredge materials; and
- Specifics of handling, dewatering (if applicable), transport and disposal of upland excavated materials (including the location of disposal sites).

2.2.18 Public Health

This section will: (1) briefly review scientific knowledge regarding the health effects of specific air pollutants; (2) evaluate the public health significance of the impacts on air quality modeled in site-specific sections of the DEIS; (3) describe the causes and triggers of asthma; (4) evaluate the public health significance of impacts of noise and odor modeled in site-specific sections of the DEIS; and (5) describe vermin control measures. Details are as follows:

1. The public health impacts of air emissions will be evaluated for specific pollutants associated with the on-road and off-road activities at the sites. These pollutants include the "criteria" pollutants, for which NAAQS have been developed (e.g., NO_2, CO and particulate matter [PM]) and those designated as hazardous air pollutants (HAPs, e.g., benzene and toluene). Potential health effects of these pollutants, especially the public health basis for regulating exposure to them, will be briefly described. In addition, epidemiological and toxicological studies assessing the possible health effects (usually respiratory) of traffic will be described and assessed.

2. The methods for assessing health impacts of NAAQS criteria pollutants and HAPs will be described. That is, the air dispersion modeling efforts will be summarized, as well as the NAAQS standards, existing and (for $PM_{2.5}$) proposed (interim) STVs, cancer unit risk factors and reference concentrations (RfCs).

3. With regard to air quality impacts of criteria pollutants, the maximum impacts modeled at fence lines or sensitive receptors (as appropriate) across all sites and critical intersections will first be identified and assessed in light of the NAAQS and existing and proposed (interim) STVs. NYCDEP and NYSDEC have established two interim STV values that are applicable and will be assessed: (1) a NYCDEP 24-hour STV of 5 micrograms per cubic meter; and (2) a NYCDEP neighborhood average value of 0.1 micrograms per cubic meter, calculated over a 1-km grid centered on each facility site. If these estimated maximum impacts across the sites are found to be insignificant, then any lesser impacts at other receptor locations will, likewise, be deemed insignificant. If instead estimated maximum impacts exceed reference levels, then assessments will be made for less-than-maximum impacts, and any locations with potentially adverse public health impacts will be delineated.

4. Potentially toxic air pollutants will be assessed according to accepted, conservative (that is, health-protective) methods of quantitative health risk assessment. As described above for the criteria pollutants, the maximum impacts across sites will be evaluated first. For known or potential carcinogens, upper-bound incremental lifetime cancer risk estimates will be calculated using USEPA inhalation unit risk estimates. These risk estimates will be summed, and the cumulative (from all carcinogens) incremental exposure deemed negligible if the incremental, total risk estimate is less than one in 1,000,000 at sensitive receptor locations. If the estimated incremental risk exceeds one in 1,000,000 at a sensitive receptor, additional investigation or analysis will be performed. For non-carcinogens, hazard ratios will be calculated using USEPA RfCs. If the sum of hazard ratios -- the hazard index -- is less than one, then the cumulative exposure will be deemed insignificant. If not, health risk estimates will be calculated for less-than-maximum impacts, and all locations for which the hazard index exceeds 1.0 will be delineated. Conservative (health-protective) aspects of air quality modeling and health risk evaluations will be described, so that readers can understand the assumptions and procedures that are used to estimate air impacts and health risks. Uncertainties in these assumptions and procedures will also be detailed, as well as upcoming changes in the quality of diesel fuel and engines; these changes will affect project-related air impacts.

5. Asthma will be discussed on several levels. Rates in affected zip codes will be delineated, along with trends in these areas over time, both in the City and more generally. Known and suspected causes and triggers of asthma will be discussed. Other public health indicators in host communities will also be presented.

6. The public health significance of odors will be addressed, the odor control technology to be employed at the facilities will be referenced and the toxicity of some of the major contributors to putrescible waste odor will be discussed.

7. The public health significance of estimated increases in noise will be described, relying largely upon the methods and conclusions of the noise analysis. Reference to any guidelines on acceptable levels of ambient noise will be provided, along with the identification of the health concerns upon which they are based.

8. Engineering and operational features designed to reduce vermin (i.e., unwanted rodents, birds, and insects) at the facilities will be described.

Attachment B

Environmental Justice Policy

CP- 29 Environmental Justice and Permitting

New York State Department of Environmental Conservation

DEC Policy

Issuing Authority: Commissioner Erin M. Crotty

Date Issued: 3/19/03	**Latest Date Revised: 3/19/03**

I. Summary:

This policy provides guidance for incorporating environmental justice concerns into the New York State Department of Environmental Conservation (DEC) environmental permit review process and the DEC application of the State Environmental Quality Review Act. The policy also incorporates environmental justice concerns into some aspects of the DEC's enforcement program, grants program and public participation provisions. The policy is written to assist DEC staff, the regulated community and the public in understanding the requirements and review process.

This policy amends the DEC environmental permit process by identifying potential environmental justice areas; providing information on environmental justice to applicants with proposed projects in those communities; enhancing public participation requirements for proposed projects in those communities; establishing requirements for projects in potential environmental justice areas with the potential for at least one significant adverse environmental impact; and providing alternative dispute resolution opportunities to allow communities and project sponsors to resolve issues of concern to the community.

This policy will promote the fair involvement of all people in the DEC environmental permit process. It will do this by training and educating DEC staff on environmental justice; providing public access to DEC permit information; incorporating environmental justice concerns into DEC's permit review process; and pursuing technical assistance grants to enable community groups in potential environmental justice areas to more effectively participate in the environmental permit review process.

This policy contains groundbreaking elements which will lead the nation in environmental justice. As such, the DEC expects that the policy will be revised regularly to account for new information in the area of environmental justice and other issues encountered during the implementation of this policy.

II. Purpose and Background:

In 1998, various and diverse parties interested in environmental justice, including a number of environmental justice advocates and minority and low-income community representatives from across New York State, met with the DEC Commissioner to express concern over environmental justice issues. Concerns raised by interested parties included, but were not limited to: the lack of meaningful public participation by minority or low-income communities in the permit process; the unavailability or inaccessibility of certain information to the public early in the permit process; and the failure of the permit process to address disproportionate adverse environmental impacts on minority and low-income communities.

