FINAL SCOPING DOCUMENT

for the

CITY OF NEW YORK

COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

DRAFT ENVIRONMENTAL IMPACT STATEMENT

CEQR No. 03-DOS-004Y

October 2004

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List of Acronyms/Definitions

Acronyms	
AGC	annual guideline concentration
ATR	automatic traffic recorder
BHD	Brooklyn Highway Datum
BIC	Business Integrity Commission
BOD	biochemical oxygen demand
BQB	Brooklyn, Queens and Bronx
BQE	Brooklyn-Queens Expressway
BTU/CF	British thermal units per cubic foot
BTU/gal	British thermal units per gallon
C&D	construction and demolition
CD	community district
CEPO	Council Environmental Protection Order
CEQR	City Environmental Quality Review
CEQR/SEQRA	City Environmental Quality Review/State Environmental Quality Review Act
CERCLA	Federal Comprehensive Environmental Responsibility and Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
cfs	cubic feet per second
CFR	Code of Federal Regulations
CMP	Coastal Management Program
CO	carbon monoxide
CSO	combined sewer overflow
CWMS	Commercial Waste Management Study
dBA	A-weighted decibel
DEIS	Draft Environmental Impact Statement
DSNY	New York City Department of Sanitation
DT	detection threshold
EAS	Environmental Assessment Statement
EBUF	enclosed barge unloading facility
EIS	Environmental Impact Statement
EJ	Environmental Justice
ERNS	USEPA's Emergency Response Notification System
FAQ	frequently asked question
FDNY	New York City Fire Department
FDR or FDR Drive	Franklin D. Roosevelt Drive
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FY	Fiscal Year

Acronyms	
gpd	gallons per day
H_2S	hydrogen sulfide
HAP	hazardous air pollutant
HC	hydrocarbon
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
HNC	Hugo Neu Corporation
HRY	Harlem River Yard
in/hr	inches per hour
IRIS	USEPA's Integrated Risk Information System
ISCST3	Industrial Source Complex Short Term
km	kilometer
L_{10}	10^{th} percentile noise level
L_{50}	50^{th} percentile noise level
L_{90}	90^{th} percentile noise level
L_{eq}	equivalent sound level
$L_{eq(1)}$	one-hour equivalent sound level
LIRR	Long Island Rail Road
LL74	Local Law 74, effective December 19, 2000, enacted by the City Council, requiring a comprehensive assessment of commercial solid waste management in New York City
L_{max}	maximum sound level
L_{min}	minimum sound level
LOS	level of service
LPC	Landmarks Preservation Commission
MCR	Manhattan Curbside Recyclables
mg/l	milligrams per liter
mph	miles per hour
MPN/100ml	most probable number per 100 milliliters
MSL	mean sea level
MSW	municipal solid waste
MTS	marine transfer station
NA	Not Applicable
NAAQS	National Ambient Air Quality Standard
NHP	NYSDEC's Natural Heritage Program
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NPL	USEPA's National Priorities List
NR	National Register
NURP	Nationwide Urban Runoff Program
NY&A	New York and Atlantic Railroad
NYCAC	New York City Administrative Code
NYCDCP	New York City Department of City Planning
NYCDEP	New York City Department of Environmental Protection

Acronyms	
NYCDOB	New York City Department of Buildings
NYCDOH	New York City Department of Health
NYCDOT	New York City Department of Transportation
NYCDPR	New York City Department of Parks and Recreation
NYCEDC	New York City Economic Development Corporation
NYCHA	New York City Housing Authority
NYCL	New York City Landmark
NYCRR	New York Codes, Rules and Regulations
NYPD	New York City Police Department
NYSAAQS	New York State Ambient Air Quality Standard
NYSDEC	New York State Department of Environmental Conservation
OEC	New York City Office of Environmental Coordination
OGS	Office of General Services
OPRHP	Office of Parks, Recreation and Historic Preservation
OSHA	Occupational Safety and Health Administration
OU	odor unit
PANYNJ	Port Authority of New York and New Jersey
PCE	passenger car equivalent
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
ppm	parts per million
RCNY	Rules of the City of New York
RCRA	Federal Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
RfC	reference concentration
RFP	Request for Proposals
RRF	resource recovery facility
SBMT	South Brooklyn Marine Terminal
SEQRA	State Environmental Quality Review Act
SGC	short-term guideline concentration
SHPO	State Historic Preservation Office
SHS	self-help site
SO_2	sulfur dioxide
SPDES	State Pollutant Discharge Elimination System
SR	State Register
STV	screening threshold value
SUV	sport utility vehicle
TNM	Traffic Noise Model
TNM 2.1	Traffic Noise Model Version 2.1
tpd	tons per day
tpy	tons per year
TS	transfer station

Acronyms	
µg/l	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter
ULURP	Uniform Land Use Review Procedure
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USF&WS	United States Fish and Wildlife Service
UST	underground storage tank
v/c	volume-to-capacity
VOC	volatile organic compound
WPCP	water pollution control plant
WRP	waterfront revitalization program
WTE	waste-to-energy

Definitions	
208 Model	New York Harbor Seasonal Steady State Water Quality 208 Model
1992 SWMP	The City's first Comprehensive Solid Waste Management Plan, adopted in 1992
1996 SWMP or 1996 SWMP Modification	Modifications to the 1992 SWMP that were adopted by the City Council and approved by the state in 1996, focusing on further expansion of recycling and more extensive environmental review of the proposed Brooklyn Navy Yard WTE project and the rehabilitation of the Southwest Brooklyn incinerator project
2000 FEIS	Final Environmental Impact Statement of November 2000
2000 SWMP or 2000 SWMP Modification	Modifications to the 1992 SWMP that were adopted by the City Council and approved by the state in 2000, focusing on defining the City's plan to address the closure of its last remaining landfill at Fresh Kills on Staten Island
2001 CEQR Technical Manual	October 2001 CEQR Technical Manual
2001 Plan	February 2001 Final Comprehensive Solid Waste Management Plan Modification and Final Environmental Impact Statement
Alternative(s)	An alternative to the Proposed Action evaluated in the New SWMP DEIS
City	New York City
City Council	The legislative body of the City of New York
Commercial Waste	The wastes, including recycled material, generated in the City by business establishments and construction activity and collected by private carters that are respectively defined in the DSNY Rules as Putrescible Waste and Non-Putrescible Waste
Converted MTS	One of DSNY's eight marine transfer stations, modified to containerize waste for out-of-City export by barge or rail
Curbside Recycling Program or Curbside Program	The collection of source-separated materials designated by DSNY as recyclables from residences, City agencies and non-profit institutions housed in tax-exempt property
CWM Study or Study	Commercial Waste Management Study

Definitions	
Draft New SWMP	Draft Comprehensive Solid Waste Management Plan, September 2004
DSNY-managed Waste	Solid waste that DSNY collects from all residential households in the City and the institutional waste of City, state and federal agencies that DSNY collects and/or for which DSNY arranges disposal
EJ Policy	NYSDEC's policy guidance on Environmental Justice (EJ) and Permitting issued in March 2003
EJ Community	Census block groups with populations that meet the EJ Policy criteria
EJ Program	DSNY's enhanced public participation and outreach program
Existing Programs	Ongoing programs approved in the 1992 SWMP, as amended, that will continue under the New SWMP
Existing SWMP	1992 comprehensive Solid Waste Management Plan, as amended
Fill Material	Waste as defined in DSNY Rules that is typically comprised of clean material consisting of earth, ashes, dirt, concrete, rock, gravel, asphalt millings, stone or sand
Interim Export	Short-term DSNY contracts with in- and out-of-City transfer stations and out-of-City disposal sites for export of DSNY-managed Waste
Long Term Export Program	Those facilities and services pertaining to the export of DSNY-managed Waste from the City that is a component of the Proposed Action
MGP	Metal, glass and plastic defined as Recyclables by DSNY
MTS Conversion Program	The City's initiative to develop, at the sites of the existing marine transfer stations (MTSs), new converted MTSs that will containerize solid waste for long-term export by barge with the potential for additional intermodal transfers to enable delivery of containerized waste to disposal facilities outside of the City
New Initiatives	New activities described in the Draft New SWMP that are enhancements to Existing Programs

Definitions	
New SWMP	The new Comprehensive Solid Waste Management Plan for the period 2005 through 2024 prepared pursuant to 6 NYCRR Part 360-15
Non-Putrescible Waste	Waste as defined in DSNY Rules that is typically comprised of inert waste generated from commercial and residential demolition, new construction and renovation projects, and contains inorganic materials, some of which are recycled. The non-recycled fraction is processed by the City's non-putrescible transfer stations for shipment to disposal facilities. This waste is also referred to as construction and demolition (C&D) debris to distinguish it from fill material, which is a subset of non-putrescible waste comprised of materials such as excavated fill, stone rubble and road millings that are graded into materials such as sand and aggregate and stockpiled at fill material transfer stations in the City and reused in other building projects.
Paper	Material made of paper that DSNY defines as a Recyclable
Proposed Action	Actions in three major categories – Long Term Export, Recycling, and Commercial Waste – proposed to be implemented under the New SWMP that are subject to environmental review
Putrescible Waste	Waste as defined in DSNY Rules that is typically comprised of material generated by business establishments and collected by private carters in the City that may be delivered to putrescible transfer stations or recycled, which may contain organic matter
Recyclables	Materials defined by DSNY as recyclable such as Paper and MGP
Rules	Rules of the City of New York
Zoning Resolution	New York City's Zoning Resolution

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. Having issued a Notice of Determination/Positive Declaration on May 3, 2004, DSNY is issuing this Final Scope for the preparation of a DEIS. The Final Scope describes: (1) the Proposed Action and reasonable alternatives thereto that may be undertaken pursuant to the adoption of the New SWMP; (2) summary information on the sites of the Proposed Action; and (3) the methodologies and the types of information needed to evaluate potential impacts.

1.2 Purpose and Need

In accordance with the requirements of New York State's Solid Waste Management Act (New York Environmental Conservation Law, Section 27-0707) and implementing regulations (6 NYCRR Subpart 360-15), the City adopted its first Comprehensive Solid Waste Management Plan in 1992 (1992 SWMP) that established the framework for its solid waste management and recycling programs over a 10-year period. Approved modifications to the 1992 SWMP made in 1996 (1996 SWMP Modification) focused on further expansion of recycling. In 2000, further approved amendments to the 1992 SWMP (2000 SWMP Modification) were made which principally focused on the City's plan to address the closure of the Fresh Kills Landfill in Staten Island. The 1992 SWMP, as amended (Existing SWMP), expires at the end of October 2004. The City and the City Council have requested that the New York State Department of Environmental Conservation (NYSDEC) extend the Existing SWMP to cover the period between the submittal of the Draft New SWMP to the City Council and its adoption and the approval of the adopted Draft New SWMP by NYSDEC.

Each day, the City's 8.1 million residents, commuters, visitors, businesses and residential and commercial construction activity generate very large and diverse quantities of solid waste material. The Draft New SWMP sets forth a plan for the long-term management of the City's solid waste in a cost-effective and environmentally responsible manner and, in addition to the Proposed Action, it incorporates by reference the Existing SWMP to support Existing Programs, including the New Initiatives described in the Draft New SWMP. These Existing Programs and New Initiatives, approved pursuant to the Existing SWMP, are, therefore, not part of the Proposed Action that is subject to environmental review in this DEIS.

The City's existing solid waste management system:

- Recycles or disposes of approximately 14,000 tons per day (tpd) or 4,240,000 tons per year (tpy) of DSNY-managed Waste currently generated in the City;
- Recycles or disposes of approximately 10,000 tpd (3,000,000 tpy) of Putrescible Commercial Waste that is generated, and approximately 6 million to 8.3 million tons per year of Non-Putrescible Commercial Waste that is currently generated; and
- Provides for the management of Biosolids, Medical Waste and Dredge.

The Proposed Action for Long Term Export, described herein, builds on the Mayor's plan announced in July 2002 that was outlined in the Draft Scoping Document. This Final Scoping Document Proposed Action for Long Term Export achieves an expedited timeframe, a lower cost and reduced reliance on the complex Marine Transfer Station (MTS) conversions outlined initially. Furthermore, beyond export this Proposed Action defines an array of components that will improve the City's Curbside Recycling Program and the management of the City's Commercial Waste that were not described in the Draft Scoping Document.

Sections 1.3, 1.4 and 1.5 describe, respectively, the Proposed Action for Long Term Export, Recycling and Commercial Waste Management, as well as the reasonable Alternatives thereto.

1.3 Proposed Action – Long Term Export

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 transfer 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 1.3-1 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.

