

## Under New Plan Cost of Disposing Curbside Waste Grows, For Now

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SINCE THE CLOSING OF THE FRESH KILLS LANDFILL in 2001, the city has used an interim plan for disposing of the roughly 3.5 million tons of trash the Department of Sanitation (DSNY) collects annually. Many critics contend this interim plan unfairly burdens certain city neighborhoods with traffic and pollution. The cost of the interim plan has been steadily rising as well. Last October, the Bloomberg Administration proposed a long-term solution in a Draft Comprehensive Solid Waste Management Plan, or SWMP.

An analysis by IBO finds that in the short run, the plan would add \$100 million per year to the cost of disposing of city-collected waste. Over the longer run, however, if the plan meets its goal of holding down the rate of growth of the fees the city pays to ship its trash to out-of-town landfills and incinerators, the city could potentially save hundreds of millions of dollars. In addition, this short-run increase in waste disposal costs, coupled with a new contract that lowers the fee paid for processing the city's recyclables, alters the economics of waste management increasingly in favor of recycling as a cost-competitive alternative to disposal.

The SWMP is currently under review by the City Council and, if approved, then must be submitted for approval to the state's Department of Environmental Conservation. The plan as proposed by the Mayor and analyzed here may undergo substantive changes before it is finally adopted.

*From Interim to Long-Term Plan.* Since the closure of the Fresh Kills landfill, the city has operated under an "interim export program," in which the city has paid private companies to dispose of its garbage. Costs have risen rapidly, with the sanitation department's budget set to break the \$1 billion mark this year. The interim program has been criticized as inequitable, because of the concentration of private transfer stations in a small number of neighborhoods, and as contributing to traffic congestion and air pollution due to its reliance on DSNY collection trucks and tractor-trailers for transport of garbage.

In developing the long-term plan, DSNY and the city's Economic Development Corporation (EDC) sought to address the concerns about equity and environment while crafting a plan that would hold down the growth in the cost of exporting the city's residential waste. The goals were grouped under the three headings—*Environment*: improve air quality and reduce truck traffic through greater reliance on barge and rail to transport waste; *Equity*: Strive for greater equity among the boroughs through an emphasis on reducing transfer station capacity in neighborhoods currently hosting them and making each borough responsible for handling its own waste—a principle the SWMP hopes to extend to the commercial sector as well; and

*Economics:* hold down the growth in the cost of exporting the city’s residential waste by relying more on rail and barge transportation to more distant—and cheaper—disposal sites and by signing long-term, 20-year contracts with private vendors.

*Disposal Basics.* The SWMP proposes a solution to disposal of residential waste based on 20-year contractual agreements with waste haulers to transport waste via rail-freight and ocean-going barge to more distant disposal sites than those that can be accessed economically by the current system of tractor-trailer trucking. After collection by DSNY trucks, waste would be delivered to a mix of private facilities—transfer stations and incinerators—and city-owned transfer stations, where it would be “containerized:” packed into sealed, freight containers. The city would operate five facilities: a truck-to-train transfer station on Staten Island, and four marine transfer stations (MTSs)—two in Brooklyn and one each in Queens and Manhattan. (The plan also addresses the disposal of privately collected commercial waste, but that component of the SWMP are not part of IBO’s analysis.)

Implementing the plan will entail substantial costs. The plan requires a large capital investment—over \$400 million—to rebuild and re-open the city-owned transfer stations. The plan projects that export fees paid to private vendors to transport and dispose of the waste would significantly increase in the short term compared to current prices—adding \$100 million to the city’s annual cost. Over the longer run, however, the city hopes that signing long-term contracts for transport of waste to more distant disposal sites will hold down the rate of cost growth. If the plan is successful at holding down the growth rate of growth of export fees, the city could potentially save hundreds of millions of dollars. If, on the other hand, waste disposal fees start to rise more rapidly than expected, that savings could disappear.

*Higher Disposal Costs.* The city currently has 17 contracts with private firms to take and dispose of city waste collected and delivered by DSNY. The average fee paid to the private sector is about \$73 per ton—ranging from a low of \$54 per ton to as high as \$90 per ton. In general the city has signed three-year contracts, with two one-year extensions, which limit annual increases in the fee charged to around 2 percent. Recent bids for expiring contracts, however, have risen 15 percent to 20 percent. IBO projects that the average export fee will reach about \$80 per ton by 2007, as increases are phased in on

Annual Disposal Costs Under the Proposed Long-Term Export Plan					
	Annual tonnage	Cost per ton			Total disposal cost (millions)
		Export fee	Debt service & operations	Total	
City-owned facilities	1,878,427	\$109	\$24	\$133	\$249.7
Private facilities	1,665,034	77	0	77	128.3
	<b>3,543,461</b>	<b>\$94 avg</b>	<b>--</b>	<b>\$107 avg</b>	<b>\$378.0</b>

SOURCE: IBO calculations based on Draft SWMP and New York City Economic Development Corporation: “The Economics of the Draft Solid Waste Management Plan,” presentation to the City Council Committee on Sanitation and Solid Waste Management, March 30, 2005, and DSNY documents obtained by IBO.  
 NOTES: Tonnages are based on projections in Attachment II of Draft New SWMP, allocated according to facility tonnage provided by DSNY.

expiring contracts.

In contrast, the Bloomberg Administration expects the total disposal cost to average \$107 per ton under the long-term plan. Two factors contribute to the greater cost per ton of disposal under the proposed long-term export plan. First, the city would have to build and operate the four marine transfer stations and the Staten Island facility. This would add about \$26 million per year in operations and maintenance costs, and \$24 million in debt service—the equivalent of about \$24 per ton of trash going through these facilities.