On October 4, 1999, in response to the concerns raised by parties interested in environmental justice, DEC announced a new program to address environmental justice concerns and ensure community participation in the state's environmental permitting process. DEC named an Environmental Justice Coordinator to oversee the Office of Environmental Justice and develop DEC's Environmental Justice Program, and created two staff positions in the Division of Environmental Permits. DEC also established the New York State Environmental Justice Advisory Group (Advisory Group) comprising representatives from state, local and federal government, community groups, environmental groups, and the regulated community. The Advisory Group, chaired by the Environmental Justice Coordinator, was asked to develop recommendations for an environmental justice permit policy and recommend elements for an effective environmental justice program.

On January 2, 2002, the Advisory Group submitted a report to DEC Commissioner Erin M. Crotty containing its recommendations for creating an effective environmental justice program. The report: *Recommendations for the New York State Department of Environmental Conservation Environmental Justice Program* focuses on the environmental permit process and is intended to ensure DEC's programs are open and responsive to environmental justice concerns. Additional recommendations for an environmental justice program are also included in the report.

The DEC held public meetings state-wide to solicit public comment on the Advisory Group report and accepted public comment for a period in excess of 50 days, through February 22, 2002. This policy is based on the Advisory Group report, public comment on the report and DEC staff recommendations.

On August 7, 2002, a draft of this policy was released for public review and comment. The comment period exceeded 90 days, ending on October 11, 2002. Numerous detailed comments were received by the DEC and are reflected in this policy and in the implementation of this policy.

III. Policy:

It is the general policy of DEC to promote environmental justice and incorporate measures for achieving environmental justice into its programs, policies, regulations, legislative proposals and activities. This policy is specifically intended to ensure that DEC's environmental permit process promotes environmental justice. This policy supports the DEC's continued funding and implementation of environmental programs that promote environmental justice, such as urban forestry, environmental education, the "I Fish NY" program and watershed enhancement projects. This policy also encourages DEC efforts to implement other programs, policies, regulations, legislative proposals and activities related to environmental justice.

This policy shall become effective 30 days after the full text of this policy, or a summary thereof, along with information on how the full text may be obtained, has been published in the Environmental Notice Bulletin, as defined in Environmental Conservation Law 70-0105. Any application for a permit received after the effective date of this policy will be subject to the provisions of this policy.

This policy shall be reviewed at least 18 months from the effective date and revised, as necessary, to consider the policy's applicability to various DEC Programs, incorporate evolving information on environmental justice and reflect the best available environmental protection information and resources. The 18-month period shall enable DEC to further develop implementation procedures, better identify resources needed to implement the policy, and determine appropriate legislative, regulatory and policy changes that can be implemented. Thereafter, DEC shall periodically evaluate the need for further revision, as implementation experience is gained.

This policy will not be construed to create any right or benefit, substantive or procedural, enforceable by law or by equity by a party against the DEC or any right to judicial review. This policy may be subject to change at the discretion of DEC.

A. Definitions. For purposes of this policy, the following definitions shall apply.

1. *Census block group* means a unit for the U.S. Census used for reporting. Census block groups generally contain between 250 and 500 housing units.

2. *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 resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

3. *Low-income community* means a census block group, or contiguous area with multiple census block groups, having a low-income population equal to or greater than 23.59%[*] of the total population.

4. *Low-income population* means a population having an annual income that is less than the poverty threshold. For purposes of this policy, poverty thresholds are established by the U.S. Census Bureau.

5. *Major project* means any action requiring a permit identified in section 621.2 of title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR Part 621.2), which is not specifically defined as minor.

6. *Minority community* means a census block group, or contiguous area with multiple census block groups, having a minority population equal to or greater than 51.1%[*] in an urban area and 33.8%[*] in a rural area of the total population.

7. *Minority population* means a population that is identified or recognized by the U.S. Census Bureau as Hispanic, African-American or Black, Asian and Pacific Islander or American Indian.

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[*] The percent threshold relies on 2000 U.S. Census data. The percent threshold may be adjusted as U.S. Census data is revised.

8. *Potential environmental justice area* means a minority or low-income community that may bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

9. *Rural area* means territory, population, and housing units that are not classified as an urban area. See definition for 'urban area' below. For purposes of this policy, rural classifications are established by the U.S. Census Bureau.

10. *Urban area* means all territory, population, and housing units located in urbanized areas and in places of 2,500 or more inhabitants outside of an urbanized area. An urbanized area is a continuously built-up area with a population of 50,000 or more. For purposes of this policy, urban classifications are established by the U.S. Census Bureau.

B. Policy Directives. With respect to this policy, DEC shall:

1. Upon the effective date of this policy, provide enhanced accessibility to public permit information held by the DEC, including access to DEC permit information on the DEC Website and a toll free environmental justice hotline to enable the public to access the Office of Environmental Justice during business hours;

2. Upon the effective date of this policy, use geographic information system screening tools and U.S. Census data to identify potential environmental justice areas within New York State;

3. Upon the effective date of this policy, use enhanced public participation and public notification mechanisms, including those which are most effective in potential environmental justice areas.

4. Upon the effective date of this policy, DEC shall make guidance available to assist permit applicants in complying with the Public Participation Plan requirements of this policy. The guidance shall contain tools and information, including those that will better enable the applicant to engage community residents in potential environmental justice areas in the environmental permit review process;

5. Upon the effective date of this policy, facilitate alternative dispute resolution between permit applicants and the public to resolve conflicts in the permit review process;

6. Upon the effective date of this policy, educate permit applicants with respect to environmental justice, the environmental review process, the requirements of this policy and the methodology for identifying a potential environmental justice area by distributing information on environmental justice to permit applicants;

7. Upon the effective date of this policy, provide to interested members of the public such information on environmental justice that is provided to permit applicants. Within six months from the effective date of this policy, the DEC shall identify and begin conducting workshops to educate the public with respect to environmental justice, the environmental review process, the requirements of this policy and the methodology for identifying a potential environmental justice area;

8. Upon the effective date of this policy, establish two work groups to assist DEC to develop and incorporate critical environmental justice information into the DEC environmental review process. Each work group shall report its results to the DEC Commissioner no later than six months after the effective date of this policy. The results will be considered by the DEC Commissioner when revising this policy;

i. One work group shall develop recommendations for conducting a disproportionate adverse environmental impact analysis as a component of the environmental impact statement. Although the Advisory Group report recommended a basic methodology for conducting such an analysis, further definition and specific criteria are needed;

ii. A second work group to be established in conjunction with the New York State Department of Health, shall identify reliable sources of existing human health data and recommend means to incorporate such data into the environmental review process;