The principal features of Interim Export are:

- DSNY contracts with 21 private transfer stations (located both within and outside the City) or out-of-City disposal facilities, to provide sufficient capacity to dispose of approximately 12,500 tpd on an average daily basis.
- 48% 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.
- 38% of DSNY-managed Waste is moved to out-of-City disposal sites in DSNY collection vehicles.[1]

1.3.2 Long Term Export – Proposed Action

The City has long recognized the importance of moving quickly to develop a more permanent system of waste export to address both the rising cost of nearby landfill disposal, as well as the current over-reliance on a truck-dependent system. The plan announced by Mayor Bloomberg in

[1] Includes Interim Export from Manhattan and Staten Island.

Table 1.3-1
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**	98 Lincoln Street, Bronx, NY	1,800
	Waste Services	920 East 132nd Street, Bronx, NY	1,500
Brooklyn	**Waste Management of NY**	215 Varick Street, Brooklyn, NY	1,400
		485 Scott Avenue, Brooklyn, NY	1,400
	IESI NY Corp.	110 50th Street, Brooklyn, NY	1,000
		577 Court Street, Brooklyn, NY	500
	BFI – Waste Services	598-636 Scholes Street, Brooklyn, NY	220
	Solid Waste Transfer and Recycling	444 Frelinghuysen Avenue, Newark, NJ	500
	LIPCo (Covanta)	1499 Route 1 North, Rahway, NJ(1)	125
	ONYX Waste Services, Inc.	301 Maltese Drive, Totowa, NJ	250
Manhattan and Staten Island	**Waste Management of NY**	666 South Front Street, Elizabeth, NJ	625
		864 Julia Street, Elizabeth, NJ	635
	Solid Waste Transfer and Recycling	444 Frelinghuysen Avenue, Newark, NJ	200
	TransRiver Marketing L.P.	American Ref-Fuel, Essex County, NJ(1)	1,700
Queens	**ONYX Waste Services, Inc.**	30-35 Fulton Street, Patterson, NJ	1,000
		301 Maltese Drive, Totowa, NJ	480
		264 Broadway, Jersey City, NJ	350
	Solid Waste Transfer and Recycling	444 Frelinghuysen Avenue, Newark, NJ	1,025
	Tully Environmental	127-20 34th Avenue, Queens, NY	900
	TransRiver Marketing L.P.	American Ref-Fuel, Hempstead, NY(1)	150
	Waste Management of NY	38-50 Review Avenue, Queens, NY	958

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

July of 2002 was to establish a system that would take advantage of the City's waterways and existing infrastructure. The Proposed Action for Long Term Export, described herein, adheres to the two main principles of the Mayor's earlier plan: the containerization of waste and the long-distance export of that waste in containers by barge or rail, but also offers an expedited timeframe, a lower cost and reduced reliance on the complex MTS conversions outlined initially. The Proposed Action relies on a mix of Converted MTSs and private transfer stations with the addition of the existing Essex County Resource Recovery Facility (Essex County RRF) in Newark, New Jersey, to which waste would be delivered in collection vehicles.

The Proposed Action for Long Term Export has the following specific elements.

- For the entire Bronx wasteshed, Community Districts (CDs) 1 through 12, enter into a long-term contract with one or two private transfer stations for truck-to-rail disposal of DSNY-managed Waste from the Bronx.
- For the Brooklyn wasteshed formerly served by the Greenpoint MTS, enter into a long-term contract with one or two private transfer stations for truck-to-rail or truck-to-barge disposal of the DSNY-managed Waste from Brooklyn CDs 1, 3, 4 and 5.
- For the Brooklyn wasteshed formerly served by the Hamilton Avenue MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18 will be received and containerized.
- For the Brooklyn wasteshed formerly served by the Southwest Brooklyn MTS, develop a City-owned Converted MTS on the adjacent site of the former Southwest Brooklyn incinerator, where DSNY-managed Waste from Brooklyn CDs 11, 12, 13 and 15 will be received and containerized.
- For the Manhattan wasteshed, Manhattan CDs 1, 2, 3, 4, 7, 9, 10 and 12, enter into a long-term service agreement with the Port Authority of New York and New Jersey (PANYNJ) to receive and process DSNY-managed Waste delivered in City collection vehicles to the Essex County RRF in Newark, New Jersey.
- For the Manhattan wasteshed formerly served by the East 91st Street MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Manhattan CDs 5, 6, 8 and 11 will be received and containerized.
- For the Queens wasteshed formerly served by the Greenpoint MTS, enter into a long-term contract with a private transfer station for truck-to-rail or truck-to-barge disposal of the DSNY-managed Waste from Queens CDs 1 through 6.

- For the Queens wasteshed formerly served by the North Shore MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Queens CDs 7 through 14 will be received and containerized.

- For the four wastesheds served by Converted MTSs, enter into 20-year service agreements with one or more waste management companies, for transport of containerized waste by barge directly from an MTS to disposal facilities or to intermodal facilities for transloading to railcars or a larger barge, and for disposal at an appropriately permitted out-of-City facility.

Figure 1.3-1, Locations of Proposed Long Term Export Facilities and Wastesheds Served, identifies the boroughs and CDs that would be assigned to specific facilities.

Table 1.3-2 lists the facilities and potential contracts that are the Long Term Export component of the Proposed Action. In the Bronx and Brooklyn CDs 1, 3, 4 and 5, noted in Table 1.3-2, the decision to contract for export of DSNY-managed Waste generated in these wastesheds with one or two potential transfer stations will be determined by upcoming negotiations.

Table 1.3-3 lists the support facilities that may be required for the implementation of the Long Term Export Program that are subject to environmental review in the DEIS. These facilities include: (1) the 52nd Street Barge Staging Area that would be used as a temporary mooring facility for flat bed barges being routed to maintenance facilities; and (2) several in-City intermodal facilities that are potential locations, depending on the outcome of the City's negotiations with selected waste management companies, for providing services and facilities to transload containerized waste between barges shuttling to/from the Converted MTSs and railcars or larger ocean-going barges. This DEIS also presents an environmental review of these facilities, as applicable.

Figure 1.3-1
Locations of Draft New SWMP Long Term Export Facilities and Wastesheds Served

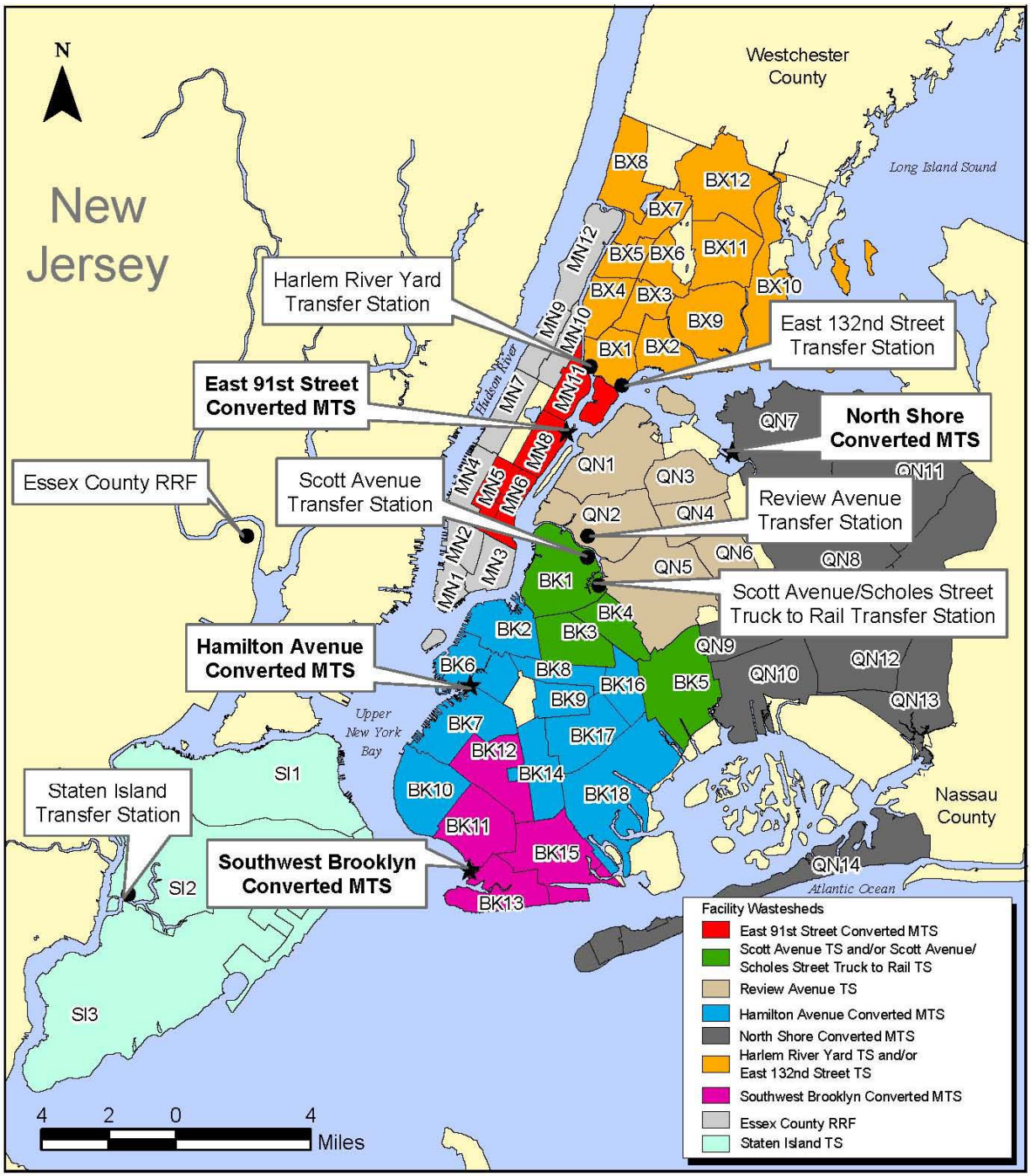

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Table 1.3-2
Draft New SWMP Long Term Export Facilities and Potential Contractors

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Converted MTS[(1)]	DSNY, Hamilton Avenue Converted MTS, Hamilton Avenue at Gowanus Canal, Brooklyn	Brooklyn 7	Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18
Converted MTS[(1)]	DSNY, Southwest Brooklyn Converted MTS, Shore Pkwy at Bay 41st Street, Brooklyn	Brooklyn 11	Brooklyn CDs 11, 12, 13 and 15
Converted MTS[(1)]	DSNY, East 91st Street Converted MTS, East 91st Street and York Avenue, Manhattan	Manhattan 8	Manhattan CDs 5, 6, 8 and 11
Converted MTS[(1)]	DSNY, North Shore Converted MTS, 31st Avenue and 122nd Street, Queens	Queens 7	Queens CDs 7 through 14
Truck-to-Rail TS	Waste Management Harlem River Yard, 98 Lincoln Avenue, Bronx	Bronx 1	Bronx CDs 1 through 12
Truck-to-Rail TS[(2)]	Allied Waste Services, East 132nd Street Transfer Station, Bronx and Oak Point Rail Yard, Oak Point Avenue and Barry Street, Bronx	Bronx 1	Bronx CDs 1 through 12
Truck-to-Barge TS	Waste Management, 485 Scott Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1,3, 4 and 5
Truck-to-Rail TS	Allied Waste Services, 72 Scott Avenue-598 Scholes Street, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5
Truck-to-Rail/Barge TS[(3)]	Waste Management, 30-58 Review Avenue, Queens and the LIRR Maspeth Rail Yard, Maspeth Avenue and Rust Street, Queens	Queens 2	Queens CDs 1 through 6
Waste-to-Energy Facility[(4)]	PANYNJ, Essex County RRF, Newark, New Jersey	NA	Manhattan CDs 1, 2, 3, 4, 7, 9, 10 and 12

Notes:

(1) From among the selected proposers responding to DSNY's MTS RFP, DSNY will award one or more contracts for the acceptance, transport and disposal of containerized waste from the Converted MTSs.

(2) This facility would include use of an off-site intermodal railyard, as noted in the Table, where containers would be loaded onto railcars.

(3) Pending the outcome of negotiations between DSNY and Waste Management, the Review Avenue Transfer Station would be modified to operate as either a truck-to-barge or a truck-to-truck-to-rail facility. If operated in a truck-to-rail mode, an off-site intermodal railyard, as noted in the Table, would be required, where containers would be loaded onto railcars.

