# New York City Comprehensive Commercial Waste Management Study

# **Preliminary Report**



**June 2002** 

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#### I. Introduction

New York City's residents and businesses generate vast amounts of many types of waste materials which must be disposed of: food wastes, yard wastes, animal wastes, furniture and clothing and household goods, construction and demolition debris, concrete and asphalt paving, soils, sinks and toilets, medical waste, asbestos, paper and cardboard, plastics, scrap metal, dredge spoils, oils, solvents, paints, barrels and buckets and crates, catch basin grit, grease, sewage sludge, junked vehicles, and every other imaginable discarded matter. For regulatory and management purposes, however, most of the solid waste generated in the City falls into one of four, large, identifiable categories:

- "putrescible" waste, which is organic matter such as food and yard wastes having the tendency to decompose, creating malodorous by-products;
- "non-putrescible" waste, which is primarily interior and exterior construction and demolition ("C&D") debris including concrete, plaster, rock, waste timber, tiles, glass, wood, sheetrock, metal, electrical wires and cables, asphalt, shingles, and other non-organic material;
- "fill material," which is excavated dirt, concrete, rock, gravel, sand, and stone; and
- "recyclables," which either are "source separated" before collection, such as metal, glass, certain plastics, cardboard, and paper; or are reusable materials sorted and separated from C&D debris and fill material, such as metals, dirt, aggregate, stone, and asphalt millings.

The materials which do not fit into these four categories, such as liquids, hazardous wastes, medical wastes, sewage sludge, etc., are managed by specialized disposal companies under contract with the waste generators. In New York City, the volume of these "other" wastes is approximately 41 tons per day.

The New York City Department of Sanitation (DOS) collects and disposes of putrescible and non-putrescible waste from residences, institutions, not-for-profit organizations, lot cleaning operations, and other City agencies. Private waste carting companies collect and dispose of putrescible and non-putrescible waste from commercial sources in the City. Both DOS and commercial waste handlers recycle "source separated" materials including paper, cardboard, metal, glass, and plastic;

and most commercial waste handlers separate and sell the valuable and reusable materials contained in C&D debris and fill material.

Since 1993, the City has had only one in-City waste disposal site: the Fresh Kills Landfill in Staten Island. Four years earlier, in 1989, when DOS raised the "tipping fee" for commercial waste disposal at Fresh Kills, private waste handlers began exporting the City's commercial waste to out-of-City disposal facilities in order to save costs. DOS continued to transport most of the City's residential waste via barge to Fresh Kills. In 1996, the State Legislature mandated the closure of Fresh Kills by January 1, 2002. The following year, DOS began phasing down its use of Fresh Kills and driving its collection trucks to private "waste transfer stations" within or outside the City, where the waste is transferred to long-haul trucks (or trains) for transport to out-of-City disposal facilities such as landfills and resource recovery facilities.

DOS has long maintained comprehensive records of the residential waste which it manages. In addition, beginning in 1990, Local Law 40 required operators of dumps and private transfer stations within the City to maintain and submit quarterly reports to DOS on their commercial solid waste inflow and outflow. These transfer station quarterly reports, which were revised and refined over the years, enabled DOS to roughly monitor the flow, although not the in-City origins, of commercial waste. Now, however, without Fresh Kills, private transfer stations must manage both residential and commercial waste for the next few years, and it has become important to develop accurate data on the volumes, origins, destinations, and constituents of New York City's total commercial and residential waste streams. To this end, the New York City Council enacted Local Law 74 of 2000, which requires DOS to conduct a comprehensive study of the City's existing commercial system for managing putrescible and non-putrescible solid waste. The study will augment and include the information in DOS records.

This Preliminary Report presents data on the commercial waste stream in Calendar Year 2000, collected from waste handlers in the metropolitan New York region, and some findings and conclusions that can be drawn from that data. The subsequent comprehensive study will analyze and assess the adequacy and impacts of the siting, permitting, operations, and regulation of the City's waste management infrastructure.

