

ATTACHMENT XI
ECONOMIC ANALYSIS OF IMPLEMENTING THE SWMP

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ECONOMIC ANALYSIS OF LONG TERM EXPORT SCENARIOS

1.0 BASIS OF ANALYSIS

This Attachment compares existing cost for the DSNY's total system with cost estimates for the SWMP. All estimates are presented in FY 2005 dollars. The comparison of the total system costs that DSNY incurred in FY 2005 and the estimated costs of the SWMP consider two SWMP scenarios: (i) estimated system cost for FY 2010, when the new facilities and service agreements that are part of the SWMP are assumed to be fully operational¹; and (ii) estimated system cost for FY 2026, when the total diversion rate for Curbside and Containerized DSNY-managed Waste is assumed to be 35%.

The new facilities and programs reflected in these SWMP scenarios include the following.

- Construction, operation and maintenance of four MTSs (North Shore, Hamilton Avenue, Southwest Brooklyn and East 91st Street) by the City and one or more service agreements with private companies to transport and dispose of containerized waste from these MTSs;
- Delivery of DSNY-managed Waste to up to five private truck-to-rail transfer stations (up to two located in the Bronx, one in Queens and up to two in Brooklyn, each located in the wasteshed served) under 20-year service agreements with the owner/operators of these transfer stations for transfer, transport and disposal of containerized waste;
- Direct haul in DSNY vehicles of waste generated in Manhattan (excluding the wastesheds served by the East 91st Street Converted MTS) for disposal at the Essex County RRF under a 20-year service agreement;
- Delivery of Staten Island's DSNY-managed Waste to the Staten Island Transfer Station that is constructed and permitted, which DSNY will operate and for which DSNY has executed a Service Agreement with Allied Waste for transport and disposal of containerized waste;
- Delivery of MGP Recyclables from the Curbside Program to the new materials processing facility at the SBMT; and

¹ For purposes of this analysis, the total DSNY-managed Waste for export is assumed to be approximately 3,287,673 tpy or 10,886 tpd disposed and 1,114,900 tpy or 3,692 tpd recycled in FY 2010. This is equivalent to a diversion rate of 26.5% for Curbside and Containerized DSNY managed Waste.

- Delivery of Manhattan Recyclables from Curbside Program to the Manhattan Acceptance Facility for barge delivery of MGP to SBMT and Paper to Visy.

Reflecting the above scenarios, the FY 2010 and FY 2026 tons allocated to specific facilities are shown in Table XI 1-1. These allocations are the basis on which cost for the two SWMP scenarios are estimated in Table XI 1-2.

**Table XI 1-1
Tonnage Allocation**

Facility	TPD SWMP Allocation	TPD FY 2010	TPD FY 2026
New Export Facilities and Service Agreements			
Southwest Brooklyn Converted MTS	950	842	843
Hamilton Avenue Converted MTS	1,900	1,683	1,687
East 91 st Street Converted MTS	720	631	582
North Shore Converted MTS	2,200	1,926	2,014
Bronx Truck to Rail TSs	2,100	1,802	1,862
Brooklyn Truck to Rail/Barge TSs	950	797	799
Queens Truck to Rail/Barge TS	1,200	1,094	1,203
Manhattan Direct Haul to Essex County RRF	1,680	1,472	1,428
Staten Island	920	639	716
Subtotal Export ⁽¹⁾	12,620	10,886	11,266
New Recycling Facilities and Service Agreements			
Recyclables processing at SBMT ⁽²⁾	1,460	2,230	2,260
Manhattan Acceptance Facility ⁽³⁾	NA	NA	NA

Notes:

- (1) FY 2010 and 2026 Exported assume 26.9% and 35% Curbside and Containerized diversion to recycling, respectively. See Attachment II.
- (2) Includes all MGP. Does not include portion of Curbside Paper delivered to Visy.
- (3) Paper and MGP from this facility are delivered to Visy and SBMT, respectively. The MGP is accounted for in the estimated tons of Recyclables reported for the SBMT facility

2.0 SYSTEM COSTS

The estimated cost of the SWMP and the existing FY 2005 systems costs include the following categories: collection, recycling, waste transfer (inclusive of debt service, if applicable, and operating and maintenance costs for transfer stations), waste transport and disposal and administrative expenses. The FY 2005 costs are DSNY's actual audited costs. They included all collection, recycling, and transfer and disposal costs for interim export.