(4) The Essex County RRF is a permitted and operating WTE facility in Newark, New Jersey, not subject to environmental review in the DEIS. DSNY-managed Waste would be delivered in collection vehicles to this facility or via hopper barges from the existing MTSs, if an enclosed barge unloading facility (EBUF) were to be developed in the vicinity of the Essex County RRF some time in the future. The potential impacts of DSNY collection vehicles exiting the City through bridge and tunnel portals are reviewed in the DEIS.

LIRR = Long Island Rail Road
TS = Transfer Station

Table 1.3-3
Draft New SWMP Long Term Export – Potential Support Facilities

Facility Type	Owner, Facility Name, and Address	Community District
Barge Staging Area (1)	DSNY, 52nd Street Barge Staging Area, 52nd Street and 1st Avenue, Brooklyn	Brooklyn 7
Intermodal Barge-to-Rail Yard (2)	Waste Management, Harlem River Yard, East 132nd Street and St. Anns Avenue, Bronx	Bronx 1
Intermodal Barge-to-Rail Yard (2)	NYCEDC, 65th Street Intermodal Yard, 65th Street Rail Yard, Brooklyn	Brooklyn 10

Notes:

(1) The 52nd Street Barge Staging Area historically served the existing MTSs as a location where barge movements between individual MTSs and Fresh Kills could be staged. A replacement-in-kind of the pier structure is proposed. Its purpose in the Long Term Export Program will be more limited; principally, a supply storage facility and a location to temporarily moor barges that are scheduled for maintenance at other facilities.

(2) Two intermodal barge-to-rail facilities at Harlem River Yard and the 65th Street Rail Yard may be constructed as transload facilities to move containers between the Converted MTSs and railheads. DSNY has instituted a ministerial process to register intermodal facilities handling containerized waste that is not subject to environmental review. However, the USACE Section 10/404 permits and the NYSDEC Article 15/25 permits pertaining to waterfront construction are subject to environmental review. Note that there are other existing intermodal facilities that may be used for intermodal transfer of containers from the Converted MTSs.

NYCEDC = New York City Economic Development Corporation

1.3.2.2 Long-Term Export Alternatives to the Proposed Action

Table 1.3-4 lists the Alternatives to the Proposed Action that were considered and that will also be reviewed in this DEIS. These Alternatives include: (1) conversions at four other existing MTSs sites; (2) the development of a new truck-to-rail facility in Brooklyn Community District 1 that was a proposal submitted in response to DSNY's Request for Proposals (RFP) procurement for private transfer station capacity for the Brooklyn portion of the Greenpoint wasteshed; and (3) the use of the existing MTSs, assuming substantial refurbishing of these facilities, to supply waste in open hopper barges to an enclosed barge unloading facility (EBUF) in the New York/New Jersey harbor region where it would be containerized for transport to disposal sites, although the location of such an EBUF has not been identified.

In addition to the Alternative sites referenced in Table 1.3-4, Volume V of the Commercial Waste Management Study (CWMS or CWM Study or Study),[2] Manhattan Transfer Station Siting Report, investigated four potential sites for truck-to-rail/barge transfer stations in Manhattan and concluded that three of these sites were technically infeasible, and that the fourth posed very significant land use constraints that would have to be overcome. Also, DSNY had, in the 2000 Final Environmental Impact Statement (FEIS), evaluated the technical feasibility and environmental suitability of 24 export facility options on 15 different sites, as the basis for preparing the 2000 SWMP Modification.

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 serve 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.

[2] The CWMS is available on the DSNY website: www.nyc.gov/sanitation, and in compact disk form as an Appendix to the Draft New SWMP.

Table 1.3-4
Draft New SWMP Long Term Export – Alternatives Considered

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Alternatives			
Converted MTS	DSNY, South Bronx Converted MTS, Farragut Street, Bronx	Bronx 2	Bronx CDs 1 through 12
Converted MTS	DSNY, Greenpoint Converted MTS, North Henry and Kingsland Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5; Queens CDs 1 through 6
Converted MTS	DSNY, West 135th Street Converted MTS, West 135th Street and 12th Avenue, Manhattan	Manhattan 9	Manhattan CDs 9, 10 and 12
Converted MTS	DSNY, West 59th Street Converted MTS, West 59th Street and Marginal Street, Manhattan	Manhattan 7	Manhattan CDs 1 through 4 and 7
Truck-to-Rail TS	IESI or TransRiver Marketing, Meserole Street Transfer Station, 568 Meserole Street, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5
Existing MTS	DSNY, South Bronx MTS, Farragut Street, Bronx	Bronx 2	Bronx CDs 1 through 12
Existing MTS	DSNY, Greenpoint MTS, North Henry and Kingsland Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5; Queens CDs 1 through 6
Existing MTS	DSNY, Hamilton Avenue MTS, Hamilton Avenue at Gowanus Canal, Brooklyn	Brooklyn 6	Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18
Existing MTS	DSNY, Southwest Brooklyn MTS, Shore Parkway at Bay 41st Street, Brooklyn	Brooklyn 11	Brooklyn CDs 11, 12, 13 and 15
Existing MTS	DSNY, West 135th Street MTS, West 135th Street and 12th Avenue, Manhattan	Manhattan 9	Manhattan CDs 9, 10 and 12
Existing MTS	DSNY, West 59th Street MTS, West 59th Street and Marginal Street, Manhattan	Manhattan 7	Manhattan CDs 1 through 4 and 7
Existing MTS	DSNY, East 91st Street MTS, East 91st Street and York Avenue, Manhattan	Manhattan 8	Manhattan CDs 5, 6, 8 and 11
Existing MTS	DSNY, North Shore MTS, 31st Avenue and 122nd Street, Queens	Queens 7	Queens CDs 7 through 14

1.4 Proposed Action - Recycling

1.4.1 Existing Conditions/No Action

Through the first half of 2002, DSNY collected and recycled metal, glass and plastic (MGP) and Paper materials sufficient to divert 20% of the DSNY-managed Waste (curbside/containerized) waste stream from disposal. The program flourished in many respects, and compared favorably with the recycling programs of other major cities throughout the United States.

On July 1, 2002, the City's recycling program, having incurred budget cuts in the aftermath of the events of September 11, 2001 and the subsequent economic recession, temporarily suspended glass and plastic recycling. Diversion rates suffered; however, plastic and glass recycling programs were restored in Fiscal Year (FY) 2003 and FY 2004, respectively, and funding for composting and other services was restored in FY 2005.

1.4.2 Recycling Proposed Action

Moving forward, cost-effective recycling programs are now an even greater priority. To address this priority, the Proposed Actions for recycling will commit the City to a 20-year contract for processing MGP. This long-term commitment will facilitate the development of state-of-the-art processing infrastructure in the City, which, in turn, will generate the consistent streams of materials necessary to foster reliable secondary materials markets. The 20-year contract also ushers in a new era of waterborne transportation of Recyclable materials, mirroring the transportation goals of the Draft New SWMP as a whole. Consistent with the commitment to emphasize waterborne transport as an element of the Draft New SWMP, the City will also seek to develop a Recyclables acceptance facility in Manhattan that would transport Manhattan Recyclables by barge to the newly proposed Recyclables processing facility in Brooklyn.

Accordingly, the Proposed Action for recycling has the following new elements.

- Develop a materials processing facility at the 30th Street Pier (in Brooklyn Community District 7) through a public-private partnership involving a 20-year service agreement with a private Recyclables processor; and
- Develop a Recyclables acceptance facility in Manhattan.

1.4.2.1 Recyclables Processing Facility

The City plans to enter into an agreement with the Hugo Neu Corporation (HNC) for the acceptance, processing and marketing of the MGP and a portion of the mixed Paper[3] (Curbside Recyclables) collected by DSNY. As part of the agreement, HNC will finance the development of a materials processing facility on City-owned land at the 30th Street Pier in the South Brooklyn Marine Terminal (SBMT).

In addition, HNC will use its existing regional network of waterfront acceptance facilities and its own fleet of barges to transport material to the new facility at SBMT. Recyclable material will arrive at the new materials processing facility as follows:

- DSNY trucks collecting Curbside Recyclables in the Bronx will tip this material at HNC's existing acceptance facility in the Bronx, where HNC will transfer material to barge for transport to SBMT.
- DSNY trucks collecting Curbside Recyclables in Staten Island CDs will tip this material either at the new Staten Island Transfer Station for consolidation into transfer trailers that will drive to SBMT or at HNC's existing acceptance facility in Jersey City, where HNC will transfer material to barge for transport to SBMT.
- DSNY trucks collecting Curbside Recyclables in northern Brooklyn and Queens CDs will tip this material at HNC's existing acceptance facility in Long Island City, where HNC will transfer material to barge for transport to SBMT.

[3] This is the portion that is not already committed to Visy Paper (NY), Inc. (Visy), for processing in its recycled paper mill on Staten Island.

- DSNY trucks collecting Curbside Recyclables in Manhattan CDs will tip this material at a Manhattan acceptance facility. Until the new acceptance facility is on line, trucks from southern Manhattan will tip at HNC's existing acceptance facility in Jersey City; trucks from northern Manhattan will tip at HNC's existing facility in the Bronx where HNC will transfer this material to barge for transport to the 30th Street Pier at SBMT.
- DSNY trucks collecting Curbside Recyclables in southern Brooklyn CDs will drive to SBMT and tip directly at the materials processing facility.

1.4.2.2 Manhattan Recyclables Acceptance Facility

DSNY proposes to develop a Recyclables acceptance facility in Manhattan. The West 59th Street MTS is currently the transfer site for the mixed Paper which DSNY collects in Manhattan CDs and Visy Paper, Inc. barges to its recycled Paper mill in Staten Island.

As described in the Proposed Actions for Commercial Waste (see Section 1.5.2), DSNY is proposing to reserve the West 59th Street MTS to facilitate the export of a portion of Manhattan's Commercial Waste by barge. To maximize the throughput capacity required for this scenario, the truck-to-barge operation for mixed Paper would need to be relocated. To facilitate this relocation, as well as to reduce the number of vehicle miles traveled by DSNY trucks, DSNY proposes to develop a Recyclables acceptance facility in lower Manhattan. This proposal would also fulfill the goal of the Draft New SWMP to distribute waste management facilities more equitably in all five boroughs.

The most promising location for this Manhattan Recyclables acceptance facility is the former site of DSNY's Gansevoort MTS on Pier 52 in Manhattan Community District 2. The Gansevoort MTS has not been used by DSNY since 1991. For this proposed project to move forward, several issues must be resolved, such as acceptable integration of the facility design (including an environmental education center) and operation into the plans for the Hudson River Park, and amendment of the Hudson River Park Act.

Table 1.4-1 lists all of the facilities that would be elements of the Proposed Action for Recycling in the Draft New SWMP and will be reviewed in the DEIS.

Table 1.4-1
Proposed Action Recycling Facilities

Facility Type	Operator/Owner, Facility Name, and Address	Community District
Recyclables Processing/Acceptance[(1)]	Hugo Neu Corporation, 30th Street Pier at the South Brooklyn Marine Terminal, Brooklyn	Brooklyn 7
Recyclables Acceptance[(2)]	DSNY, Former site of Gansevoort MTS, Pier 52, Manhattan	Manhattan 2

Notes:

(1) This 30th Street Pier at SBMT is a complex of facilities that would be designed to receive and process DSNY Curbside Recyclables. Curbside Recyclables collected in Brooklyn would be delivered by truck to this facility. Curbside Recyclables from other boroughs would be delivered by barge. Recyclables would be transferred from this facility by barge. As a recycling facility, it is not subject to regulation as a solid waste facility. However, the waterfront construction requires USACE Section 10/404 permits and the NYSDEC Article 15/25 permits that are subject to environmental review.

(2) The timetable for designing, permitting and constructing this facility, which would receive truck deliveries of DSNY MGP Curbside Recyclables collected in Manhattan for barge transfer to the 30th Street Pier at SBMT for processing, is approximately seven years. Accordingly, the environmental review of this facility is deferred until more detailed design information is available. However, an analysis of the potential for off-site traffic, air quality and noise impacts from directing DSNY's Manhattan Recyclables collection vehicles to this destination was conducted.

Note that pursuant to Title 6 of the New York Codes, Rules and Regulations (NYCRR) Sections 360-12.1 and 1.8(h), the NYSDEC authorizes recycling facilities by registration. Accordingly, recycling facilities conforming to this regulation are exempt from environmental review for purposes of solid waste facility permitting. However, the potential impacts associated with the issuance of other permits are subject to environmental review. 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 also be evaluated in the DEIS.

1.4.3 Alternatives to the Proposed Action

The Alternative to the Proposed Action to develop an MGP Recyclables processing facility would be the continuation of the status quo arrangement for processing MGP from Curbside collection that would not result in the economic benefits to the Curbside Recycling Program afforded by the Brooklyn Recyclables processing facility.