9. Within three months from the effective date of this policy, educate DEC staff with respect to environmental justice, the environmental review process and the requirements of this policy. The DEC Office of Environmental Justice shall develop a curriculum and begin implementation of formal training on environmental justice to affected staff in the Divisions of Air Resources, Solid & Hazardous Materials, Water, Environmental Permits, Public Affairs and Education, and other divisions. DEC staff charged with policy implementation have already received training;

10. Within three months from the effective date of this policy, begin conducting supplemental compliance and enforcement inspections of regulated facilities to ensure that facilities are operating in compliance with the Environmental Conservation Law. Supplemental enforcement and compliance inspections will apply to facilities located in potential environmental justice areas where there is reason to believe that such facilities are not operating in compliance with the Environmental Conservation Law;

11. Within three months from the effective date of this policy, translate information on the DEC environmental permit process for comprehension by non-English speakers. The DEC Office of Environmental Justice shall translate the following documents into Spanish: What is SEQR?; A Citizen's Guide to SEQR; The SEQR Cookbook; How to Apply for a DEC Permit; the Guide to Permit Hearings; and the Guide to Mediation Services. The DEC shall also evaluate the need for translation to other languages;

12. Within three months from the effective date of this policy, draft legislation to establish funding and criteria for a technical assistance grant program to assist the public in the permit review process. Funding for the technical assistance grant program shall be derived from the Environmental Protection Fund and may be supplemented by other funding opportunities;

13. Within six months from the effective date of this policy, draft regulations to enhance the effectiveness and strengthen the elements of this policy and address potential adverse environmental impacts that may bear disproportionately on potential environmental justice areas, including regulations to establish mandatory public participation requirements; regulations to require the electronic submission of environmental impact statements; regulations to establish additional criteria for determining significance pursuant to 6 NYCRR 617.7. The DEC will also review the list of Type I actions at 6 NYCRR 617.4, evaluate the need for amendments to include actions that may bear disproportionately on potential environmental justice areas and draft regulations based upon the evaluation;

14. Within six months from the effective date of this policy, propose draft revisions to the full environmental assessment form to, among other things, include information that can be used to identify adverse environmental impacts which bear disproportionately on potential environmental justice areas, and

15. Ensure compliance with the procedural elements of this policy.

IV. Responsibility:

The Office of General Counsel shall provide oversight to ensure compliance with this policy. Each DEC division and office affected by this policy, including those responsible for the permit programs listed in section V.A.1 of this policy, is expected to provide support to fulfill the elements of this policy.

V. Procedure:

The following procedure shall be incorporated into the DEC permit review process when the DEC serves as Lead Agency under the State Environmental Quality Review Act (SEQR). Where the DEC is not the Lead Agency under SEQR, the DEC shall implement the following procedure to the extent permitted by law, including Applicability, the Preliminary Screen, Guidance to Permit Applicants, Enhanced Public Participation, Environmental Impact Assessment, Coordinated Review and Alternative Dispute Resolution. All other requirements related to SEQR shall be strongly encouraged.

A. Applicability.

1. Except as provided for below, the policy shall apply to applications for major projects and major modifications for the permits authorized by the following sections of the Environmental Conservation Law:

i. titles 7 and 8 of article 17, state pollutant discharge elimination system (SPDES) (implemented by 6 NYCRR Part 750 et seq.);

ii. article 19, air pollution control (implemented by 6 NYCRR Part 201 et seq.);

iii. title 7 of article 27, solid waste management (implemented by 6 NYCRR Part 360): including minor modifications involving any tonnage increases beyond the approved design capacity and minor modifications involving an increase in the amount of putrescible solid waste beyond the amount that has already been approved in the existing permit;

iv. title 9 of article 27, industrial hazardous waste management (implemented by 6 NYCRR Part 373); and

v. title 11 of article 27, siting of industrial hazardous waste facilities (implemented by 6 NYCRR Part 361).

2. This policy shall not apply to permit applications for minor modifications, except as provided above, nor to renewals, registrations or general permits.

3. Permits authorized by delegation for sources subject to the federal requirements of prevention of significant deterioration (PSD) are subject to a review process under federal regulations and will undergo an environmental justice analysis consistent with EPA policy and guidance. Sources subject to the federal requirements of PSD will also be subject to other state permits applicable under this policy which will trigger the requirements of this policy in addition to the environmental justice analysis required by EPA policy and guidance.

B. Methodology for Conducting Preliminary Screen. Upon receipt of an application for a permit covered by this policy, the DEC Division of Environmental Permits shall conduct a preliminary screen to identify whether the proposed action is in or near a potential environmental justice area(s) and determine whether potential adverse environmental impacts related to the proposed action are likely to affect a potential environmental justice area(s).

1. Identify Potential Adverse Environmental Impacts and Area to be Affected. DEC staff in the Division of Environmental Permits and the affected environmental quality divisions shall identify potential adverse environmental impacts associated with the proposed action. Environmental quality program staff shall also identify the area to be affected by the potential adverse environmental impacts.

2. Determine Whether Potential Adverse Environmental Impacts are Likely to Affect a Potential Environmental Justice Area. An integrated geographic information system and demographic application (GIS Application), shall be used to determine whether potential adverse environmental impacts from the proposed action are likely to affect a potential environmental justice area. Using the information from section V.B.1 above, Environmental Permits staff will determine if any census block groups, meeting the GIS application thresholds for a potential environmental justice area, are within the affected area. The census block groups meeting the GIS application thresholds for a potential environmental justice area should fall substantially within the affected area. If no census block group(s) meeting the GIS application thresholds for a potential environmental justice area is identified, the proposed action is not likely to affect a potential environmental justice area and the permit review process may continue independent of the elements of this policy. If a census block group(s) meeting the GIS application thresholds for a potential environmental justice area is identified, the proposed action is likely to affect a potential environmental justice area and the remainder of these policy requirements shall be incorporated into the review process.