#### II. Summary of Findings and Conclusions

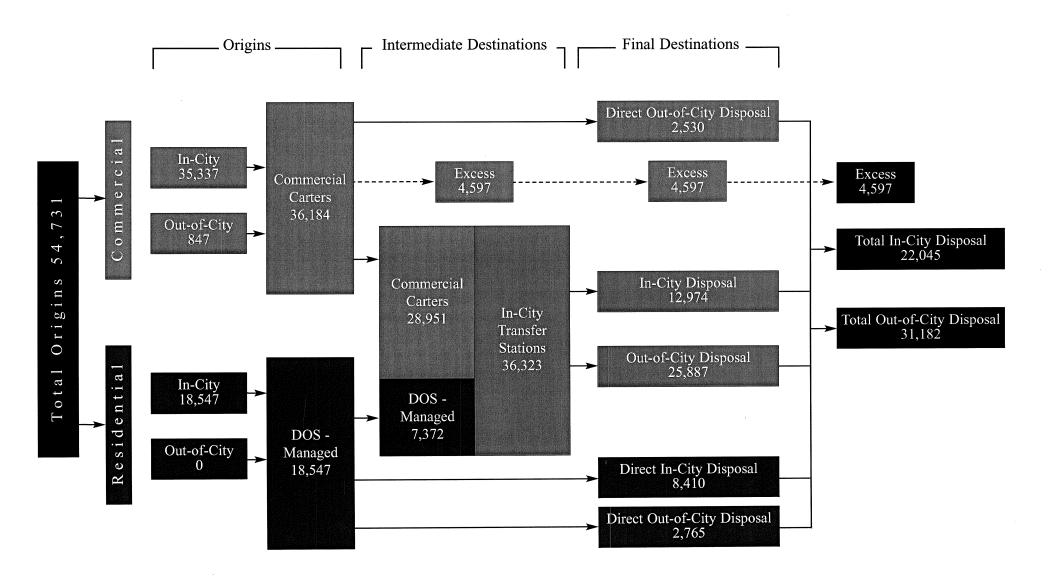
- In Calendar Year 2000, New York City's <u>commercial</u> waste stream was 36,184 tons per day (tpd), of which 9,991 tpd (28%) were putrescible waste, 12,645 tpd (35%) were non-putrescible waste, and 13,548 tpd (37%) were recyclables and fill material. While almost 95% of the putrescible waste was exported to out-of-City destinations (transfer stations, landfills, and resource recovery facilities), 4,124 tpd (41%) of the non-putrescible waste and 12,914 (67%) of the recycling/fill material were processed for reuse in the City at construction and excavation sites, asphalt plants, waste handlers, the Visy recycled paper plant in Staten Island, and yard waste composting facilities. In total, 17,128 tpd (44%) of commercial waste was recycled and reused.
- In Calendar Year 2000, the City's <u>residential</u> (DOS-managed) waste stream was 18,547 tpd, of which 10,800 tpd (58%) were putrescible waste, 995 tpd (5%) were non-putrescible waste, and 6,752 tpd (37%) were recyclables and fill material. Slightly more than half of the residential waste was exported to out-of-City destinations (transfer stations, landfills, and resource recovery facilities in Long Island and New Jersey and other states). All of the putrescible waste and much of the non-putrescible waste and fill material that remained in the City was disposed of at the Fresh Kills Landfill, the last remaining in-City disposal facility. (The Fresh Kills Landfill was closed in March 2001.) Recycled paper was sent to the Visy recycled paper plant on Staten Island and to other paper recyclers.
- In Calendar Year 2000, the City's <u>total</u> waste stream was 54,731 tpd, of which 66% was commercial waste, and 34% was residential (DOS-managed) waste. All but 847 tpd (2%) of this waste originated in the City, while 30,964 tpd (54%) were exported to final out-of-City destinations (transfer stations, landfills, and resource recovery facilities). Of the exported waste, 15,375 tpd (50%) were putrescible waste, 6,109 tpd (20%) were non-putrescible waste, and 9,480 tpd (30%) were recycling/fill material. Of the waste remaining in the City, 4,461 tpd (17%) were putrescible waste, 5,114 tpd (20%) were non-putrescible waste, and 16,623 tpd (63%) were recycling/fill material. In total, 21,737 tpd of non-putrescible waste and recycling/fill material were recycled and reused.

- Before being exported to final out-of-City destinations, most of the City's total waste stream was delivered to intermediate destinations primarily in-City waste transfer stations for processing, sorting, storing, and transferring to other waste handling facilities. In Calendar Year 2000, the City contained 76 waste transfer stations. Twenty-four transfer stations, with a total capacity of 19,084 tpd, handled putrescible waste; 30 transfer stations, with a total capacity of 35,936 tpd, handled non-putrescible waste; and 22 transfer stations, with a total capacity of 800,078 cubic yards per day (cyd), handled fill material.
- In Calendar Year 2000, the Fresh Kills Landfill received 4,018 tpd of residential (DOS-managed) putrescible waste collected in Queens, as well as asphalt millings for road construction and processed non-putrescible waste and fill material for roads, cover, and grading. When DOS stopped disposing of putrescible waste at Fresh Kills in March 2001, all 19,836 tpd of putrescible waste in the City's total waste stream had to be transferred at private transfer stations in and out of the City and transported to out-of-City disposal destinations. When the need for cover, road-building, and grading material at Fresh Kills ceases, much of the City's non-putrescible waste and fill material also may have to be exported. The adequacy of the City's solid waste infrastructure of private transfer stations to handle the increased volume of putrescible and non-putrescible waste is uncertain.
- In Calendar Year 2000, when Fresh Kills still was receiving 4,018 tpd of residential (DOS-managed) putrescible waste, the volume of putrescible waste in the City's total waste stream exceeded the permitted capacity of the 24 in-City putrescible waste transfer stations by 1,734 tpd. Adding the 4,018 tpd to the City's total volume of putrescible waste has overtaxed the infrastructure of private transfer stations in the City, and more of the City's total waste stream is being delivered to out-of-City transfer stations.
- The data in this Preliminary Report has obvious inconsistencies that result from many factors:
- First, waste generation fluctuates by season, by economic cycle, by year. Reusable construction material processed from non-putrescible waste and fill material can remain in storage for many months, until suddenly it is needed, and moves into the waste stream. When this happens,

more waste reportedly is sent to in-City and out-of-City destinations than originates in the City – a seemingly inconsistent result.