Estimates of costs for the two SWMP scenarios considered the following.

1. The estimated capital costs of constructing four MTSs and the Manhattan Acceptance Facility, which will be City financed facilities.
2. The operating and maintenance expenses of City operation of the Converted MTSs and the Staten Island Transfer Station, which will be funded in the City's expense budget.
3. The estimated cost of service agreements with private companies to transport and dispose of containerized waste from the four converted MTS and the Staten Island Transfer Station, which will be funded in the City's annual expense budget. These service agreements are inclusive of the amortization of any capital investments associated with transport and disposal and all operating, maintenance, insurance, overhead costs and profit.
4. The estimated cost of service agreements with private companies to receive, containerize, transport and dispose of DSNY-managed Waste, which will be funded in the City's annual expense budget. These service agreements are inclusive of the amortization of any required facility capital modifications at the transfer stations and capital investments associated with transport and disposal and all operating, maintenance, insurance, overhead costs and profit.
5. The estimated cost of a service agreement with SHN to finance, construct and operate the material recovery facility at SBMT and the cost of a service agreement with a private company to operate the Manhattan Acceptance facility.
6. The SWMP costs do not include potential savings achieved as a result of changes in the collection practices and relay routing.

DSNY has received a number of proposals in response to five RFPs issued for Long Term Export of DSNY-managed Waste. These are active procurements that are still subject to negotiations and awards. The SWMP cost estimate is based on engineering estimates and the current state of these procurements. The actual future costs, however, will depend on market conditions, including construction costs, energy prices, steel prices, and interest rates at the time

each project is initiated. Because market conditions may vary significantly from the assumptions used in this analysis, the actual costs are likely to be different than those presented below. In addition, there are significant technical and/or permitting requirements associated with development of each potential Converted MTS site. Therefore, the cost estimates in this analysis should be viewed on a comparative basis and not as absolutes or an indicator of the actual future cost of these actions.

3.0 RESULTS

Table XI 1-2 presents the estimates of the total cost of collection, recycling, transfer (facility debt service and operating and maintenance costs), transportation and disposal costs allocated into Collection (including transfer, transport and disposal), Cleaning, Recycling, Paid/Free Disposal cost categories. Costs are presented in this way to be consistent with the cost allocations routinely reported by DSNY (e.g., FY 2005 actual costs) and to avoid inadvertently providing information related to the active procurements. Additionally, reporting results in constant dollars eliminates the effects of general inflation in the economy from the results and shows changes in costs among the three scenarios that reflect the following:

- The costs of fully implementing the export and recycling systems compared to the existing system; and
- The relative economic effects of increasing diversion to recycling for DSNY's curbside and containerized waste to 35% while population growth increases the overall size of the waste stream being managed.

Table XI 1-2
Proposed Action Long Term Export
Estimated Annual Costs⁽¹⁾ for Waste Transfer, Transportation and Disposal by
Scenario

System Cost Category	Existing System Actual FY 2005	Fully Implemented System	Fully Implemented Diversion
Collection⁽²⁾	\$890,700,000	\$1,021,700,000	\$1,025,900,000
Cleaning	\$157,500,000	\$157,500,000	\$157,500,000
Recycling⁽³⁾	\$241,500,000	\$256,700,000	\$260,000,000
Paid/Free Disposal	\$12,300,000	\$12,300,000	\$12,300,000
Total	\$1,302,000,000	\$1,448,200,000	\$1,455,700,000

Notes

- ⁽¹⁾ Costs are estimated in constant FY 2005 dollars.
- ⁽²⁾ Cost of Collection includes the cost of collection, transfer, transport and disposal but does not include potential savings achieved as a result of changes in the collection practices and relay routing.
- ⁽³⁾ Cost of Recycling does not include the costs of any new programs except for the material processing facility at SBMT and the Manhattan acceptance facility.

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