C. Guidance to Permit Applicants. Where a potential environmental justice area is identified by the preliminary screen, the DEC Division of Environmental Permits shall provide the applicant with relevant information on environmental justice. This may include a copy of this policy, the methodology for identifying a potential environmental justice area, guidance developed to implement the policy (e.g., guidance for developing and implementing a public participation plan), information on the alternative dispute resolution process and other documents as applicable.

D. Enhanced Public Participation Plan. Public participation in the DEC environmental permit review process means a program of activities that provides opportunities for citizens to be informed about and involved in the review of a proposed action. To ensure meaningful and effective public participation, this policy requires applicants for permits covered by this policy to actively seek public participation throughout the permit review process. Applicants are encouraged to consider implementing the public participation plan components prior to application submission.

1. Where a potential environmental justice area is identified by the preliminary screen, the applicant shall submit a written public participation plan as part of its complete application. At a minimum, the plan must demonstrate that the applicant will:

i. Identify stakeholders to the proposed action, including residents adjacent to the proposed action site, local elected officials, community-based organizations and community residents located in a potential environmental justice area;

ii. Distribute and post written information on the proposed action and permit review process. Information shall be presented in an easy-to-read, understandable format, using plain language and, when appropriate, public notice materials shall be translated into languages other than English for comprehension by non-English speaking stakeholders;

iii. Hold public information meetings to keep the public informed about the proposed action and permit review status. Meetings should be held throughout the permit review process at locations and times convenient to the stakeholders to the project;

iv. Establish easily accessible document repositories in or near the potential environmental justice area to make available pertinent project information, including but not limited to: application material, studies, reports, meeting presentation materials and media releases. The applicant may also establish a repository on the internet.

2. As part of the public participation plan submission, the applicant shall include a report which summarizes: all progress to-date in implementing the plan; all substantive concerns raised to-date; all resolved and outstanding issues; the components of the plan yet to be implemented and an expected time line for completion of the plan.

3. Upon completion of the public participation plan, the applicant shall submit written certification that it has complied with the plan. As part of the certification, the applicant shall submit a revised report detailing activity which occurred subsequent to the initial submission of the report. The certification shall be signed by the applicant, or the applicant's agent, and submitted to DEC prior to a final decision on the application.

E. Full Environmental Assessment Form. Where a potential environmental justice area is identified by the preliminary screen, a full environmental assessment form shall be completed for those actions classified as Unlisted in 6 NYCRR Part 617 and meeting the applicability requirements of this policy. (A full environmental assessment form is currently required for all Type I actions.)

F. Environmental Impact Assessment. Under existing regulations, as part of its impact review, DEC must consider other sources of pollution or similar facility types in the project area in order to establish the baseline conditions against which project impacts will be assessed. DEC shall continue to consider sources of pollution or similar facility types in the respective airshed, watershed, or wasteshed for the project under consideration.

G. Coordinated Review. Where a potential environmental justice area is identified by the preliminary screen, the action is classified in 6 NYCRR Part 617 as either Type I or Unlisted and the project involves more than one agency, the DEC shall coordinate the review of the action with the other involved state and local agencies.

H. Determining Significance. Where the DEC is the lead agency, the Division of Environmental Permits staff based on comments from the affected environmental quality divisions, shall determine the significance of a Type I or Unlisted action, pursuant to criteria established in 6 NYCRR 617.7. If the DEC determines that there will be no adverse environmental impacts or that the identified adverse environmental impacts will not be significant, no further environmental justice analysis is required. If the DEC determines that the action may include the potential for at least one significant adverse environmental impact, 6 NYCRR 617.7 requires the preparation of an environmental impact statement (EIS) and the remainder of the policy requirements shall be incorporated into the review process.

I. Scoping. Where the DEC is the lead agency, a potential environmental justice area is identified by the preliminary screen and an EIS is required, scoping, pursuant to 6 NYCRR 617.8, shall be conducted. Scoping shall include an opportunity for meaningful and effective public participation consistent with the procedures set forth in this policy.

J. Environmental Impact Statement Content. Where the DEC is the lead agency, a potential environmental justice area is identified by the preliminary screen and an EIS is required, the draft EIS shall identify the potential environmental justice area to be affected, describe the existing environmental burden on the potential environmental justice area and evaluate the additional burden of any significant adverse environmental impact on the potential environmental justice area. The detail and depth of analysis for this evaluation will be identified by the DEC during the scoping process.

K. Environmental Impact Statement Procedure. When a draft EIS includes an evaluation of additional burdens on a potential environmental justice area, the DEC shall conduct a public hearing regarding the proposed action and shall receive comments on the draft EIS for no fewer than 60 calendar days from the first filing and circulation of the notice of complete application, or no fewer than ten calendar days following the completion of the public hearing, whichever is later.

L. Alternative Dispute Resolution. At any time prior to a final decision on the permit, the permit applicant and the public may voluntarily avail themselves of the alternative dispute resolution process to resolve conflict in the permit review process. Prior to issuance of the notice of public hearing, pursuant to 6 NYCRR 621.7, the parties shall be encouraged to seek alternative dispute resolution services from an independent provider. After issuance of the notice of public hearing, the parties shall be encouraged to seek alternative dispute resolution services from the DEC Office of Hearings and Mediation Services (OHMS). Where issues raised in ADR are resolved with enforceable permit conditions, the DEC shall incorporate those enforceable permit conditions into the permit. Where issues raised in ADR are resolved with conditions beyond the enforceable authority of the DEC, the conditions may be incorporated into a private agreement between the non-DEC parties and enforceable by those parties.

M. Decision and Findings Requirement. Consistent with existing regulations, any adverse environmental impact related to an action must be avoided or minimized to the greatest extent practicable.

Related References: New York State Environmental Conservation Law §1-0101; New York State Environmental Conservation Law §3-0301; New York State Environmental Conservation Law, article 8; New York State Environmental Conservation Law, article 70; New York State Administrative Procedure Act, article 3; Sections 616, 617, 621 and 624 of title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York; USEPA Region 2 Interim Environmental Justice Policy; U.S. Census Bureau.