- Second, the data was collected during a specific period of time, from unaudited reports and surveys. Some carters and haulers could not specify where they collected or delivered their waste loads. Some could only estimate the amounts they delivered to various transfer stations and other destinations. Despite cross-checking and careful analysis of survey and interview forms and transfer station quarterly reports, some of the data is erroneous and inconsistent.
- Third, waste does not flow directly from collection to transfer station to disposal site. Instead, the flow of waste is very complex, which makes tracking the origins and destinations of the City's waste stream imperfect. Putrescible waste transfer stations may sort and separate out recyclable material, which they transfer to recycling facilities or specific material handlers and processors. Non-putrescible waste and fill material transfer stations sort, sift, process, and transform construction and demolition (C&D) debris and fill material into useable construction products such as sand, rock, and aggregate. They store the building materials on site, or transfer them to other C&D or fill material transfer stations for storage or sale, or to construction and excavation sites for storage or immediate reuse. They transfer other materials such as metals to scrap metal yards or metal processors. Recyclables handling facilities separate putrescible and non-putrescible waste from the recyclable material, and either transfer it to appropriate transfer stations or export it for disposal. All of these transfers resulted in seemingly inexplicable decreases and increases in the volumes of specific waste categories. See Figure 1.
- In order to understand and assess the City's commercial waste stream, private waste carters and their regulators must maintain accurate data and records about the origins, volumes, and destinations of the waste that they manage. When such records are correlated with the transfer station quarterly reports, they will provide a complete and accurate picture of the commercial waste management system.

Figure 1: New York City Combined Commercial and Residential (DOS-Managed) Waste Stream Flow Diagram
Calendar Year 2000 (tons per day)



Note: Origins and Destinations do not match precisely. See pp. 13-14 of the Report for explanation.

#### III. Methodology

#### A. Data Collection

In order to compile in a usable form all available data on the City's commercial waste stream, DOS and the Trade Waste Commission (TWC) (which regulates private waste carters), working with a consultant, Urbitran Associates (Urbitran), created a computer database of information collected from surveys and interviews with waste handlers in the metropolitan New York region. Although the data was collected in 2001, it measures the commercial solid waste stream during Calendar Year 2000, before Fresh Kills ceased receiving any of the City's residential waste.

In the first phase of data collection, DOS and the TWC mailed a three-section survey to all of the private waste handling companies that they regulate, including waste transfer stations, recycling facilities, waste carters, and self-haulers, such as contractors and landscapers which transport and dispose of the waste they generate during their jobs. The survey solicited information on the company (current name and address, licenses and registrations), the types and origins of the waste material collected and/or handled, and the types and locations of the in-City and out-of-City destinations to which the waste was transported. Recipients were asked to return the survey by mail to the TWC. **Appendix A** contains a copy of the survey form.

Following the compilation of this information in the database, teams of interviewers undertook personal on-site or faxed interviews with 840 private waste handling companies located in four sectors of the region: Bronx/Queens (250 companies); Brooklyn/Queens (257 companies), Northern New York/Connecticut/Long Island (162 companies), and Staten Island/New Jersey (171 companies). Of the 840 companies on the contact list, DOS successfully completed 796 interviews. (DOS was unable to conduct interviews with the remaining 44 companies.)

In order to identify the origins and destinations of New York City's commercial waste stream, the interview form solicited detailed information on: 1) waste collected within the City and deposited at a transfer station within the City; 2) waste collected outside of the City but deposited at a transfer station within the City; and 3) waste collected within the City and deposited at a transfer station or disposal facility outside of the City. The information included waste type, volume collected, volume

deposited, origin, and destination (borough and facility). The interview form was augmented with field notes about the waste handlers and facilities.

With the combined interview and survey data, DOS produced a database which identifies all of the private carting companies and transfer stations operating in the New York City metropolitan region in Calendar Year 2000, the types and volumes of waste material each handled, and the origins and destinations of that waste. **Appendix B** contains profiles of these transfer stations.

#### **B.** Data Evaluation and Assessment

In order to develop a complete picture of the existing commercial waste management system as it existed in Calendar Year 2000, DOS and Urbitran assessed the information in the database against that in the transfer station quarterly reports filed with DOS. When carters reported delivering more waste than the transfer stations reported receiving, DOS deemed this waste to be "excess."

The transfer stations, recycling facilities, waste carters, and self-haulers reported information on the volumes, types, origins, and destinations of the waste they handle on survey forms, interview forms, and transfer station reports. The excess commercial waste may also reflect reporting errors such as double counting, inconsistencies or errors in transfer station reports, discrepancies and inconsistencies in survey and interview responses, and inconsistent conversions of tons into cubic yards or cubic yards into tons. Regardless of the explanation for the excess commercial waste, in order to be conservative, DOS included it in its calculations of the City's total commercial and combined commercial-residential waste streams.