The Alternative to developing a Recyclables acceptance facility at the site of the former Gansevoort MTS would be continuing delivery of Manhattan MGP to facilities in New Jersey and the Bronx or potentially using another existing MTS facility in Manhattan. The environmental review in this DEIS of the existing MTSs as Alternatives for Long Term Export evaluates the potential for significant adverse impacts associated with using the existing MTSs for Long Term Export. The potential for impacts associated with use of the existing MTSs as Recyclables acceptance facilities would be less than the impacts analyzed because of the lower number of DSNY collection vehicles associated with delivery of Recyclables to these sites, compared to those associated with delivery of DSNY-managed Waste to these sites. Therefore, no additional environmental review of this Alternative is required.

1.5 Proposed Action - Commercial Waste

1.5.1 Existing Conditions

Commercial Waste management is as complex a system as the DSNY-managed Waste counterpart. The volume of Putrescible and Non-Putrescible Commercial Waste managed in the City is even larger, accounting for nearly 75% of the City's total waste stream. Commercial Waste is managed by the private sector through a system of private carters and private transfer stations. Both elements of the systems are subject to regulation – the private carters by the City's Business Integrity Commission (BIC), and the private transfer stations by DSNY and NYSDEC.

Except for that portion of Commercial Waste carted directly out of the City, waste export occurs through a network of land-based transfer stations, points at which waste from local collection trucks is transferred for long-haul export. These transfer stations are generally located in M3 districts (districts reserved for heavy industry) which are well buffered from residential communities. However, waste trucks traveling to and from these transfer stations often pass through residential communities on their way to the designated truck routes.

Local Law 74 of 2000 (LL74) amended the Administrative Code to require 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. DSNY submitted the report, including Volumes I through VI of the CWMS, to the Mayor and the City Council in March 2004. The Study extensively characterized the City's Commercial Waste management system, providing information on the quantity of Commercial Putrescible, Non-Putrescible and Fill Material generated in the City, recycled, and disposed in- and out-of-City; the locations and operations of the City's putrescible, non-putrescible and fill material transfer stations;[4] and the effects of transfer stations located in geographical proximity in certain CDs in the City.

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 addressed 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. The complete Study can be accessed on DSNY's website: www.nyc.gov/sanitation and will also be included on a compact disk as Appendix E of the Draft New SWMP. Printed copies of the Study are available at the List of Public Document Repositories in Table 1.7-1.

There are currently 58 private waste transfer station facilities in the City with 65 permits. This is down from 220 transfer stations in 1990, shortly after the 1988 increase in tipping fees for Commercial Waste at the Fresh Kills Landfill and at certain City MTSs. Approximately one-third of the facilities accept Putrescible Waste, one-third accept construction and demolition (C&D) debris, and one-third accept clean Fill Material (some facilities accept more than one category of materials). As discussed in more detail in the Study, these facilities are located in Manufacturing Districts (M1, M2 and M3), and therefore, are not distributed evenly among the city's 59 CDs. For example, Community District 1 in Brooklyn has 14 facilities with 17 permits,

[4] These types of transfer stations are permitted under DSNY's Operating Rules.

while Bronx Community District 2 has 8 facilities and Queens Community District 7 has 5 facilities. At present, only one facility, at Harlem River Yard in the Bronx, uses rail to transport waste out of the City. There are two registered sites for the intermodal transfer of containerized solid waste, where sealed containers may be delivered by truck, and transloaded onto a railcar for further transport without being opened or undergoing any processing.

Two features of the current Commercial Waste management system have served as the focus of recent concern. The first is that Manhattan has no private transfer stations, despite the fact that over 40% of the City's Putrescible Commercial Waste is generated in Manhattan. As a result, although some waste is driven directly out of the City, most of Manhattan's Commercial Waste is driven to another borough before it is exported from the City. Further, because only one of the City's 19 private putrescible transfer stations exports waste by means other than transfer trailer, the export of waste—not just its collection—creates truck traffic.

1.5.2 Proposed Action – Commercial Waste Management

To achieve a more balanced distribution and reduce effects from Commercial Waste transfer operations in those CDs that currently have the greatest number of transfer stations, the following measures are proposed:

- Assess the feasibility of providing the site of the existing Manhattan West 59th Street MTS to private waste management companies to use for the transfer of Commercial Waste collected by private carters in Manhattan. The facility could be: (1) refurbished and used in conjunction with an EBUF; or (2) redeveloped as a containerization facility.
- Design measures to encourage private carters to deliver Commercial Waste during the 8:00 p.m. to 8:00 a.m. time period to the four Converted MTSs that are elements of the Proposed Action for Long Term Export (Hamilton Avenue and Southwest Brooklyn, Brooklyn; East 91st Street; Manhattan; and North Shore, Queens).
- Negotiate arrangements with the owners/operators of the selected private transfer stations in the Bronx, Brooklyn and Queens that submitted proposals in response to the BQB RFPs and that are potential elements of the Proposed Action to require Commercial Waste (in addition to DSNY-managed Waste) processed at these facilities to be containerized and exported from the project service area by barge and/or rail.

1.6 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.

1.7 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 Draft New SWMP; involved agencies with discretionary approval of the Draft New SWMP are the City Council and NYSDEC.

1.7.1 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.

1.7.1.1 Federal Agencies

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

1.7.1.2 New York State Agencies

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

1.7.1.3 New York City Offices, Agencies and Commissions

- 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)

1.7.2 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 were 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 1.9, Public Outreach Process/Environmental Justice, for a description of the public participation and outreach program). In addition to comments received at the Scoping Meetings, written comments were accepted until July 11, 2004. This Final Scoping Document has been revised to address the public comments received.

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, on the DSNY website at www.nyc.gov/sanitation, and at the List of Public Document Repositories in Table 1.7-1.

Issuance of an 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 1.8.

Table 1.7-1
List of Public Document Repositories

Repository Location	Repository Address	Days and Hours of Operation	Phone Number
Manhattan			
Manhattan CB 8 Office	505 Park Avenue	call for days and hours	(212) 758-4340
96th Street Public Library	112 East 96th Street	call for days and hours	(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	call for days and hours	(212) 662-9727
Manhattan CB 4 Office	330 West 42nd Street, 26th Floor	call for days and hours	(212) 736-4536
Riverside Public Library	127 Amsterdam Avenue	call for days and hours	(212) 870-1810
Brooklyn			
Brooklyn CB 7 Office	4201 4th Avenue	call for days and hours	(718) 854-0003
Sunset Park Public Library	5108 Fourth Avenue at 51st Street	call for days and hours	(718) 567-2806
Brooklyn CB 11 Office	2214 Bath Avenue	call for days and hours	(718) 266-8800
New Utrecht Public Library	1743 86th Street	call for days and hours	(718) 236-4086
Brooklyn CB 1 Office	435 Graham Avenue	call for days and hours	(718) 389-0009
Leonard Public Library	8 Devoe Street	call for days and hours	(718) 486-3365
Queens			
Queens CB 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	call for days and hours	(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, College Point	call for days and hours	(718) 539-2330
Bronx			
Bronx CB 2 Office	1029 East 163rd Street	call for days and hours	(718) 328-9125/6
Hunts Point Public Library	877 Southern Boulevard	call for days and hours	(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	call for days and hours	(718) 665-6255
Staten Island			
St. George Library Center	5 Central Avenue	call for days and hours	(718) 442-8560
Office of the Borough President Attn: Nicholas Dmytryszn	Borough Hall, Room 120	M-F, 9:00 a.m. – 5:00 p.m.	(718) 816-2200

1.8 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.

1.8.1 Federal

1.8.1.1 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;
- 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.

1.8.2 New York State

1.8.2.1 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 Pollutant 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).

1.8.2.2 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.

1.8.3 New York City

1.8.3.1 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.

1.8.3.2 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.

1.9 Proposed Public Outreach Process/Environmental Justice

1.9.1 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 was implemented in the potential EJ Communities 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 are 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.

1.9.2 The EJ Program

DSNY, as lead agency for the DEIS for the Proposed Action, has implemented 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.

1.9.2.1 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;
- Complied with the CEQR timetable for advance notice of the Scoping Meetings;
- 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;
- Conducted 10 Public Scoping Meetings in project areas potentially affected by the Proposed Action or Alternatives;
- Published all comments received; and
- Issued a summary of comments and response in Attachment C of this document.

Because nine of the ten potential Long Term Export facility project areas are located within EJ Communities, DSNY has implemented 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 public 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 was established: 1-888-NYC-SWMP. Messages are documented and substantive comments are 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.

1.9.2.2 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.

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 Proposed Action for Long Term Export and Alternatives, 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 Proposed Action for Long Term Export or Alternatives. 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 a Proposed Action in the DEIS, appropriate evaluation of existing facilities in the EJ project area that may impose similar environmental burdens will be presented.

After issuance of the Final Scoping Document and 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 were identified through conversations with stakeholders; materials were translated as appropriate, including into Mandarin and Korean.
- **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) may be invited to link to the DSNY website.

Public information materials were 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 Alternatives); (3) answer FAQs; and (4) present other pertinent information on the permitting process.

1.9.2.3 Joint Public Hearing Phase

The outreach documents have been and will continue to be distributed widely through various mailings and the DEIS Public Hearings that will be held within or near the potential EJ Community where the Proposed Action facilities would be located. 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. (Note that any permitting actions for those private transfer stations that are part of the Proposed Action will proceed on a separate schedule.) It is anticipated that, after DEIS publication and prior to the DEIS Hearing, NYSDEC would issue Notices of Complete Permit Applications for the Converted MTSs that are part of the Proposed Action. Key stakeholders will be informed of the DEIS publication and the Joint Hearings no fewer than two weeks in advance.

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2.0 SITE-SPECIFIC ASSESSMENTS OF PROPOSED PLAN FACILITIES

2.1 Site Descriptions

2.1.1 Proposed Plan Facilities for Long Term Export

2.1.1.1 Hamilton Avenue Converted MTS, Brooklyn

The existing Hamilton Avenue MTS site is located off of Hamilton Avenue, at the mouth of the Gowanus Canal in Brooklyn. The site is bounded by the elevated Gowanus Expressway to the north and east, 17th Street to the south and the 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 occupied by other existing DSNY facilities, including the former Hamilton Avenue incinerator. A contract has been awarded to demolish the incinerator and work is commencing; an environmental remediation program will be conducted prior to demolition. 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 650 feet in length. The southern boundary of the site is approximately 850 feet in length. The western side of the site is approximately 225 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 zoning 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 an M1-2D zoning district, which allows residential uses with the authorization of the City Planning Commission.

Further east and south of the site are the R6 and R5 zoning districts that characterize the Gowanus/Sunset Park neighborhoods. North and west of the site, in Red Hook, is another M3-1 zoning district that follows the north side of the Gowanus Canal into New York Bay.

The site is bordered by transportation and municipal functions on the northeast and eastern edges and commercial activities on the south side. An active City Department of Transportation (NYCDOT) asphalt plant and storage yard is located northeast of the site. Hamilton Avenue, a heavily-traveled arterial, and the elevated Gowanus Expressway define the eastern boundary of the site, and a large, two-story parking lot/garage associated with a Home Depot on 19th Street borders the site on the south side. Various businesses providing automotive services and warehouses are located on the northeastern side of Hamilton Avenue, including DSNY's Brooklyn 2 Garage. A new Lowe's Home Improvement store opened earlier this year on the Gowanus Canal near 12th Street, a few blocks north of the site.

There are no City, state or nationally designated landmarks or historic districts within ½-mile of the site, nor are there any archaeological resources on the site.

The Draft New SWMP DEIS will evaluate the delivery to the Hamilton Avenue Converted MTS of DSNY-managed Waste, including DSNY-managed Waste from other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions) and the delivery of commercial waste by private carters. 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 towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal facilities.

2.1.1.2 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 Community District 11. The site is bounded to the north by 25th Avenue (extended), to the south by Bay 41st 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 approximately 350 feet along its north-south parallel and approximately 600 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. The incinerator is in the process of being demolished; an environmental remediation program was conducted prior to demolition. To the east of the site, the DSNY Community District 11 garage facility, two salt storage sheds and a self-help site (SHS) occupy the remainder of the DSNY-owned lot.