Attachment C

Environmental Justice Public Outreach Materials

PROPOSED ACTION

To support the adoption of New York City's Comprehensive Solid Waste Management Plan (New SWMP) for the next 20-year planning period, the city is preparing an Environmental Impact Statement (EIS) to study and evaluate the environmental, economic, and social impacts of converting existing Marine Transfer Stations (MTS) present throughout the city into state-of-the-art solid waste containerization MTS facilities. The conversion and operation of eight MTS facilities will be examined to determine the potential impacts of the proposed action on the neighboring community. In addition, up to four privately owned intermodal containerization facilities will be evaluated as an alternative to the proposed action.

SCOPING

An early and open process for determining the scope of issues and identifying the significant issues related to a proposed action.

Public meetings are often arranged to provide an opportunity for members of the public to comment on the issues that need to be addressed in the EIS.

Further information will be provided, including an overall project schedule. The public scoping session will be held on:

Wednesday, June 2, 2004 at the
Flushing High School Auditorium
Flushing, Queens, NY
5:30 pm - 8:30 pm

A brief presentation will be provided by DSNY to describe the proposed action and explain the environmental review process.

A draft scoping report was published on May 2, 2004. Copies of this report and other project-related materials can be found at:

The Mitchell-Linden Library
29-42 Union St., Flushing, NY

The Queens Community Board 7 Office
45-35 Kissena Blvd, Flushing, NY

WAYS TO PROVIDE COMMENTS ON THE PROPOSED ACTION:

At the meeting:

- Provide verbal comments
- Fill out a comment card

At a later date:

- Mail written comments to*:
  Ecology and Environment, Inc.
  90 Broad Street, Suite 1906
  New York, NY 10004
  Comments must be postmarked by June 14, 2004.
- Visit our website at: _____
- Call the Proposed MTS Facility Hotline at (888) NYC-SWMP Monday-Friday, between 9:00 am and 5:00 pm.

Land Side View

PROPOSED NORTH SHORE CONVERTED MTS FACILITY

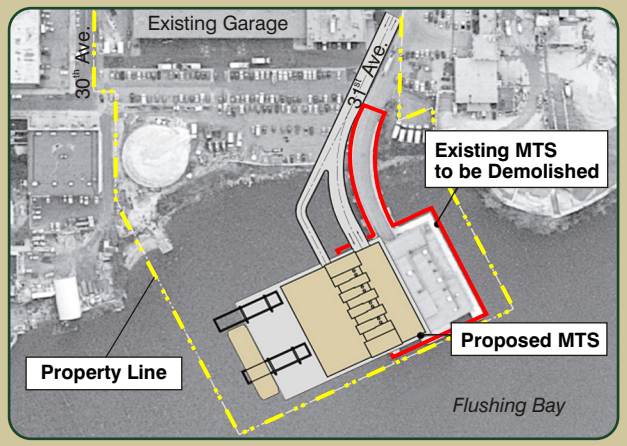
QUEENS, NEW YORK

The North Shore MTS site is located in the College Point section of Queens, New York. It is bounded by 30th Avenue to the north, 31st Avenue and 122nd Street to the east, Flushing Bay to the west.

The existing MTS facility will be demolished and replaced with a new MTS facility that will containerize waste for transport to out-of-city disposal locations. All waste processing will be carried out in an enclosed building structure. The facility design will include state-of-the-art odor control systems as well as on-site ramps and roadways that provide sufficient space for the queuing of DSNY collection vehicles within the property boundary.

The Converted MTS facility will handle waste collected from Community District Nos. 7 through 14. All waste processed will be placed in sealed metal containers prior to leaving the MTS site for barge or rail transport.

Site Location - North Shore Converted MTS



PUBLIC SCOPING MEETING

Flushing High School
35-01 Union St.
Flushing, Queens

Wednesday, June 2, 2004
5:30 - 8:30 pm

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

APPENDIX A

Field Sampling & Analysis Management Plan

EEA, Inc.
Fisheries Study:
Field Sampling & Analysis Management Plan For The New York City Department of Sanitation Marine Transfer Station Facilities

January 7, 2003

1.0 INTRODUCTION

1.1 Project Overview and Goals. This document is a Field Sampling and Analysis Management Plan (FSAMP) for a fisheries and marine ecology study to be conducted for the New York City Department of Sanitation through the prime contractor, HDR Engineering, Inc., and subcontractor, EEA, Inc. The Department is planning to restore and modify solid waste transfer operations at all eight of the marine Transfer Stations (MTS's). Locations of the MTS's are shown in Figure 1. Because the new operations planned for the MTS's will require varying degrees of in water (and on shore) construction, the following field studies have been designed to supplement the data bases and satisfy regulatory requirements. The goals of the Fisheries Study are to:

- Provide site specific habitat data including finfish (adult and larval) meiofaunal invertebrates, macrofaunal invertebrates, sediment quality, and water quality over a 12 month period;

- Satisfy the regulatory requirements for permit applications to the US Army Corps of Engineers (COE) and the New York State Department of Environmental Conservation (DEC);

- Satisfy data requirements for preparation of an Essential Fish Habitat Filing (EFH) as defined by the National Marine Fisheries Service (NMFS);

- Provide on site data needed for the preparation of a Natural Resources Section of a planned Environmental Impact Statement (EIS) for the proposed MTS modifications;

- In general, provide the technical and scientific bases to support the regulatory process needed to define ecological baseline and impact evaluations so as to minimize natural resource impacts to the greatest extent attainable.

Table 1 presents an overview of all the sampling activities and the planned schedule. Inspection of the Table shows that some MTS's are sampled more intensively than others. This variation was intentional and reflects the amount of construction activity described in the conceptual plans. MTS's that will have significant expansion or other in water construction activities are more heavily sampled than MTS's with only minimal expected impacts.

1.2 Sampling Plan Design Considerations.

In the development of this initial scope a variety of factors were considered including the following:

- SEQRA requirements for EIS's
- COE and DEC requirements
- National Marine Fisheries Service EFH requirements
- Size and reliability of the existing data base
- Agency requirements on prior, similar projects
- Importance of various aquatic habitats
- Sensitivity of aquatic habitats and resources to presumptive impacts of construction
- Data requirements for permit applications
- Scheduling and cost implications
- Feasibility of field data acquisition programs

1.3 Guidance Documents. This FSAMP will be followed by a program-specific Quality Assurance Project Plan (QAPP). A QAPP provides all team members with an understanding of the project organization, data quality objectives, measurement criteria, and specific Quality Assurance (QA) and Quality Control (QC) standards.