The factors that resulted in excess commercial waste also resulted in inconsistent total volumes of waste in the "origins" and "destinations" waste streams presented in the Tables in this Report. Because waste does not always flow directly from collection to transfer station to disposal site, tracking the origins and destinations of the City's waste stream is imperfect. Some putrescible waste transfer stations sort and separate out recyclable material, which they transfer to recycling facilities or specific material handlers and processors. Non-putrescible waste and fill material transfer stations sort, sift, process, and transform C&D debris and fill material into useable construction products such as sand, rock, aggregate, and metals. They store, transfer, and sell these materials to other waste handlers, material processors, construction and excavation sites. Recyclables handling

facilities separate putrescible and non-putrescible waste from the recyclable material, and either transfer the waste residue to appropriate transfer stations or export it for disposal. All of these waste transfers, accompanied by conversions of volume from tons to cubic yards, and vice versa, resulted in confusing inconsistencies in the "origins" and "destinations" waste streams.

The Tables in this Report show volumes of waste originating and having destinations "within" or "outside" New York City. These unspecified origins and destinations reflect the inability of carters and haulers to identify the specific locations where they collected or delivered their waste loads.

#### IV. Solid Waste Transfer Stations

#### A. Statistics

In Calendar Year 2000, New York City contained 76 operating transfer stations, of which 24 handled putrescible waste, 30 handled non-putrescible waste, and 22 handled fill material. (Eleven of the transfer stations were inactive). DOS and the New York State Department of Environmental Conservation (DEC) permit and regulate the transfer stations located within the City. Their combined enforcement efforts have significantly improved transfer station operations, and have contributed to the closure of 26 transfer stations since 1996.

The putrescible waste transfer stations had a total permitted capacity of 19,084 tpd. The non-putrescible waste transfer stations had a total permitted capacity of 35,936 tpd. The capacities of fill material transfer stations are measured in cubic yards of storage, which are less relevant to the total capacity of the waste management infrastructure to handle the City's daily waste stream.

In Calendar Year 2000, as today, most of the transfer stations were located in the Bronx, Brooklyn, and Queens. Manhattan contained just two small fill material transfer stations, which had a combined permitted storage capacity of 450 cubic yards. Staten Island contained no putrescible waste transfer stations; six non-putrescible waste transfer stations, with a total permitted capacity of 7,404 tpd; and three fill material transfer stations. The Bronx contained eight putrescible waste transfer stations, with a total permitted capacity of 8,123 tpd; six non-putrescible waste transfer stations, with a total permitted capacity of 4,442 tpd; and four fill material transfer stations. Brooklyn contained ten putrescible waste transfer stations, with a total permitted capacity of 9,275 tpd; thirteen non-putrescible waste transfer stations, with a total permitted capacity of 22,193 tpd; and three fill material transfer stations. Queens contained six putrescible waste transfer stations, with a total permitted capacity of 1,686 tpd; five non-putrescible waste transfer stations, with a total permitted capacity of 1,897 tpd; and ten fill material transfer stations. All 76 permitted transfer stations are located in industrial/manufacturing zones where they are an "as of right" use; 52 are located in heavy industry M-2 and M-3 zones.

**Appendix C** contains summary tables listing the transfer station names and addresses, locations by borough and community board, permitted capacity, current operating capacity, additional available capacity, and the volumes of residential and commercial waste handled.

In addition to the transfer stations located within the five boroughs, the surrounding counties in New York and New Jersey have many transfer stations within reasonable driving distance of the City. Both DOS and private carters deliver New York City waste to these transfer stations.

#### **B.** Permitting and Regulation

The State DEC has authority to permit and regulate solid waste transfer stations pursuant to its "Part 360" regulations (6 New York Codes, Rules and Regulations [NYCRR] Part 360). DOS has authority to permit and regulate transfer stations pursuant to title 16, sections 130-133, of the New York City Administrative Code (Ad Code) and title 16, chapter 4, of the Rules of the City of New York (RCNY). Since 1992, DEC and DOS have conducted coordinated environmental impact reviews of all proposed new transfer stations in the City in accordance with the terms of a New York State Supreme Court Stipulation and Order in City of New York v. New York State Department of Environmental Conservation, Supreme Court, Albany Co., Index No. 7218/91.

In 1998, DOS adopted a stringent rule governing the siting of transfer stations even in the industrial/manufacturing zones where they are an "as of right" use (RCNY title 16, ch.4, subch. C.). This rule establishes mandatory buffer zones between transfer stations and such "sensitive receptors" as residential zoning district boundaries, schools, and parks. Pursuant to a court order in Organization of Waterfront Neighborhoods (OWN) v. Carpinello, Supreme Court, New York Co. Index No. 103661/99, DOS is redrafting the siting rule to address the clustering of transfer stations.

The DEC Part 360 regulations and the DOS transfer station operating rules govern transfer station operations. **Appendix D** contains a chart of the Notices of Violation (NOVs) that DOS has issued for violations of these rules for each of the past five years. Transfer station NOVs carry penalties of \$2,500 to \$10,000, and are adjudicated at the City Environmental Control Board (ECB). In Calendar Year 2000, DOS obtained guilty verdicts and pleas for 221 NOVs issued for transfer station violations. The ECB assessed \$603,500 in penalties and fines against transfer station operators for these violations.