The site is located at the southern end of an M3-1 zoning district that extends about ½-mile along the waterfront from Bay Parkway to Bay 41st Street. Immediately south of the site is a small M1-1 zoning district and further south is a C3 commercial zoning district. Five hundred feet east of the site, on the same block but fronting Shore Parkway, is the Nellie Bly Amusement Park that has been a neighboring feature for decades. Beyond these industrially zoned waterfront areas, most of the surrounding residential communities (Bensonhurst, Gravesend and Coney Island [east and south of the site]) are zoned for medium density residential uses (R4, R5 and R6) and contain a mix of housing types, parks and marinas. Within the larger residentially zoned district to the northeast is a small C8-1 zoning district that allows automotive-related uses in a few blocks between Cropsey and Bath Avenues.

To reduce the potential for damage to the seawall of the Marine Basin Marina, a property adjacent to the MTS site to the east, as a result of increased wake resulting from the construction of the Converted MTS or tugboat operations associated with the facility, a DSNY consultant recommended the installation of a kingpile bulkhead wall. Consequently, the Converted MTS project will include the construction of a kingpile bulkhead wall to ensure that the marina is not impacted by pile driving activities, construction-related dredging and tugboat prop wash (wake) during Converted MTS operations. The proposed kingpile bulkhead wall extends 290 feet south

into the ocean from the southeast corner of the existing pier to an existing channel buoy. The buoy delineates the limits of the navigable channel for tugs coming to the Converted MTS and is the eastern limit for the proposed dredge area. To improve the stability of the Marina seawall, the top of the sheeting between the kingpiles will be close to the existing ocean bottom and rip-rap or concrete groins will be installed perpendicular to the kingpile wall the Marina seawall. In addition, the angle of the proposed wall was designed to decrease the probability that tide, current and waves will erode the base of the Marina seawall.

There are no City, state or nationally designated landmarks or historic districts within a ½-mile radius of the site, nor are there any archaeological resources on the site.

The Draft New SWMP DEIS will evaluate the delivery to the Southwest Brooklyn Converted MTS of DSNY-managed Waste, including DSNY-managed Waste from other City agencies (e.g., the NYCDPR, NYCHA and non-profit institutions), and the delivery of commercial waste by private carters. 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 towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal facilities.

2.1.1.3 East 91st Street Converted MTS, Manhattan

The existing East 91st Street MTS site is located in the Upper East Side section of Manhattan in Community District 8. The site is bounded by the East River to the north and east, Carl Schurz Park to the south and the Franklin D. Roosevelt (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 3.07 acres. The East 91st Street MTS site is roughly rectangular in shape. The western boundary of the site conforms to the existing configuration of the FDR Drive. The northern boundary of the MTS site 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 East 91st Street Converted MTS extends beyond the water grant line, which will require an underwater land grant from the New York State Office of General Services.

The MTS site is located within a small irregularly-shaped M1-4 (light industrial) zoning district, which extends from East 90th to East 93rd Streets along the shoreline, between the FDR Drive and the East River waterfront. It continues west of the site to York Avenue between East 90th and East 92nd Streets to encompass most of the Asphalt Green Recreational Center. Beyond the site on all sides are high-density residential zoning districts that allow for dense, high-rise development. The northern portion of Asphalt Green is situated within a large R7-2 zoning district that extends about one mile to the north. Immediately south of the site is an R10A high-density residential district and is surrounded by other high-density residential districts (R8, R8B and R10) within a ½-mile radius. There are also a wide array of discrete commercial (C84, C28, C1-9, C4-6) zones further west and northwest of the site throughout the ½-mile radius.

One historic district and 13 other historic properties are located within ½-mile of the site, representing different stages of the neighborhood's development over the last 200 years. The two closest historic resources are: (1) Asphalt Green Recreation Center (New York City Landmark [NYCL] and National Register [NR]), across the FDR Drive from the site; and (2) Gracie Mansion (NYCL, State Register [SR] and NR), located south of the site at East 88th Street. Asphalt Green, built in 1944, was the Municipal Asphalt Plant. It was the first successful American use of the parabolic arch form in reinforced concrete. Gracie Mansion was built at the turn of the 19th century as a country house for Archibald Gracie, a successful Scottish merchant who settled in New York. It was acquired by the City in 1896 and later became an official residence for the City mayor in 1942.

No archaeologically significant resources are located on the site.

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

The Draft New SWMP DEIS will evaluate the delivery to the East 91st Street Converted MTS of DSNY-managed Waste, including DSNY-managed Waste from other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions) and the delivery of commercial waste by private carters. 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 towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal facilities.

2.1.1.4 North Shore Converted MTS, Queens

The existing North Shore MTS is located in the College Point section of Queens in Community District 7. 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, which includes the site and is bounded by 122nd Street, is approximately 12.5 acres, of which approximately 7.5 acres are upland. DSNY's District 7 garage occupies the majority of this acreage; the remaining five acres are made up of water that extends to the U.S. Pierhead Line. The North Shore MTS site is roughly rectangular in shape, with a bend beyond the U.S. Bulkhead Line extending south. The northern boundary of the MTS site 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 located on the western edge of a heavy industrial M3-1 zoning district along Flushing Bay, which extends north approximately to 30th Avenue and east to Ulmer Street. Bordering the M3-1 zone to the north is an M1-1 zone, which allows for light industrial uses and extends from Flushing Bay to beyond ½-mile from the site. M1 zoning districts, often buffers for adjacent residential and commercial districts, serve this function to the residentially zoned areas north of the site. These include a variety of residential zoning districts such as R4, R5B, R4-1 and R3X.

No designated historic landmarks or districts are within the study area nor are there archaeologically significant resources located on the site.

The Draft New SWMP DEIS will evaluate the delivery to the North Shore Converted MTS of DSNY-managed Waste, including DSNY-managed Waste from other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions) and the delivery of commercial waste by private carters. 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 towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean going vessels for transport to out-of-City disposal facilities.

2.1.1.5 Harlem River Yard Truck to Rail Transfer Station (TS)

The Harlem River Yard (HRY) Site is an existing permitted transfer station located at 98 Lincoln Avenue in the Bronx. The HRY Site is bounded on the northeast side by a primary branch of the through-track rail line to the Oak Point Link running through the development, on the west by the Harlem River, and on the south and southeast by the Harlem River. The property is located directly northeast of the Harlem River and Bronx Kill.

The site is located in a heavily industrialized area that is zoned M3-1. Across 132nd Street to the northeast lies a light manufacturing zone (M1-2), with a residential zone (R6) beyond the Major Deegan Expressway more than ½-mile from the site. Across the Harlem River in Manhattan lies the Harlem River Drive, bordered by light manufacturing (M1-2) and medium-density apartment-house (R7-2) zones. Land use on Randalls Island to the south across Bronx Kill is also designated R7-2.

As reported in the 2000 SWMP FEIS, the study area for the Harlem River Yard Barge to Rail Intermodal Yard is very industrial in nature as it is part of one of the City's few remaining active industrial waterfronts. The area has not noticeably changed in terms of land use, population or zoning in the four years since publication of the 2000 SWMP FEIS. NYCDCP is currently considering rezoning approximately 15 blocks in the Port Morris section of the Bronx to allow mixed-use development on underutilized blocks north of the HRY site. Development related to this potential rezoning is projected to occur by 2014 at the earliest, well beyond 2006 when the Proposed Action is expected to be implemented. Therefore, this rezoning and development will not be included in the Future No-Build Condition analyzed in the Draft New SWMP DEIS.

The facility is currently contracted to accept up to 1,800 tpd of Bronx DSNY-managed Waste under Interim Export and DSNY delivers approximately 1,381 tpd on an average peak day. In response to DSNY's Bronx RFP, the HRY Truck to Rail TS proposes to accept all of the Bronx DSNY-managed Waste long term, which is approximately 2,337 tpd (average peak day analyzed in this DEIS, increased by an additional 20% contingency). To accomplish this, the HRY Truck to Rail TS requires no increase in capacity, but does require a minor modification for additional equipment. The HRY Truck to Rail TS is permitted at 4,000 tpd.

The existing facility is a direct truck-to-rail facility where Putrescible Waste is loaded directly from the tipping and processing floor into containers on railcars within the transfer station building. The complete transfer facility consists of an enclosed 69,600-square-foot steel-framed transfer building that includes an extension for lidding operations, maintenance and utility buildings, access roads and ramps, weigh station and scales, and employee and visitor parking lots.

2.1.1.6 East 132nd Street TS

The East 132nd Street TS is an existing permitted facility in the Port Morris section of the South Bronx in Community District 1, which is in the extreme southeastern corner of the Bronx. The site is bounded on the north by 132nd Street, on the east by the East River, on the south by the Bronx Kills and on the west by the HRY. Based on City tax maps, the site is comprised of

Lots 30 and 62 in Block 2538 and Lot 650 in Block 2538. The site and immediately surrounding area is zoned M3-1 for heavy industry. There are no residentially zoned districts, schools or parks within an approximate 2,000-foot radius of the site. There are no registered historic structures or significant architectural resources in the area.

East 132nd Street serves as the access road for the site. Employee parking is on the northern side of the property, where the site entrances and exits are located. The used portion of the site is entirely paved. The site is enclosed by fencing and has direct access to the East River.

Out-of-service rail tracks traverse the southwestern boundary and the middle of the site. These rails could not be used for direct rail export to an out-of City disposal facility because the East 132nd Street facility does not currently have rail access to the HRY due to an agreement between the developer of the HRY complex and the original developer of the truck-to-rail transfer station there. Under Long Term Export, DSNY-managed Waste would be containerized and then drayed to the Oak Point Rail Yard where containers would be loaded onto railcars.

The East 132nd Street Truck to Rail TS is currently permitted at 2,999 tpd based upon a negative declaration finding on an Environmental Assessment Statement (EAS) completed in 1994 for that capacity. It is currently contracted to accept up to 1,500 tpd of Bronx DSNY-managed Waste under Interim Export. The quantities of DSNY-managed Waste delivered to this facility for Interim Export average approximately 1,033 tpd. In response to the DSNY's RFP to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from the Bronx (Bronx RFP), the East 132nd Street Truck to Rail TS proposes to accept all of the Bronx DSNY-managed Waste long term, which is approximately 2,337 tpd (the average peak day analyzed in the DEIS increased by an additional 20% contingency). To accomplish this, the East 132nd Street Truck to Rail TS requires no increase in capacity, but does require a minor permit modification to add container lidding outside of the building.

2.1.1.7 Scott Avenue Truck to Barge TS, Brooklyn

The existing Scott Avenue Truck to Truck TS is a permitted facility located at 485 Scott Avenue. The site comprises several buildings, open lots and processing areas, and covers an area of 9.75 acres. The facilities and property are owned by Waste Management. The site is located in the Williamsburg Industrial Park section in Brooklyn, New York. The entrance to the site is at the intersection of Gardner Avenue and Thomas Street. The elevated Brooklyn-Queens Expressway (BQE) Kosciusko Bridge traverses the eastern portion of the site.

The site is located in a heavily industrialized area that is zoned M3-1. The northern perimeter of the property is bounded by Newtown Creek. Properties to the south include warehouses, open lots, truck parking lots and other heavy manufacturing and industrial facilities. Properties to the east include factories, truck parking lots, construction yards and other properties associated with heavy industrial uses. Properties to the west include Newtown Creek, a building supply and equipment rental facility, importer warehousing and related truck parking and other heavy industrial uses.

Newtown Creek is a NYSDEC-designated littoral zone. The existing property is currently situated between 7.5 feet and 22 feet Brooklyn Highway Datum (BHD) or 10.06 to 24.56 feet mean sea level (MSL). The 100-year tidal surge or 100-year floodplain is at elevation 10 feet MSL (7.44 feet BHD). All waste handling components of the facility's operation have been placed at elevation 7.5 feet BHD or higher to minimize the risk of flooding at the site.

The existing Scott Avenue Truck to Truck TS is currently permitted at 1,500 tpd with a negative declaration and EAS for that capacity dated January 2003. The Scott Avenue Truck to Truck TS is currently contracted to accept up to 1,400 tpd of DSNY-managed Waste under Interim Export. In response to the DSNY's Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from Brooklyn Formerly Delivered to the Greenpoint Marine Transfer Station (Brooklyn RFP), the Scott Avenue Truck to Truck TS proposes to accept all of the Brooklyn DSNY-managed Waste long term, which is approximately 900 tpd. To accomplish this, the Scott Avenue Truck to Truck TS requires no increase in capacity, but does require a minor modification for barge loading and container lidding to operate as a Truck to Barge TS.