This FSAMP has been developed to be consistent with the following guidance documents and recommended examples thereof;

- Guidance for Quality Assurance project plans. EPA QA/G-5, February 1998.

- Guidance for the Preparation of Standard Operating Procedures (SOPs) for Quality-Related Documents. EPA QA/G-6, November 1995.

- Coastal 2000 Environmental Monitoring and Assessment Program (EMAP), Northeast Component, Field Operations Manual. EPA/600/R-00/002, April 2000.

- Generic Quality Assurance Project Plan Guidance for Programs Using Community Level Biological Assessment in Wadeable Streams and Rivers. EPA 841-B-95, July 1995.

- Guidance for the Data Quality Objectives Process. EPA QA/G-4. EPA/600/R-96/055, August 2000.

- EPA Requirements for Quality Management Plans. EPA QA/R-2. November 1999.

- Guidance on Technical Audits and Related Assessments for Environmental Data Operations. EPA QA/G-7, January 2000.

- Guidance for Data Quality Assessment – Practical Methods for Data Analysis. EPA QA/G-9, July 2000.

The FSAMP and QAPP) will be updated as new programs are added, or new techniques are advanced, and will be maintained in all facilities (offices, vessels, labs) involved in performance of the Fisheries project.

1.4 Review of the Literature. Prior to designing this FSAMP a detailed review of the literature was conducted to determine whether existing data bases could offset some of the sampling activities. Additionally, in preparation for an Essential Fish Habitat (EFH) study at the eight MTS's, a literature search was conducted on fish utilizing the waters of the New York Harbor Complex. A great amount of effort has been made and 66 different reference documents have been compiled relating to most of the 16 species of concern listed on the NMFS EFH form for these MTS's. The research is ongoing and the list of references will continue to grow. In addition, personal communications have been conducted with scientists and researchers in NMFS, Stony Brook Marine Sciences Research Center (MSRC), New York State Department of Environmental Conservation (DEC), and Rutgers University resulting in further insights to finfish utilization of these sites and have lead to additional sources of information.

Specific documents collected thus far includes information for 13 of the 16 species of concern listed by NMFS. There are presently 11 references about recent winter flounder studies conducted in NY and NJ waters (9 of which are from 1999 to 2002). It is expected that this species will be of greatest concern to NMFS. Information for all species has been compiled covering all those listed as having EFH for the project areas.

Current information pertaining to the newest developments and Final Rules regarding EFH have been downloaded from the NMFS web site and are currently

being reviewed. Information requests were sent to the NYSDEC Natural Heritage Program and the U S Fish and Wildlife Service and response from DEC has been received indicating that no threatened or endangered species are present on the sites.

The database continues to grow and follow-ups to personal communications that often lead to new sources of information are ongoing. Recently, at a conference in Rhode Island, several contacts at NMFS and the Mid-Atlantic Fishery Management Council were made that hold promise for gaining insight and understanding to completing the EFH process and approaches to finfish species covered under State and Federal regulations.

1.5 Regulatory Agency Review. During the program design phase of this project, contact was maintained with the COE, DEC and NMFS. Specifically, a detailed outline of the planned field and laboratory activities was presented in a meeting to relevant COE scientist and engineers and in two meetings to DEC scientists. The COE provided verbal agreement to the planned study. The DEC requested (minor) modifications which were subsequently made. As of this date, NMFS has yet to provide comments.

2.0 SPECIFIC STUDY ELEMENTS.

2.1 Water Quality. Water quality data including surface and bottom dissolved oxygen levels, salinity, and temperature will be collected at all of the sampling events listed below using a Yellow Springs Instrument (YSI) model R-85-10 Meter. Light transmission through the water column will be measured using a Secchi disc.

2.2 Ichthyoplankton Sampling

2.2.2 Sampling Schedule. Sampling will be conducted once monthly beginning in January and continuing through the end of September.

2.2.3 Sample Station Locations. Ichthyoplankton sampling will be conducted at three stations at each MTS. Station location will be recorded by use of a Garmin 185 Global Positioning System (GPS) receiver. Each station will be assigned a specific designation and the latitude and longitude will be recorded from the GPS receiver. While on station, the position will be saved in the memory of the GPS for reference and follow-up sampling events.

2.2.4 Field Sampling. Ichthyoplankton will be collected at each station utilizing a 0.75 meter diameter ring net, 5 to 1 length to open end ratio. Mesh size will be 363 micron. Each net will be equipped with a factory calibrated General Oceanics flow meter. One tow will be made at each of the

three stations. The net will be lowered through the water column as it is being towed behind the research vessel until the depressor plate contacts bottom and then slowly retrieved. Each tow will proceed until approximately 100 cubic meters of water have been entrained per tow. In the field the retrieved nets will be washed down and collected organisms will be poured from the cod end bottle and preserved with 10% formalin. Sample containers will have both inside and outside labels to identify the sample. The samples will be returned to the laboratory at the end of the day.

2.2.5 Laboratory Analyses. In the laboratory, all samples will be sorted under a dissecting microscope. Ichthyoplankton will be removed and placed in labeled vials according to gross taxonomic groups. Subsampling will be carried out when abundances are high. Samples will be subsampled either volumetrically using a Folsom plankton splitter or with a Stemple Pipette. Using the Stemple Pipette, 10 milliliter subsamples will be taken from a sample of known volume until a minimum of 100 fish larvae are removed. All organisms in the aliquot will be identified to the lowest practical taxa. The Average Outgoing Quality Limit (AOQL) criteria for laboratory identification and counts shall be 90%.

2.2.6 Quantitative Data Analysis. All data generated as a result of laboratory analysis of ichthyoplankton samples will be recorded in EXCEL spreadsheet format. The data will then be evaluated for taxa diversity, composition, and abundance. These analyses will be used to compare sampling locations to each other.

2.3 Adult Finfish.

2.3.1 Sampling Schedule. Fish sampling will be conducted in conjunction with the ichthyoplankton collections during the sampling periods; monthly from January through December 2003. Trawling operations will be duplicated on successive days, while gill nets will be set once (overnight) during the first trawl day and retrieved on the second day.