#### V. Findings

#### A. New York City Commercial Waste Stream (Tables 1-4; Figures 1a-4)

#### **Origins:**

As is discussed in the Methodology section, above, DOS used three sources of data to compile findings on the City's commercial waste stream: the transfer station quarterly reports, the private waste handler surveys and interviews, and its own records of residential waste delivered to Fresh Kills and to in-City and out-of-City transfer stations. Based on these data sources, in Calendar Year 2000, the 76 transfer stations in the City received 36,184 tpd of commercial waste (including excess). Of this total, 12,754 tpd (35%) originated at unspecified locations throughout the five boroughs. Of the remainder, 6,042 tpd (17%) originated in Manhattan; 4,336 tpd (12%) originated in the Bronx; 3,435 tpd (10%) originated in Brooklyn; 3,667 tpd (10%) originated in Staten Island; 5,103 tpd (14%) originated in Queens; and 847 tpd (2%) originated outside of the City. **Table 1** presents the data on the origins of the commercial waste stream. **Figures 1a, 1b, 2, 3** and **4** illustrate this data.

In Calendar Year 2000, non-putrescible waste, recyclables, and fill material constituted over 70% of the City's commercial waste stream (including excess). Only 9,991 tpd (28%) were putrescible waste, while 12,645 tpd (35%) were non-putrescible waste, and 13,548 tpd (37%) were recycling/fill material. See **Table 1** and **Figure 1b.** 

The volume of commercial waste that the carters and haulers reported collecting in the five boroughs and outside the City exceeded by 7,233 tpd the volume that the 76 transfer stations reported receiving. DOS deemed this tonnage to be excess commercial waste, and included it in the commercial waste stream in this Report. Of the 7,233 tpd of excess commercial waste, 2,530 tpd (35%) were transported directly to out-of-City transfer stations or disposal facilities. The excess remaining in-City could have been delivered to other locations, or could represent reporting errors and inconsistencies and inaccurate conversions between tons and cubic yards. **Table 4** presents the data on excess commercial waste. **Figure 4** illustrates this data.

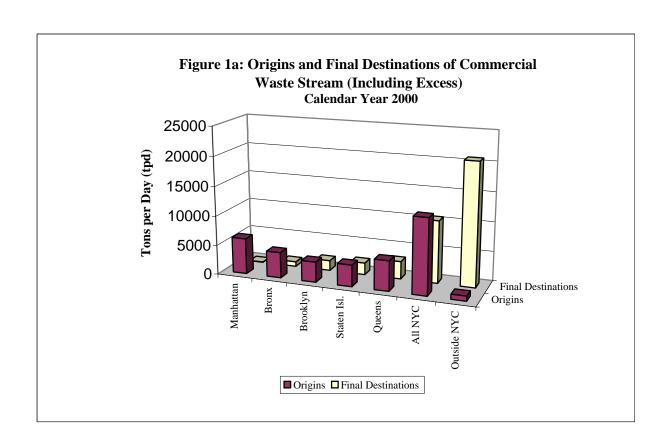
Table 1: New York City Commercial Waste Stream (Including Excess); Origins and Final Destinations

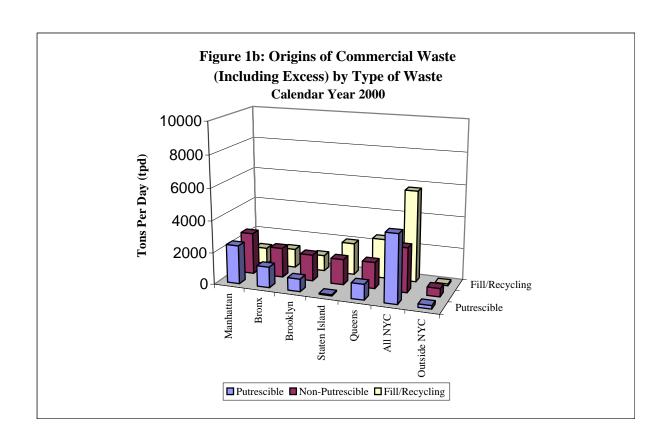
ORIGINS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	2,411	2,588	1,043	6,042
Bronx	1,295	1,852	1,189	4,336
Brooklyn	791	1,646	998	3,435
Staten Island	68	1,598	2,001	3,667
Queens	972	1,643	2,488	5,103
within NYC	4,239	2,795	5,720	12,754
SUBTOTAL	9,776	12,122	13,439	35,337
Out-of-City				
Nassau	0	9	0	9
Suffolk	0	0	0	0
Westchester	0	2	0	2
outside NYC	215	512	109	836
SUBTOTAL	215	523	109	847
TOTAL	9,991	12,645	13,548	36,184

FINAL DESTINATIONS	Putrescible <sup>1</sup>	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	0	4	49	53
Bronx	1	489	322	812
Brooklyn	379	860	206	1,445
Staten Island	1	575	1,416	1,992
Queens	62	2,224	705	2,991
within NYC	0	62	10,216	10,278
SUBTOTAL	443	4,214	12,914	17,571
Out-of-City <sup>2</sup>				
Nassau	27	1,057	831	1,915
Suffolk	27	684	946	1,657
Westchester	28	89	100	217
outside NYC	8,511	4,279	4,560	17,350
SUBTOTAL	8,593	6,109	6,437	21,139
TOTAL	9,036	10,323	19,351	38,710

**Note 1:** Final in-City putrescible waste destinations include facilities that received 443 tpd of excess commercial waste.