The quantities of DSNY-managed Waste delivered to the facility under Interim Export average approximately 1,114 tpd. The Scott Avenue Truck to Barge TS would take 900 tpd, which is a decrease in tonnage. The Scott Avenue Truck to Barge TS would be a direct container-to-barge facility, where Putrescible Waste is loaded directly from the tipping and processing floor into containers and then transported from the transfer building across the property to waiting shuttle barges for transport to a container handling facility. At the container handling facility, containers would be loaded onto ocean-going barges for long-haul transport to a final disposal facility. Modifications to the facility would be made to accommodate containerizing the waste and container handling and barge loading operations.

2.1.1.8 Scott Avenue/Scholes Street Truck to Rail TS

The Scott Avenue/Scholes Street Truck to Rail TS site is located at 72 Scott Avenue/598 Scholes Street in Community District 1 near the Brooklyn/Queens border, in the predominantly industrial section of East Williamsburg, Brooklyn. It is generally surrounded by English Kills on the west, Newtown Creek on the east and Long Island Rail Road (LIRR) tracks to the east and south. The area is also characterized by abundant parking lots and garage facilities, some of which are leased by DSNY for trucks and other equipment storage. The site is located within Tax Block 2990, Lot 1 and Tax Block 2979, Lot 5, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

Currently, the site contains a processing facility for commingled Recyclables, Putrescible Waste processing area, and wastepaper baling plant, owned by Allied Waste Services. The 598 Scholes Street site is currently permitted to handle 1,450 tpd of source-separated Recyclables, and 220 tpd of Putrescible Waste. The buildings occupy a 106,700-square-foot area with several loading docks and rail access to the southeast.

The site is located within an M3-1 zoning district. This M3-1 zone extends north of the site along English Kills, east into Queens and south of the site where there are M1-2 and M1-1 zoning districts as well. The M1 zones act as a buffer between the residential and the heavier manufacturing districts and feature both residential and light manufacturing (e.g., distribution) activities. The nearest residential district, R5B, is located approximately ¼-mile east of the site.

The Scott Avenue/Scholes Street site is situated on the Brooklyn/Queens border which separates East Williamsburg, Brooklyn to the west and Maspeth, Queens to the east. South of the site are several private waste transfer stations (including BFI Waste Systems facilities on Scholes Street and Gardner Avenue, and Waste Management of New York facilities on Stewart Avenue and Varick Avenue), as well as a DSNY parking lot on Meserole Street, a new Community District 1 and 4 garage under construction on Varick Avenue and an existing garage on Johnson Avenue.

The English Kills canal located ¼-mile east of the site is approximately 200 feet wide and connects with Newtown Creek at the Brooklyn/Queens boundary. The LIRR tracks pass immediately south of the site between Meserole and Randolph Streets. The New York and Atlantic Railroad (NY&A) operates freight trains on these tracks, with a terminal nearby in Bushwick (to the west).

The area surrounding the Scott Avenue/Scholes Street site includes some vacant land to the north on Gardner and Stewart Avenues, as well as lots undergoing construction. Some sites have been rehabilitated to accommodate new industrial loft space and community facilities such as a Peter Jay Sharp Center for Opportunity on Porter Street. The other community facilities include a fire station on Morgan Avenue and a daycare center on Knickerbocker Street.

There is a mix of residential, industrial and some commercial uses further from the site. Industrial uses located nearly ½-mile from the site tend to be of lighter intensity than those found within ¼-mile of the site. These uses include printers, auto salvage and repair shops and food product manufacture and distribution companies. The nearest residential area, Bushwick, which is ½-mile east of the site along Willoughby and Starr Streets, is characterized by three- and four-story apartment buildings as well as single-family homes and townhouses.

According to published sources, no historic structures are located on the site. However, within ½-mile of the site there are three early 20th-century historic districts and one individual property that are listed on the NYSR and NR. The Vander Ende-Onderdonk House (a.k.a., The Adrian and Anne Wyckoff Onderdonk House), located nearly ¼-mile east of the site, is a City landmark and listed on the SR and NR. It is the oldest Dutch-American fieldstone house in the City, and

houses the Greater Ridgewood Historical Society. The three historic districts within ½-mile of the site (or just beyond) are all intact groupings of late 19th-century/early 20th-century working class rowhouse and tenement housing. They are all in the bisected neighborhood of Ridgewood, which spans the Queens and Brooklyn border. The Willoughby-Suydam Historic District covers 1½ blocks composed of 50 three-story brick tenements built between 1904 and 1906. Located more than ¼-mile southeast of the site, the district is listed on the SR and NR. The Stockholm-DeKalb-Hart Historic District covers 2½ blocks, approximately ½-mile east of the site. The central portion of this district is designated by LPC as the Stockholm Street Historic District.

The Scott Avenue/Scholes Street Truck to Rail TS would require an increase in its currently permitted Putrescible Waste capacity and would add rail export to the facility's waste shipping capabilities. The capacity of the facility would be increased to 1,368 tpd. This would include the 560 tpd of Putrescible capacity that would be transferred to the Scott Avenue/Scholes Street Truck to Rail TS from a nearby facility on Thames Street that would be shut down. In addition, Allied proposes that the permitted capacity of 388 tpd of construction and demolition debris (C&D) at 594 Scholes Street and 200 tpd from glass, tire and yard waste at 575 Scholes Street be transferred to the Scott Avenue/Scholes Street Truck to Rail TS. The permit application and EAS for the expansion to 1,368 tpd was submitted in September 2003, with supplemental traffic analyses submitted in March 2004 to support the expansion. The site is currently contracted to accept up to 220 tpd of DSNY-managed Waste under Interim Export, and has proposed to accept 891 tpd of DSNY-managed Waste under Long Term Export.

2.1.1.9 Review Avenue Truck to Rail/Barge TS

The Review Avenue TS site is located at 38-50 Review Avenue in Queens and is adjacent to Newtown Creek. The facility and property are owned by Waste Management of New York. The site is in the West Maspeth section of Queens in Queens Community District 2 in a heavily industrialized area across Newtown Creek from the Greenpoint section of Brooklyn. It is

bounded by the Montauk branch of the LIRR on the north and Newtown Creek to the south. Industrial and warehouse buildings are on the site's eastern and western borders. Laurel Hill Boulevard is farther to the east and Greenpoint Avenue is farther to the west. Calvary Cemetery is approximately 520 feet to the north of the site. There are no schools or parks within a ¼-mile radius.

The site is comprised of approximately four upland acres. Access to the site is via an easement that extends from Review Avenue between two warehouses and over the LIRR right-of-way. Based on City tax maps, the site is comprised of all or portions of Lots 300, 308, 309 and 1366 within Block 312. The site and the immediately surrounding area are zoned M3-1 for industrial/heavy manufacturing use under a "Use Group 18" designation. The site is currently permitted to handle 958 tpd of Putrescible Waste as a truck-transfer facility. Newtown Creek is an NYSDEC-designated littoral zone and a portion of the existing property is within the 100-year floodplain.

DSNY's Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from Queens Formerly Delivered to the Greenpoint Marine Transfer Station (Queens RFP), requires that proposers commit to exporting all waste processed at their facility (both DSNY and commercial) by rail or barge. In its response, the proposer offered two alternatives, one for barge and one for rail.

Review Avenue is currently permitted as a truck-to-truck TS at 958 tpd. The existing facility has a 13,800-square-foot processing building that includes a 1,600-square-foot tipping floor, access roads, inbound and outbound scales, on-site queuing for up to 25 vehicles, and employee and visitor parking areas. The existing facility is currently used for Interim Export of DSNY-managed Waste. A permit application to modify the facility for barge transport and a capacity expansion from 958 to 1,200 tpd is proposed and was submitted in January 2003. The facility would be modified to enable lidding of containers and transport of containerized waste by barge and would require a permit modification to do so.

Waste Management, in its response to the DSNY's Queens RFP, has proposed Review Avenue as a truck-to-barge TS to accept all of the DSNY-managed Waste generated in Queens CDs 1 through 6, an average of approximately 1,200 tpd. The Review Avenue Truck to Rail TS would require the same modifications as the Review Avenue Truck to Barge TS for lidding containers that would be drayed to the Maspeth Rail Yard; however, there would be no improvements for barge loading/unloading.

Under the Review Avenue Truck to Rail TS Alternative, DSNY-managed Waste would be containerized and then drayed on chassis by yard tractors to the Maspeth Rail Yard, where the containers would be loaded onto railcars. The Maspeth Rail Yard is approximately 1½ miles from the Review Avenue Truck to Rail TS site in Queens Community District 2.

Access to the Maspeth Rail Yard is provided via Maspeth Avenue off of Rust Street. At the Maspeth Rail Yard, containers would be unloaded from the chassis and placed onto railcars. Full containers would be brought to the rail yard only when a train is available for loading and would not be stored at the Maspeth Rail Yard. The trucking of containers of DSNY-managed Waste to Maspeth Rail Yard is considered part of this DEIS, since, at present, all waste from the Review Avenue Truck to Rail TS goes out by transfer trailer. However, the review is limited to off-site impacts of draying to the Maspeth Rail Yard, since the Maspeth Rail Yard has been permitted as an intermodal yard and any changes in this permit would be subject to DSNY's new rules, as a non-discretionary action.

2.1.1.10 Collection Vehicle Transport to Essex County WTE Facility

The out-of-City WTE facility is the Essex County RRF located on Raymond Boulevard in Newark, New Jersey, off the New Jersey Turnpike South. It is an existing permitted facility with a capacity of 2,800 tpd that can accept waste from the City, and, as such, no environmental review of this site is required in this DEIS. Currently DSNY-managed Waste from Manhattan is disposed there under Interim Export contracts.

Any required environmental review would be limited to the evaluation of off-site impacts associated with collection vehicle traffic as it leaves the City to reach the Essex County RRF in New Jersey.

DSNY does not envision a change in post collection routing of DSNY collection vehicles now going to the Essex County RRF. Implementation of this Proposed Action under a 20-year service agreement will not materially change DSNY collection operations. While it would change the post-collection destinations of some DSNY collection vehicles, truck routes and dumping schedules would remain substantially the same under the Long Term Export Program as under existing Interim Export contracts. This is because DSNY collection vehicles would still be routed to the nearest Hudson River crossing on their way to New Jersey.

2.1.2 Potential Support Facilities

The development of Converted MTSs and private transfer stations also requires supporting intermodal facilities where containerized waste can be transloaded to railcars or ocean-going barges. DSNY, through the issuance of the BQB and MTS Containerization RFPs, identified existing facilities that can provide this function within the City and in the New York Harbor region. However, DSNY intends to issue a Request for Expressions of Interest to solicit more information about these and other intermodal facilities, and the outcome of this process will determine which specific facilities will be utilized by the Long Term Export Program.

2.1.2.1 52nd Street Barge Staging Area, Brooklyn

The 52nd Street Barge Staging Area may serve as a support facility for the Converted MTSs. Its principal uses would be for storage of marine supplies required by the Converted MTSs, temporary mooring of barges scheduled for maintenance, and temporary staging of container barge movements between the Converted MTSs and intermodal transload facilities (barge-to-barge operations).

The existing 52nd Street Barge Staging Area is located within the Sunset Park section of the industrial Brooklyn waterfront in Community District 7, just south of Bush Terminal and north of the Brooklyn Army Terminal. It is bounded on the east by First Avenue and on the north, south and west by the Upper New York Bay. The site is located within Tax Block 803, Lot 5 based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*. Currently, the site contains a DSNY vehicle maintenance facility and a storage facility for sand and salt, as well as a parking lot for employees.

The site and most of the area within a ¼-mile of site lie within a large M3-1 zone, which extends southward to 57th Street. This M3-1 zone extends east toward Second Avenue, west to the shoreline and northward to the South Brooklyn Terminal. A mixed-use M1-2D zoning district and a small M1-2 zoning district on 54th Street are located east of Second Avenue. Immediately south of this light industrial district is an R6 zoning district, which encompasses Lutheran Medical Center. Small portions of R6A and R6B zoning districts allowing medium contextual residential development are situated southeast of the site along Second Avenue.

Along First Avenue, the land uses are characterized by light industrial activities, warehousing and some commercial space. A series of five- to six-story warehouses is located between First Avenue and the waterfront, north of 51st Street. These structures include loading piers and parking areas for trucks and autos.

Residential uses within ¼-mile of the site consist of two- and three-story single- and multi-family attached structures east of Second Avenue. Similarly, community facilities within ¼-mile of the site are generally located east and southeast of the site, along Second Avenue. The Lutheran Medical Center (including its associated mental health clinic), the Augustana Lutheran elder care facility, a five-story parking structure and the Martin Luther Playground are located at Second Avenue at 55th and 56th Streets.