2.3.2 Sample Station Locations. Fish sampling will be conducted at five stations at each MTS. Station location will be recorded by use of a Garmin 185 Global Positioning System (GPS) receiver. Each station will be assigned a specific designation and the latitude and longitude will be recorded from the GPS receiver. While on station, the position will be saved in the memory of the GPS for reference and follow-up sampling events.

2.3.3 Field Sampling Using Trawls. One trawl per station will be conducted. Each MTS will have five stations to be located adjacent to and/or

in front of the present MTS structure. The exact location of the trawl station will be dependent on field conditions. Since MTS structures are located in restricted basins and along open water, slight alterations in the trawling process are adapted for the different locations. Trawling operations in restricted areas require the boat to be backed to the head end of the channel or basin and the net and wings are lowered over the stern to approximately half the water depth. In open water, the boat is positioned on the starting point of the station and the net is lowered over the stern to approximately half the water depth. The boat is slowly run ahead and the trawl paid out to an appropriate length. The amount of line (warp) let out depends on the depth of the water (a ratio of 5 to 1, warp length to water depth, is considered optimal). Trawling speed is standardized at 2.5 knots. Each tow is approximately 500-800 feet in length, physical constraints permitting. A 32-foot semi balloon otter trawl will be used with a 3.0" mesh and a 0.5" mesh cod end net liner.

Contents of each trawl will be emptied into a container, sorted and identified to species. Scales will be removed and placed into envelopes labeled with the date, station and species for later aging analysis. Each species will be identified, measured and weighed before being returned to the water, if alive. If large numbers of an individual species are encountered (e.g., more than 30), the first 30 of that species will be analyzed and the remainder counted or weighed in mass. Fish will be examined for general condition including fin rot, external parasites and similar items. Observations will be made on adult fish in order to determine if fish are gravid. In addition, scales will be removed from species identified on the EFH tables for each site, in order to conduct an age analysis.

2.3.4 Field Sampling Using Gillnets. Gill nets will be set at one station at each MTS location during the first day of trawling, left overnight, and retrieved the next day during the course of the sampling event. A 100-foot gillnet consisting of four panels ranging from one-inch to four inches in size will be anchored in place.

Contents of the panels of each gillnet will be emptied into separate tubs, placed on a sorting table and identified by species. Scales will be removed and placed into envelopes labeled with the date, station and species for later aging analysis. Collected finfish will be identified, measured and weighed before being returned to the water, if alive. If large numbers of an individual species are encountered (e.g., more than 30), the first 30 of that species will be analyzed and the remainder counted or weighed in mass. Fish will be examined for general condition including fin rot, external parasites and similar items. Observations will be made on adult fish in order to determine if fish are gravid. In addition, scales will be removed from species identified on the EFH tables for each site, in order to conduct an age analysis.

2.3.5 Lab Analyses. In the laboratory, scales removed from the fish caught in trawl and gillnets that are identified on the EFH tables for the site will be examined under a stereomicroscope to determine the age of the fish.

2.3.6 Quantitative Data Analysis. Data collected in the field and generated in the laboratory will be analyzed. Data will be evaluated for taxa diversity, composition, and abundance. Spatial and temporal analysis will be conducted on adult finfish collected in both trawls and gillnets in order to compare sampling locations to one another.

2.4 Colonization Plate Sampling

2.4.1 Overview. .Artificial substrate panel arrays will be deployed in January and retrieved every 3 months. Panel arrays will be examined monthly for physical presence. Individual panels will be retrieved every three months for analysis and the arrays will be removed completely in January of the following year.

2.4.2 Sample Station Locations. Two artificial panel arrays will be deployed at the each MTS location. One array will be deployed at 3 feet below mean low water and the second will be deployed at 7 feet below mean low water.

2.4.3 Field Sampling. Epibenthic recruitment studies will be performed using a eight-plate array. Artificial panel arrays will be deployed in January, 2003, and examined once per month for physical presence. After three months (April) the entire array will be removed from the water, weighed, photographed, and checked for the presence of crabs and fish. Crabs will be identified and counted. Fish will be identified, counted, weighed, and measured. The lower two plates will be removed and the array will be returned to the water. Each individual plate will be placed in a container and preserved in 95% ethanol. Rose Bengal stain will be added to the ethanol to aid in later sorting of the organisms. The sample container will have both inside and outside labels to identify the sample. Concurrent with panel retrieval, water quality parameters will be measured. Six months after deployment (July) the lowest two plates will be removed and analyzed. The process will be repeated again in October. After one year, in January, the array will be retrieved and the remaining two plates will be analyzed.

2.4.4 Lab Analyses. Artificial colonization plates will be scraped of all organisms. Identification of organisms will be made with the aid of a dissecting microscope. Major taxonomic groupings will be counted and weighed. Total weights of each species will be recorded to the nearest

milligram. The AOQL criteria for laboratory identifications and counts shall by 90%.

2.4.5 Quantitative Data Analysis. All data generated as a result of laboratory analysis of epibenthic samples will be recorded in EXCEL spreadsheet format. The data will then be evaluated for taxa diversity, composition, and abundance. These evaluations will enable the comparisons of the epibenthic communities at each sampling location.

2.5. Benthic Invertebrate Sampling.

2.5.1 Overview. Benthic invertebrates will be sampled at each of the MTS structures. Benthic sampling will be scheduled to coincide with the panel collection every three months for one year.

2.5.2 Sample Station Locations. A total of 15 benthic grabs will be collected at each of the MTS structures. Three stations will be chosen around the perimeter of the MTS and five replicate grabs will be collected at each station (15 grabs total). The coordinates of each grab will be recorded using the differential GPS navigation system of the survey vessel (RV Kingfisher).

2.5.3 Field Sampling. The grab that will be used for the collections is a 0.025 meter square modified Young grab sampler. Individual samples (entire contents of the Young grab) will be washed through a 0.5 millimeter mesh sieve to remove fine particles. Contents will then be transferred to a wide mouth one-liter sample jar that contains both an external and an internal label identifying the sample. The samples will then be fixed with a buffered 10 percent formalin solution. Only full grab samples will be utilized. Rose bengal stain will be added to the formalin to aid in later sorting of the organisms.