**Note 2**: In this Report, both final and intermediate out-of-City destinations include transfer stations, recycling facilities, and disposal facilities.





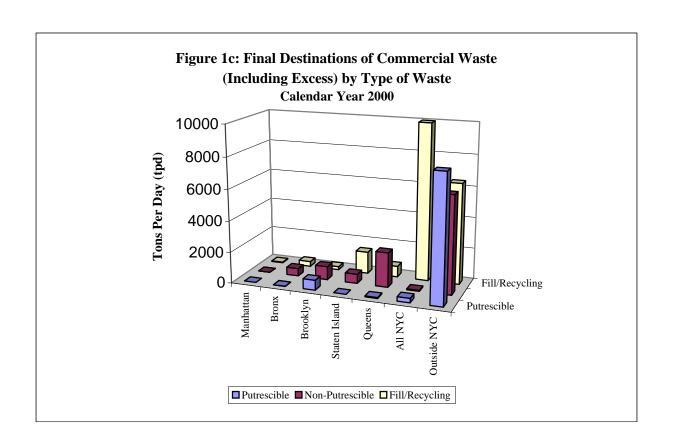


Table 2: New York City Commercial Waste Stream (Including Excess); Origins and Intermediate Destinations

ORIGINS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	2,411	2,588	1,043	6,042
Bronx	1,295	1,852	1,189	4,336
Brooklyn	791	1,646	998	3,435
Staten Island	68	1,598	2,001	3,667
Queens	972	1,643	2,488	5,103
within NYC	4,239	2,795	5,720	12,754
SUBTOTAL	9,776	12,122	13,439	35,337
Out-of-City				
Nassau	0	9	0	9
Suffolk	0	0	0	0
Westchester	0	2	0	2
outside NYC	215	512	109	836
SUBTOTAL	215	523	109	847
TOTAL	9,991	12,645	13,548	36,184

INTERMEDIATE DESTINATIONS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City <sup>1</sup>				
Manhattan	0	4	0	4
Bronx	3,185	1,411	3,310	7,906
Brooklyn	4,498	4,152	4,328	12,978
Staten Island	1	846	4,131	4,978
Queens	694	2,574	7,042	10,310
within NYC	0	0	4	4
SUBTOTAL	8,378	8,987	18,815	36,180
Out-of-City <sup>2</sup>				
Nassau	13	169	2	184
Suffolk	27	147	42	216
Westchester	0	58	0	58
outside NYC	618	962	492	2,072
SUBTOTAL	658	1,336	536	2,530
TOTAL	9,036	10,323	19,351	38,710

**Note 1**: Intermediate in-City destinations of commercial waste (excluding excess) consist of transfer stations. Intermediate in-City destinations of excess commercial waste are unclear because excess commercial waste may reflect reporting errors.

**Note 2**: The commercial waste sent to both final and intermediate out-of-City destinations is excess sent by carters and haulers directly out-of-City to transfer stations, recycling facilities and disposal facilities.

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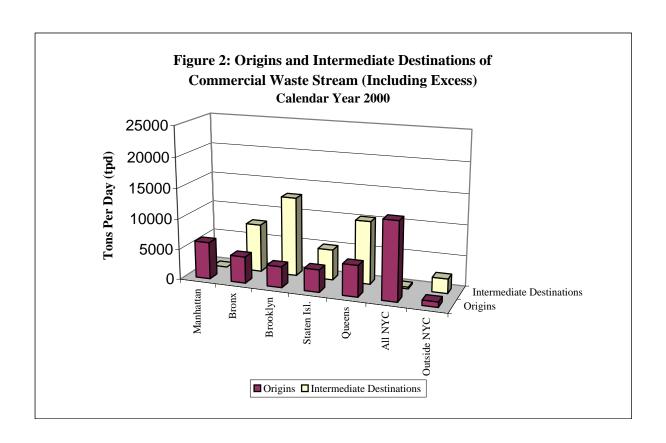


Table 3: New York City Commercial Waste Stream (as Reported by Transfer Stations);
Origins and Final Destinations
Calendar Year 2000 in Tons Per Day (tpd)

ORIGINS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	1,232	1,667	740	3,639
Bronx	1,096	1,550	946	3,592
Brooklyn	622	1,192	276	2,090
Staten Island	61	1,206	1,806	3,073
Queens	798	988	1,379	3,165
within NYC	4,239	2,795	5,720	12,754
SUBTOTAL	8,048	9,398	10,867	28,313
Out-of-City				
Nassau	0	0	0	0
Suffolk	0	0	0	0
Westchester	0	0	0	0
outside NYC	209	320	109	638
SUBTOTAL	209	320	109	638
TOTAL	8,257	9,718	10,976	28,951