Second, the fees charged by vendors themselves would on average be higher—\$94 per ton, compared to the \$80 per ton we project for the current set of contracts. This average, however, masks sharp differences between what it would cost to dispose of trash via the city-owned and operated marine transfer stations and the private transfer stations. According to EDC and the sanitation department, the initial bids at the four MTSs and the Staten Island transfer station averaged \$109 per ton. This implies that the export fee at privately operated facilities would be just \$77 per ton. When combined with the cost of debt service and operations and maintenance, the total cost of disposal at the city-owned MTSs would be at least \$133 per ton.

*Why Are Export Fees Higher at City Facilities?* Vendor fees under the long-term plan are expected to be over one-third higher at city facilities than at private facilities. There are essentially three components to the vendors’ cost at city facilities: the cost of loading and unloading containers onto barges and trains; the cost of transport to disposal sites; and the disposal fees themselves.

The cost of barge loading and towing—loading containers onto barges at the MTS and towing them to intermodal facilities where they would be transferred onto trains or ocean-going

barges—would be unique to the city-owned MTSs; vendors using their own facilities would not incur this cost. According to EDC, these costs would represent 6 percent and 16 percent respectively of the total cost under the long-term export plan—or \$24 per ton combined.

The cost of transport is currently included in the export fees the city pays. In most cases, transport is by tractor-trailer (by rail from the Harlem River Yard facility in the Bronx and two facilities in New Jersey). As the distance increases, however, rail transport becomes more economical on a ton per mile basis. Nonetheless, transport—including intermodal transfer of containers from barges to rail cars or ocean-going barges—would constitute over half the cost of export from city facilities, or about \$57 per ton. Export from private facilities would in most cases not require intermodal transfer of containers.

Disposal fees include the actual tipping fee—the cost to dump at a landfill—plus capitalized costs associated with any special infrastructure required at landfill sites, such as rail spurs or container unloading equipment. Under the proposed plan, 26 percent of the average MTS vendor fee of \$109 per ton would be attributable to disposal, or \$28 per ton. The cost would likely be similar for contracts at both private and city-owned facilities.

**Long-Run Savings?** The difference between the rates of increase of export fees under the long-term plan compared to the interim program will determine how much more the new plan would cost (or save) over the long run. The table on incremental costs compares projected rates of growth in export fees under the interim program and the long-term plan,

Incremental Cost of Long-Term Plan				
<i>Dollars in millions, present value</i>				
Interim Export	Long-Term Export			
Average Annual Vendor Fee Growth:	Average Annual Vendor Fee Growth:			
	2.0%	3.0%	4.0%	5.0%
4.5%	\$419	\$852	\$1,337	\$1,879
6.0%	(\$335)	\$98	\$582	\$1,124
7.0%	(\$915)	(\$482)	\$2	\$545
8.0%	(\$1,566)	(\$1,133)	(\$648)	(\$106)

SOURCE: IBO based on Department of Sanitation data.  
 NOTES: Positive values indicate additional cost of the long-term plan compared to the interim program; negative values indicate a savings. Assumes discount rate of 5.5 percent over 20 years.

calculating the total cost, in present value terms, of the long-term plan compared to the interim program.<sup>1</sup>

Under several plausible scenarios, the new plan would cost more, in present value terms, than the interim program, over a 20-year period. If the long-term plan is successful at holding down export fee growth, however, then the difference could be negative—that is, a net savings to the city.

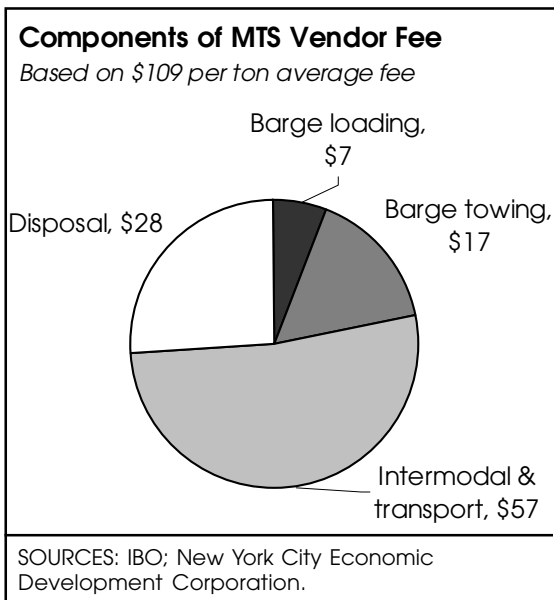
**Recycling Becomes Cost-Competitive.** Since the inception of the city’s recycling program, it has been more expensive to recycle than simply dispose of trash in landfills. This may be changing. The increase in the cost of waste disposal, coupled with the SWMP’s goal of achieving lower and stable fees for processing recyclables, leads the city in the direction of a goal long sought by environmental advocates: cost parity between recycling and waste disposal. If the city is successful in increasing recycling beyond recent levels, it may even become the cheaper alternative, creating a strong incentive to promote recycling as a way to hold down the total cost of waste management.

For more information on the costs of recycling, see IBO’s Web supplement: *The Changing Economics of Recycling*.

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**END NOTE**

<sup>1</sup>The calculation assumes an average fee of \$80 per ton under the interim export program, beginning in 2007, and an average fee of \$94 per ton under the long-term export plan. Additional costs under the long term plan include \$25.9 million in operations and maintenance costs at city-owned transfer stations, growing at 2 percent per year, and \$24.1 million per year in debt service costs for construction of the four marine transfer stations. We assume 3.5 million tons for disposal, which grows at an average annual rate of 0.13 percent. Note that the SWMP projects declining tonnage for disposal due to a rapid increase in the recycling program. The difference has a relatively minor impact on the results.



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