The general land use pattern found within ¼-mile of the site extends to ½-mile from the site. Industrial uses housed in large industrial loft buildings are located on the blocks nearest the waterfront, while a mix of residential, commercial and lighter industrial activities characterize

the blocks east of Second Avenue. Rows of single-family attached homes and two- and three-story row houses line most of the blocks, along with isolated storefronts and auto repair shops between Second and Third Avenues, between 42nd and 46th Streets.

No significant elements of architectural or historical significance are located on the site, but several historic resources are located within ½-mile of the site. Bush Terminal, to the north, consists of a collection of red brick buildings built in the early 1900s to serve the bustling intermodal industrial complex. They are clustered on either side of 43rd Street, between Marginal Street and First Avenue. State Historic Preservation Office (SHPO) determined that Bush Terminal (not the deteriorated piers) is eligible for listing on the SR and NR, and the LPC concurs that the complex is eligible for City landmark designation.

The Brooklyn Army Terminal south of the site is listed on SR and NR and appears to be eligible for LPC designation. The original complex of eight structures (two remain) was designed by Cass Gilbert, architect of the Woolworth Building and other City landmarks.

The expansive Sunset Park Historic District, which is listed on the NR for its uniform 19th-century residential development, is a large district roughly bounded by Fourth Avenue, 38th Street, Seventh Avenue and 64th Street, approximately ½-mile east of the site.

The former 18th Police Precinct House and Stable (4302 Fourth Avenue), approximately 4,000 feet northeast of the site, currently houses the Sunset Park School of Music. A designated City landmark, it is one of several station houses in Brooklyn designed by City Police Department (NYPD) architect George Ingram in the late 19th century to resemble a medieval fortress.

The 52nd Street Barge Staging Area would be a replacement-in-kind of the existing pier. It would be used for storage of marine supplies, temporary mooring of barges needing repair, and temporary staging of container barge movements between the Converted MTSs and intermodal transload facilities (barge-to-barge operations).

2.1.2.2 Harlem River Yard Barge to Rail Intermodal Yard

The Harlem River Yard (HRY) Barge to Rail Intermodal Yard may serve as a support facility for the Converted MTSs. It would function as an intermodal transload facility where barges with containerized waste from the Converted MTSs would be unloaded, containers placed on railcars, and train sections for transport to out-of-City disposal facilities assembled. Returned empty containers would be loaded on barges and towed back to the Converted MTSs.

On a property contiguous to the existing HRY TS, a new facility would be developed to transload containers of DSNY-managed Waste delivered by barges from Converted MTSs to rail cars in the HRY. The new facility would be located south of the existing HRY TS. The gross acreage of the lot is approximately 18 acres. The site is bounded on the northeast side by a primary branch of the through-track rail line to the Oak Point Link running through the development, on the west by the Harlem River, and on the south and southeast by the Harlem River.

The site is located in a heavily industrialized area that is zoned M3-1. Across 132nd Street to the northeast lies a light manufacturing zone (M1-2), with a residential zone (R6) beyond the Major Deegan Expressway more than ½-mile from the site. Across the Harlem River in Manhattan lies the Harlem River Drive, bordered by light manufacturing (M1-2) and medium-density apartment-house (R7-2) zones. Land use on Randalls Island to the south across Bronx Kill is also designated R7-2.

The site development would include a barge staging area with pile fendering, a barge mooring area adjacent to a replacement bulkhead for servicing barges, an adjacent 60-foot-by-200-foot concrete pad for crane operations in unloading and loading barges, four rail spurs with capacity for 17 railcars, and two designated storage areas for intermodal containers with capacity for 114 container units

2.1.2.3 65th Street Intermodal Yard, Brooklyn

The 65th Street Intermodal Yard, Brooklyn may serve as a support facility for the Converted MTSs. It would function as an intermodal transload facility where barges with containerized waste from the Converted MTSs would be unloaded, containers placed on railcars, and train sections for transport to out-of-City disposal facilities assembled. Returned empty containers would be loaded on barges and towed back to the Converted MTSs.

The 65th Street Intermodal Yard is an existing intermodal yard owned by and under the control of NYCEDC, and currently leased by Canadian Pacific Railway. Under a proposal responding to DSNY's MTS RFP, a waterfront area of the existing intermodal transload facility would be sublet to an MTS proposer and developed to service barges from the Converted MTSs. NYCEDC has completed an $8 million improvement program to upgrade rail facilities at this property. This program included the construction of two new gantry float bridges and the installation of 10 tracks on the south side of the site, and three tracks on the north side. NYCEDC will issue an RFP for a long-term lease shortly.

The 65th Street Intermodal Yard is in the industrial waterfront area bordering Bay Ridge and Sunset Park, Brooklyn. It is in Brooklyn Community District 10 near the border of Brooklyn Community District 7. Based on City tax maps, the site is comprised of Lot 2 of Block 5804. The yard interconnects with the Bay Ridge Line, a freight line that crosses Brooklyn to interconnect with the CSX and CP rail systems at Fresh Pond Yard in Queens. The Bay Ridge Line is owned by the LIRR and is operated by the NY&A under a lease agreement for use for freight traffic.

The intermodal site is comprised of approximately 12 upland acres of the 33-acre City property managed by NYCEDC and five acres over water between the U.S. Bulkhead Line and the U.S. Pierhead Line that would be developed for barge staging. The site is zoned M2-1 and is on the Upper New York Bay waterfront adjacent to the Brooklyn Army Terminal. The waterfront portion of the site is occupied by the ruins of two railroad float bridges and timber piles that would have to be removed before the waterfront could be dredged for barge reception.

On the west, the property is bounded by the Upper New York Bay. It is bounded on the north, east and south by the 65th Street Rail Yard facilities. Immediately to the east, NY&A is planning to develop a rail-to-truck intermodal facility. Immediately to the south are a series of tracks that lead to the waterfront, where a float bridge terminal is being developed. Further to the south is the Owl's Head WPCP and the Shore Parkway.

Designated parklands – Shore Road Park and Owl's Head Park – are located to the southeast of the site. The closest of these, Shore Road Park, is land located under Shore Parkway and, as such, is a visual resource to the community, but not useable parkland. Owl's Head Park would be approximately 800 feet from the location of the transload facility. The Brooklyn Army Terminal Day Care Center (58th Street and 1st Avenue) is approximately 500 feet from the site boundary. Residentially zoned areas interspersed within commercial and industrial zones are located to the northeast of the site.

2.1.3 Proposed Action Recycling Facilities

2.1.3.1 Hugo Neu Corporation: 30th Street Pier at the South Brooklyn Marine Terminal

Located along Gowanus Bay in the South Brooklyn Marine Terminal (SBMT) in Tax Block 662, Lot 1, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data,* the 30th Street Pier site is bounded by Second Avenue to the east and the U.S. Pierhead Line to the west. The 29th Street Pier and the 31st Street Pier abut the site to the north and south, respectively. The site is zoned M3-1 between Second Avenue and the U.S. Bulkhead Line, M2-1 between the U.S. Bulkhead Line and the U.S. Pierhead Line, use group 18 (which allows for all manufacturing uses) The site is located in Brooklyn Community District 7. The site was used for loading and off-loading marine vessels and long-term import/export cargo storage and processing, office space, and trailer inspections and repair.

Development of the 30th Street Pier at the SBMT for the acceptance and processing of Recyclables would involve removal of an undetermined amount of piling remnants and other underwater debris from the recent demolition of the finger piers that formerly abutted the

30th Street Pier, and dredging of an estimated 40,000 cubic yards of material. The 30th Street Pier at the SBMT would require construction of two, 400-foot-long-by-60-foot-wide docks constructed on 100- to 120-foot-deep piles to support equipment, a fendering system, and sheetpiling to prevent washout.

The majority of inbound Recyclables (an estimated 85%) are expected to be delivered to the 30th Street Pier Recycling Facility at SBMT by barge. Some recyclables from South Brooklyn collection districts may be delivered directly in DSNY collection vehicles. It is expected that most glass and ferrous metals will be exported from the facility by barge (these two materials comprise an estimated 75% of mixed MGP). Depending on market conditions, plastics, non-ferrous metals and residue from processing operations may leave the site by truck.

2.1.3.2 Gansevoort Recyclables Acceptance Facility

Located on Block 651, Pier 52 along the Hudson River, the former Gansevoort Street MTS site is bounded by a pedestrian walkway along the West Side Highway to the east and the U.S. Pierhead Line to the west. Bloomfield Street and Gansevoort Street abut the site to the north and south, respectively. The site is located in Manhattan Community District 2. The site is zoned M3-2, Use Group 18, which allows for all manufacturing uses. The site was formerly used as an MTS, but was closed down in July 1991.

Development of a new facility at Gansevoort Street for the acceptance and processing of Recyclables would involve the removal of the existing structures on the site. The NYCEDC is currently in the planning stages for converting much of the Gansevoort property into parkland with recreational activities. These recreational areas will include a rocky beach, open market along Bloomfield Street, concession stand, a lawn area, a boat drop off and marina, and a stop for water taxis. . This plan is a part of a larger plan to convert the waterfront from Battery Park City to West 59th Street into park facilities between the U.S. Pierhead Line and the western boundary of West 11th and West 12th Streets. Fire Department Marine Company One, Manhattan's only remaining waterside fire station, will remain on Pier 53 adjacent to the Gansevoort property to the north. The site is adjacent to public parks on Pier 51 that include a new maritime-themed playground, a water play area, climbing equipment and slides and viewing scopes, which have been open to the public since Spring 2003.

NYCEDC is in the planning stages for the Gansevoort Recyclables Acceptance Facility. Once a design is developed, the Gansevoort Recyclables Acceptance Facility will be the subject of a future environmental review.

2.1.4 Proposed Action – Commercial Waste Management Facility

2.1.4.1 West 59th Street MTS, Manhattan

The Proposed Action for Commercial Waste includes assessing the feasibility of providing the site of the existing Manhattan West 59th Street MTS to private waste management companies to use for the transfer of Commercial Waste. An environmental analysis cannot be undertaken until the details have been formulated. However, a description of the site follows.

The existing West 59th Street MTS site is located in the Clinton section of Manhattan in Community District 4, at the end of West 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. The site boundary extends 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 site is located at the northern edge of an M2-3 manufacturing zone, which extends south along the Hudson River waterfront to the Gansevoort Peninsula and then continues south to Battery Park City. Adjacent to the site's northern boundary is a large R10 zoning district that covers the waterfront and the residential portion of the new Riverside South Development.

Directly northeast of the site is a C4-7 zoning district and an M1-6 zoning district. Beyond these immediate districts, much of the area within ½-mile northeast of the site is zoned for high-density residential uses (R8) and a varied mix of commercial and industrial activities.

Southeast of the site, the immediate area is predominantly zoned for a range of industrial uses (M1-5 and M3-2). Within ½-mile of the site there is a mix of commercial and high-density residential (R8 and R9) districts, further to the east and south. In addition, there are two Special Purpose Districts that are in the general site vicinity: (1) the Clinton Special Purpose District, which extends west to 12th Avenue and West 59th Street; and (2) the Lincoln Square Special Purpose District, which extends south to West 60th Street and 10th/Amsterdam Avenues. These Districts were created to preserve and strengthen the residential character of the Clinton neighborhood and to preserve, protect and promote the unique cultural and architectural character of the Lincoln Center area. The site itself is within the designated Hudson River Park boundary, and plans for the park extend as far north as Pier 97 (at West 57th Street).

The elevated Miller Highway dominates the study area immediately surrounding the site (as it touches down to grade at West 57th Street), as does the massive Consolidated Edison generating plant across 12th Avenue and the large surface parking lot north of West 59th Street. In addition to the plant, Consolidated Edison occupies Pier 98 at the end of West 58th Street immediately south of the site for fuel transfer operations. Just south of Consolidated Edison's pier is Pier 97, which DSNY uses for vehicle parking and various storage operations. Pier 97 is also planned to be rehabilitated in the future as part of the Clinton Cove Park and may include passive and active recreational areas. Piers 95 and 96 at the end of West 55th and West 56th Streets, respectively, are under construction as part of the Hudson River Park's "Clinton Cove Park," which will feature a boathouse and other waterfront amenities. This section of park is scheduled to open in 2005.

Several landmarks are located within a ½-mile radius of the site. The original Interborough Rapid Transit Company powerhouse is located on West 59th Street approximately 600 feet east of the site. The Church of St. Paul the Apostle is located along West 59th Street, approximately ½-mile east of the site, and the 69th Street Transfer Bridge/New York Central Railroad is located at West 69th Street and the West Side Highway, approximately ½-mile north of the site. The rehabilitation of the 69th Street Transfer Bridge as a ferry terminal is currently being considered as part of the overall development of the Riverside South Complex. This ferry terminal would alleviate commuter congestion problems along the subway lines that serve the area (along 8th Avenue).