FINAL DESTINATIONS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	0	0	49	49
Bronx	0	0	305	305
Brooklyn	0	25	101	126
Staten Island	0	149	1,385	1,534
Queens	0	2	684	686
within NYC	0	62	10,212	10,274
SUBTOTAL	0	238	12,736	12,974
Out-of-City <sup>1</sup>				
Nassau	14	888	829	1,731
Suffolk	0	537	904	1,441
Westchester	28	31	100	159
outside NYC	7,893	3,317	4,068	15,278
SUBTOTAL	7,935	4,773	5,901	18,609
TOTAL	7,935	5,011	18,637	31,583

**Note 1**: In this Report, both final and intermediate out-of-City destinations include transfer stations, recycling facilities, and disposal facilities.

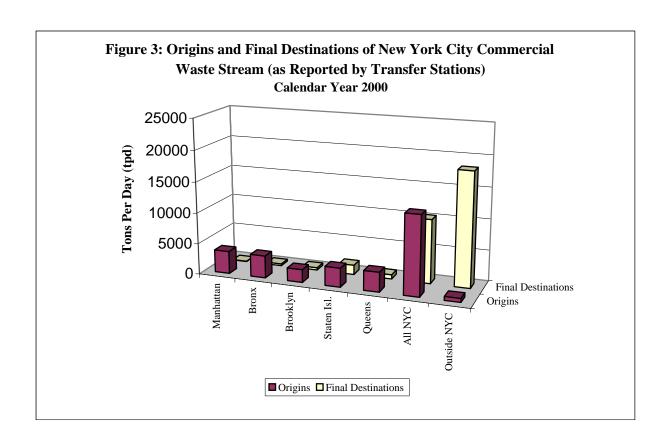


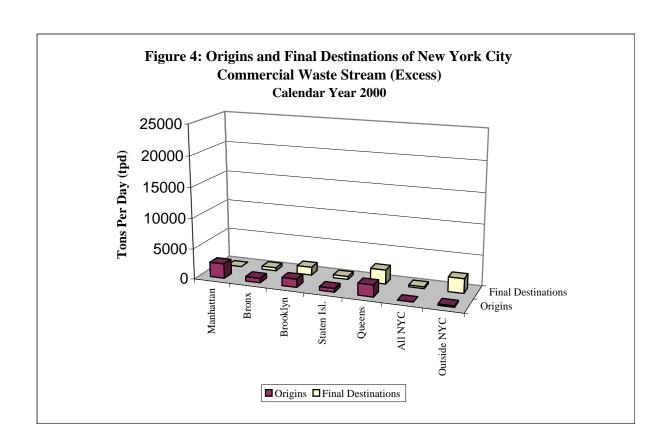
Table 4: New York City Commercial Waste Stream (Excess); Origins and Final Destinations

ORIGINS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	1,179	921	303	2,403
Bronx	199	302	243	744
Brooklyn	169	454	722	1,345
Staten Island	7	392	195	594
Queens	174	655	1,109	1,938
within NYC	0	0	0	0
SUBTOTAL	1,728	2,724	2,572	7,024
Out-of-City				
Nassau	0	9	0	9
Suffolk	0	0	0	0
Westchester	0	2	0	2
outside NYC	6	192	0	198
SUBTOTAL	6	203	0	209
TOTAL	1,734	2,927	2,572	7,233

FINAL DESTINATIONS	Putrescible <sup>1</sup>	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	0	4	0	4
Bronx	1	489	17	507
Brooklyn	379	835	105	1,319
Staten Island	1	426	31	458
Queens	62	2,222	21	2,305
within NYC	0	0	4	4
SUBTOTAL	443	3,976	178	4,597
Out-of-City <sup>2</sup>				
Nassau	13	169	2	184
Suffolk	27	147	42	216
Westchester	0	58	0	58
outside NYC	618	962	492	2,072
SUBTOTAL	658	1,336	536	2,530
TOTAL	1,101	5,312	714	7,127

**Note 1:** Final in-City putrescible waste destinations include facilities that received 443 tpd of excess commercial waste.

**Note 2**: The commercial waste sent to both final and intermediate out-of-City destinations is excess sent by carters and haulers directly out-of-City to transfer stations, recycling facilities and disposal facilities.



Of the excess commercial waste, 2,403 tpd (33%) originated in Manhattan; 744 tpd (10%) originated in the Bronx; 1,345 tpd (19%) originated in Brooklyn; 594 tpd (8%) originated in Staten Island; 1,938 tpd (27%) originated in Queens; and 209 tpd (3%) originated outside the City. By category, 1,734 tpd (24%) were putrescible waste; 2,927 tpd (40%) were non-putrescible waste; and 2,572 tpd (36%) were recycling/fill material. See **Table 4** and **Figure 4**.