2.5.4 Lab Analyses. In the laboratory, all grab samples will be rinsed gently with tap water through a 0.5-mm mesh sieve to remove preservatives and sediment, stained with Rose Bengal, and stored in 95% ethanol solution until processing. Subsequently, the organisms will be carefully removed with forceps and placed in labeled plastic vials containing 90% ethanol. After sorting, macroinvertebrates will be identified to the lowest practical identification level (LPIL), which in most cases will be to the species level unless the organism is a juvenile, damaged, or otherwise unidentifiable. The number of individuals for each taxa and the total weight for that taxa will be recorded. The AOQL criteria for laboratory identifications and counts shall be 90%.

2.5.5 Biomass Analysis. Each sample will be weighed for wet weight biomass (standing stock biomass in g/square meter) for the major taxonomic groups identified. In the laboratory, the organisms will be removed from the vials and placed on a filter paper pad, gently blotted with a paper towel to remove moisture, placed in a tarred weighing pan, and weighed to the nearest 0.01 g.

2.5.6 Quantitative Data Analysis. All data generated as a result of laboratory analysis of meioinvertebrate samples will be recorded in EXCEL spreadsheet format. The data will then be evaluated for taxa diversity, composition, and abundance. The 15 stations within the project location will be compared to each other to analyze similarities and differences between the observed data. Water quality, sample depth, and spatial differences will be analyzed to find any correlations between these variables and the similarities or differences in the data among the stations.

Data will be standardized to abundance by calculating the number of organisms per square meter. This will be calculated by dividing the total number of each species by the number of samples taken from the proposed project area. This number will then be multiplied by 40 to calculate the abundance per square meter (since the grab sample is .025 square meters). This analysis enables the estimation of species abundance within the project site.

2.5.7 Statistical Data Analysis. Statistical tests will be utilized to determine how representative the stations are within the grid of the project area. As the data set is complex, three representative statistical measures will be used to compare the sampling stations. These measures are: abundance within the project area, Jaccard's Indices, and biological diversity indices(H').

2.6 Sediment Quality Sampling.

2.6.1 Overview. Sediment quality will be sampled at each of the MTS structures. Sediment quality sampling will be scheduled quarterly starting in January.

2.6.2 Sample Station Locations. Three sediment grabs will be collected at each of the MTS structures. The stations will be chosen around the perimeter of the MTS. The coordinates of each grab will be recorded using the differential GPS navigation system of the survey vessel.

2.6.3 Lab Analyses. Sediment samples will be analyzed for grain size, moisture content, TOC and RCRA metals.

2.6.4 Quantitative Data Analysis. All data generated as a result of laboratory analysis of sediment samples will be recorded in EXCEL spreadsheet format. These results of the laboratory analysis will enable the comparisons of the sediment type at each sampling location.

3.0 REPORTS, IMPACT ANALYSIS AND DELIVERABLES.

3.1 Monthly Reports. At the end of each month the EEA Project Manager will submit a report listing all the sampling activities conducted during the month. If any discrepancies occurred (e.g., variations from the FSAMP), the reasons will be presented and corrective measures described.

3.2 Quarterly Reports. Every three months a quarterly summary will take the place of the normal monthly report. This summary will list all the activities during the quarter and also present any field and laboratory data that has been reviewed, undergone QA/QC checks and is ready for transmittal.

3.3 Final Report and Impact Analysis. At the conclusion of the program a comprehensive final report will be prepared. This report will document the results of the literature survey, the baseline conditions on each site, and a habitat assessment for each site. In addition the report will compare and contrast habitat conditions among all eight of the MTS's and rate the sites in relation to each other.

An impact analysis will include a definition of the expected acreage loss (or gain) for each major habitat type for both finfish and invertebrates communities. Impacts to be addressed include:

- Removal of large quantities of hard or soft surface substrate
- Discussion of on-site habitat requirements for wildlife identified on site, as well as potential species and discussion of both short- and long-term impacts of habitat loss.
- Substantial interference with the movement of any resident or migratory fish or wildlife species.
- Impacts on areas of significant habitat, if any.
- Adverse effects on any threatened, endangered or rare plant or animal species and/or the habitat of such species, pursuant to the Endangered Species Act and NYSDEC guidelines.
- Other significant impacts to natural resources.

FIGURE 1
Marine Transfer Station Locations

Table 1
Field Sampling and Analysis Management Plan for New York City
Department of Sanitation MTS Facilities

Permit and EFH Studies: Preliminary Ecological Sampling Activities and Schedule

	Months													
Location	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**
North Shore	TGBISP	I	I	TGBISP	I	I	TGBISP	I	I	TGBSP	N	N	P	
Greenpoint	TGBISP	TGI	TGI	TGBISP	TGI	TGI	TGBISP	TGI	TGI	TGBSP	TG	TG	P	
South Bronx	TGBISP	TGI	TGI	TGBISP	TGI	TGI	TGBISP	TGI	TGI	TGBSP	TG	TG	P	
East 91st Street	PBIS	I	I	PBIS	I	I	PBIS	I	I	PBS	N	N	P	
West 135th Street	TGBISP	I	I	TGBISP	I	I	TGBISP	I	I	TGBSP	N	N	P	
West 59th Street	TGBISP	TGI	TGI	TGBISP	TGI	TGI	TGBISP	TGI	TGI	TGBSP	TG	TG	P	
Hamilton Avenue	PBIS	I	I	PBIS	I	I	PBIS	I	I	PBS	N	N	P	
Southwest Brooklyn	TGBISP	TGI	TGI	TGBISP	TGI	TGI	TGBISP	TGI	TGI	TGBSP	TG	TG	P	

Notes: T=Fisheries Trawls (5 replicate trawls, 2 days per month)
G=Fisheries Gill Nets (1-100' gill net set overnight on trawl periods)
B=Benthic Invertebrates (3 stations, 5 replicates each)
I=Ichthyoplankton (3 tows with a 363u, 0.75m plankton net)
S=Sediment Quality (grain size, % moisture, TOC, RCRA metals)
P=Colonization Plates (2 arrays of 8 plates set in Jan, two removed from each array quarterly for analysis)

Lab Notes: B= 15 samples taken every three months at 8 MTSs (3 samples from each of the 3 stations will be analyzed initially and 2 samples will be archived).
I= 3 samplels taken per month at 8 MTSs.
S= 3 samples taken every three months at 8 MTSs.
P= 2 plates analyzed from 8 MTSs at 2 depths every three months.
T & G = age analysis of subsample of fish collected in trawls and gill nets.