No archaeologically significant resources are located on the site.

The West 59th Street MTS site is evaluated in this DEIS with: (1) a Converted MTS for the acceptance and processing of both DSNY-managed Waste and Commercial Waste; and (2) an existing MTS facility that would receive waste delivered in DSNY collection vehicles and load the waste into hopper barges for out-of-City disposal. If the site were selected to receive, transfer and transport Commercial Waste only, a supplemental environmental review would reassess the potential for adverse impacts based on a more complete understanding of Commercial Waste transfer operations at this site.

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.

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[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 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.)

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
- 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 were 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.
- 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 [FDNY], 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 FDNY 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, FDNY).

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.

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.

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.

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 10 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 10 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.

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 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.

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, Parking, Transit, and Pedestrians

Traffic, parking, transit, and pedestrians 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.

If a detailed analysis is required, the approach to be taken will achieve the following objectives:

- Describing Existing, Future No-Build and Future 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

Trucks are required by NYCDOT Title 34 to travel on truck routes directly to the facility they are servicing or to the intersection nearest the facility, if streets adjacent to the facility are not designated truck routes. It is assumed that DSNY and other agency collection vehicles currently abide by the rules and regulations set forth in NYCDOT Title 34 and that these vehicles will

continue to follow Title 34 in the future. Therefore, collection vehicles are assumed to proceed to the closest designated truck route upon completion of their collection route in order to deliver waste to a designated Converted MTS or Alternative. DSNY and other agency collection vehicles would also follow truck routes on trips returning from their designated unloading facility, whether returning to the collection district to collect additional waste or returning to the district garage at the end of a shift.

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 No-Build Conditions

Future No-Build Conditions assume that there would be no changes to the existing department operations in the projected Build Year for the project. Traffic volumes are assumed to increase according to growth rates for each section of the City, as designated by CEQR. The Future No-Build Condition also incorporates additional traffic generated by other projects in the area that would be completed by the time the proposed project is completed.

2.2.13.1.3 Future DSNY 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, Tuesday or Wednesday) 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.

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 2.2-3
Average Peak Day Facility Load Allocation

Facility	Total Number of Net Loads of DSNY Collection Vehicles
Hamilton Avenue MTS[(1)]	267
Southwest Brooklyn MTS[(1)]	166
East 91st Street MTS[(1)]	130
North Shore MTS[(1)]	329
52nd Street Barge Staging Area	NA
65th Street Intermodal Yard	NA
East 132nd Street Site[(2)]	374
Scott Avenue TS[(3)]	0
Scott Avenue/Scholes Street Truck to Rail TS	125
Review Avenue Truck to Barge TS	81
Review Avenue Truck to Rail TS[(2)]	225
Collection Vehicle Transport to Out-of-City WTE Facilities[(4)]	0
MCR to 30th Street Pier at South Brooklyn Marine Terminal	60
MCR to Gansevoort Recyclables Acceptance Facility	108
South Bronx MTS[(1)]	363
Greenpoint MTS[(1)]	423
West 135th Street MTS[(1)]	222
West 59th Street MTS[(1)]	124
Meserole Street Truck to Rail TS	225

Notes:

(1) The total number of loads from DSNY collection vehicles is the same for both the Converted MTSs and the Existing MTSs.

(2) Total number of loads from DSNY collection vehicles includes dray trips to a rail yard.

(3) Future Condition DSNY-managed Waste deliveries to the Scott Avenue TS are less than Existing Condition deliveries to the facility. Therefore, no traffic analysis was performed at this site because Existing Conditions are worse than Future Conditions.

(4) Future Condition DSNY-managed Waste deliveries to out-of-City WTE facilities would remain the same as Existing Conditions. Therefore, no traffic analysis was performed at this site because there is no change between Existing and Future Conditions.

MCR = Manhattan Curbside Recyclables

Table 2.2-4
Peak Hour Trips

Facility	Facility Peak Hour	Peak Hour DSNY Collection Vehicles Inbound[1]	Peak Hour DSNY Collection Vehicles Outbound[2]	Total Peak Hour PCEs Generated[3]
Hamilton Avenue[4] MTS	9:00 a.m. – 10:00 a.m.	32	30	93
Southwest Brooklyn MTS[4]	10:00 a.m. – 11:00 a.m.	27	27	81
East 91st Street MTS[4]	9:00 a.m. – 10:00 a.m.	28	28	84
North Shore MTS[4]	10:00 a.m. – 11:00 a.m.	39	38	116
52nd Street Barge Staging Area	NA	0	0	0
65th Street Intermodal Yard	NA	0	0	0
East 132nd Street Site[5]	11:00 a.m. – 12:00 p.m.	45	43	138
Scott Avenue TS[6]	NA	NA	NA	NA
Scott Avenue/Scholes Street Truck to Rail TS	10:00 a.m. – 11:00 a.m.	19	18	56
Review Avenue Truck to Barge TS	10:00 a.m. – 11:00 a.m.	10	10	30
Review Avenue Truck to Rail TS[5]	10:00 a.m. – 11:00 a.m.	16	16	54
Collection Vehicle Transport to Out-of-City WTE Facilities[7]	NA	NA	NA	NA
MCR to 30th Street Pier at South Brooklyn Marine Terminal[8]	6:00 a.m. – 7:00 a.m.	5	5	15
MCR to Gansevoort Recyclables Acceptance Facility[8]	6:00 a.m. – 7:00 a.m.	7	7	21
South Bronx MTS[4]	11:00 a.m. – 12:00 p.m.	64	58	183
Greenpoint MTS[4]	9:00 a.m. – 10:00 a.m.	61	54	173
West 135th Street MTS[4]	9:00 a.m. – 10:00 a.m.	30	30	90

Table 2.2-4 (Continued)
Peak Hour Trips

Facility	Facility Peak Hour	Peak Hour DSNY Collection Vehicles Inbound[(1)]	Peak Hour DSNY Collection Vehicles Outbound[(2)]	Total Peak Hour PCEs Generated[(3)]
West 59th Street MTS[(4)]	9:00 a.m. – 10:00 a.m.	21	21	63
Meserole Street Truck to Rail TS	10:00 a.m. – 11:00 a.m.	34	33	101

Notes:

(1) Represents the number of collection vehicles the Proposed Action would generate during the peak hour traveling to the Facility.

(2) Represents the number of collection vehicles the Proposed Action would generate during the peak hour leaving the Facility.

(3) DSNY collection vehicles must be multiplied by a factor of 1.5 to convert to PCEs.

(4) The total number of loads from DSNY collection vehicles is the same for both the Converted MTSs and the Existing MTSs.

(5) Vehicles include dray trucks used to transport containers from a facility to an intermodal yard. Dray vehicles must be multiplied by a factor of 2.0 to convert to PCEs.

(6) Future Build Condition DSNY-managed Waste deliveries to the Scott Avenue TS are less than Existing Condition deliveries to the facility. Therefore, no traffic analysis was performed at this site because there is no net increase in truck traffic.

(7) Future Condition DSNY-managed Waste deliveries to out-of-City waste-to-energy facilities would remain the same as Existing Conditions. Therefore, no traffic analysis was performed at this site because there is no change between Existing and Future Conditions.

(8) Indicates a facility at which there are several hours during which the peak hour number of DSNY collection vehicles are predicted to arrive at the facility.

MCR = Manhattan Curbside Recyclables

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. Intersections within the study areas that do not meet the above criteria will be considered to "screen out" and no further traffic analysis will be performed at these locations.

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, pedestrian counts, 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, which occurs between the AM and PM peak hours during midday hours.

These peak time periods represent the worst-case traffic conditions for the proposed operations at each Converted MTS. 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 versions 4.1(c) and (d). 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.

2.2.13.5 Transit and Pedestrians

The objective of the transit and pedestrian analyses is to determine whether the Proposed Action and Alternatives would have a significant impact on public transportation facilities and services and on pedestrian flows. Particularly, the analyses would examine the effects of the Proposed Action and Alternatives on rail and subway facilities and services, bus services and pedestrian flow and conditions.

The 2001 CEQR Technical Manual guidelines state that "if the proposed action is projected to result in fewer than 200 peak hour rail or bus transit riders, further transit analyses are not typically required as the proposed action is considered unlikely to create a significant transit impact." Additionally, the 2001 CEQR Technical Manual states that "projected pedestrian volume increases of less than 200 pedestrians per hour at any pedestrian element analyzed would not typically be considered a significant impact, since that level of increase would not generally be noticeable and therefore would not require further analysis."

The Proposed Action and Alternatives are expected to generate less than 200 employee trips per day, which is significantly lower than the 200 people per hour threshold stated in the 2001 CEQR Technical Manual. Employees traveling to and from the facilities are the only pedestrian and transit generators that would result from the Proposed Action and Alternatives. Additionally, many of the employees will travel to and from the new facilities using automobiles, as a number of the facilities are not easily accessible by mass transit. Because pedestrian volumes and transit riders are significantly below the thresholds in the 2001 CEQR Technical Manual, further analysis will not be included. Pedestrian safety at selected intersections will be addressed according to the guidelines stated in the Traffic, Parking, Transit, and Pedestrians section of this Scoping Document.

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; 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 Manual (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 each facility Alternative will be used to determine specific planned odor control measures to be incorporated into the facility impact evaluations.

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 generation is also affected by the age 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 will be below the 0.01 ppm H_2S NYSAAQS within a very 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.

The first two types of sources are relevant to the Alternatives that reuse the City's existing MTSs. The last two types of sources are relevant to the Converted MTSs and other Alternatives, since open-top barges with loose, uncovered waste will not be used for waste collection and transport. Also, in preparing the current DEIS, odor sampling will be conducted to evaluate odor generation by DSNY collection vehicles operating on-site.

Under the Proposed Action for the Converted MTSs and some Alternatives, 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) and from collection vehicles queued on the on-site facility roads.

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 including potential commercial waste tonnage, and a worst-case odor emission factor based on MTS sampling conducted for the 2000 FEIS and for the Commercial Waste Management Study.

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 fence line receptor and the closest sensitive receptor to each site. As noted above, three emission sources will be modeled for the DEIS: (1) the roof vents of the facilities; (2) the DSNY collection vehicles; and (3) for relevant Alternatives, full and empty barges. 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 for the odor analysis 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 the 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. A level of 5 OU is expected to create an odor that is near 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 by an average individual and in this case mitigation measures would be considered for reducing predicted odor impacts.

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 major convergence 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, the City Noise Code and NYSDEC, 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_5, L_{10}, L_{50} and L_{90} are also used in this analysis. These descriptors represent noise levels that are exceeded 5%, 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.

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 $L_{eq(1)}$ is 62 dBA; (2) 5 dBA, if the Future No-Build $L_{eq(1)}$ is 60 dBA; or (3) a total of 65 dBA;
- Adherence to the City Noise Code requirements at the plant boundary;
- Adherence to the City Zoning Noise Regulations at the plant boundary; and
- Adherence to the NYSDEC 6 NYCRR Part 360 Regulations.

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 $L_{eq(1)}$ 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 NYSDEC Part 360 Regulations

The following section of the NYSDEC Part 360 Regulations will be applied based on an Urban Character of Community:

- General Provisions, which specified a 67 dBA limit for daytime hour (7:00 a.m. - 10:00 p.m. and 57 dBA limit for nighttime hours. However, if the background residual sound level (excluding any contributions from the solid waste management facility) exceeds these limits, the facility must not produce an L_{eq} exceeding that background.

2.2.16.3.4 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 $L_{eq(1)}$, and the analysis period is during the day, the threshold for significant impact will be an increase of 5 dBA $L_{eq(1)}$.
- If the Future No-Build Condition traffic noise level is equal to or greater than 62 dBA $L_{eq(1)}$, 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, front-end loaders, tamping cranes, waste delivery vehicles, etc.. 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_5, 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. Noise monitoring will consist of short-term, 20-minute readings taken at the noise-sensitive receptor during the hour(s) determined to have a possible impact based on screening. Vehicle classification counts will be recorded during the noise monitoring and used to model the traffic noise, using the FHWA's TNM 2.1. If necessary, noise monitoring of site-specific truck simulations may also be performed.

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 $L_{eq(1)}$. Short-term 20-minute readings will be taken at the closest noise-sensitive receptor during this hour and used as the Future No-Build background noise level 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. This value will be logarithmically combined with the Future No-Build background noise level to determine the Future No-Build noise level. The Future No-Build and Future Build noise levels will be compared 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.

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.

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