The transfer stations in the City reported receiving 28,951 tpd of commercial waste in Calendar Year 2000. Of this total, which of course excludes the 7,233 tpd of excess tonnage discussed above, 3,639 tpd (13%) originated in Manhattan; 3,592 tpd (12%) originated in the Bronx; 2,090 tpd (7%) originated in Brooklyn; 3,073 tpd (11%) originated in Staten Island; 3,165 tpd (11%) originated in Queens; 12,754 tpd (44%) originated at unspecified locations throughout the five boroughs; and 638 tpd (2%) originated outside of the City. **Table 3** presents the data on the origins of the commercial waste stream as reported by the transfer stations (without excess). **Figure 3** illustrates this data.

By category, of the 28,951 tpd of commercial waste (excluding excess), 8,257 tpd (29%) were putrescible waste; 9,718 tpd (34%) were non-putrescible waste; and 10,976 tpd (37%) were recycling/fill material. See **Table 3**.

#### **Destinations:**

Under DOS transfer station operating rules, putrescible waste may remain at a transfer station no longer than 48 hours. Thus, transfer stations may not store the putrescible waste they receive daily. Since Fresh Kills closed in March 2001, New York City has had no disposal sites, and all putrescible waste must be exported to out-of-City landfills or resource recovery facilities. In contrast, much non-putrescible waste and fill material can remain in the City. Waste in both of these categories is processed (sifted, ground up, and sorted) to remove recyclable materials and to create new reusable products such as various sized aggregate, sand, clean fill, and other construction material. The recyclable materials are transported to processors; the reusable products are stockpiled at the transfer station for later use or are transported to other transfer stations for storage, or to construction and excavation sites. Such destinations can be in or out of the City. Only useless, residual waste must go to an out-of-City disposal site.

Similarly, recycling facilities, after sorting and separating the metal, glass, plastic, cardboard, paper, textiles, and other recyclable materials that they receive, send the non-recyclable materials to other transfer stations or disposal sites.

In order to track the different waste flows, DOS compiled data on the intermediate and final destinations of the various types of commercial waste that originate in the City. Intermediate destinations are transfer stations and recycling facilities that receive putrescible and non-putrescible waste and recycling/fill material from private carters, DOS, and other transfer stations and recycling facilities. They process, sort, and transfer this material for transport to a final disposal site or to another transfer station for additional processing or temporary storage. Final destinations are facilities or sites that receive waste from transfer stations or haulers directly for final disposal. In this report, final destinations include:

- landfills and resource recovery facilities that receive putrescible waste, non-putrescible waste, fill material, and residual waste from transfer stations and haulers;
- construction and excavation sites that receive recycled materials from non-putrescible and fill material transfer stations for reuse;
- scrap metal dealers, automobile crushing facilities, asphalt plants, oil recycling companies,
   and other waste handlers;
- composting facilities that receive yard waste;
- any out-of-City waste management facility that receives City commercial or residential (DOS-managed) waste.

**Tables 1-4** present the data on the intermediate and final destinations of the commercial waste stream. **Figures 1a, 1c, 2, 3** and **4** illustrate this data.

Commercial waste does not flow directly from carters and haulers to transfer stations to final disposal sites. While putrescible waste is most likely to follow this course, non-putrescible waste and fill material more often are converted to recyclable material that is reused rather than disposed of. The volume of putrescible commercial waste (with and without excess) originating in New York City approximates the volume sent to intermediate and final destinations. See Tables 1-4. However, the volume of non-putrescible commercial waste (including excess) originating in the City reportedly exceeds the volume sent to intermediate and final destinations. And, in contrast, the volume of

commercial recycling/fill material (including excess) sent to intermediate and final destinations reportedly exceeds the volume originating in the City.

The often wide differences between the origins and destinations of specific categories of commercial waste reported in **Tables 1-4** reflect the complex flows of waste, recyclables, fill material, and post-processing materials among transfer stations, other waste handlers, storage sites, and disposal sites, and the effects of converting volumes from cubic yards to tons, and vice-versa. However, the total volumes of commercial waste originating in the City are closer to the total volumes sent to intermediate and final destinations. For example, in Calendar Year 2000, the 76 transfer stations in the City reported receiving a total of 28,951 tpd of commercial waste, and reported sending 31,583 tpd to final destinations. See **Table 3** and **Figure 3**. The storage of fill material at transfer stations probably accounts for the 2,632 tpd (8%) difference between inflow and outflow.

The intermediate destinations of almost all of the commercial waste (including excess) were within New York City. Of the 36,184 tpd of commercial waste with in-City intermediate destinations, Manhattan received 4 tpd (<1%); the Bronx received 7,906 tpd (22%); Brooklyn received 12,978tpd (36%); Staten Island received 4,978 tpd (14%); Queens received 10,310 tpd (28%); and unspecified locations within the City received 4 tpd (<1%). These destinations largely correspond to the borough locations of the transfer stations. By category, 8,378 tpd (23%) were putrescible waste; 8,987 tpd (25%) were non-putrescible waste; and 18,815 tpd (52%) were recycling/fill material. See **Table 2** and **Figure 2**.

Only the 2,530 tpd of excess commercial waste went directly to out-of-City intermediate destinations. Of this volume, Nassau County received 184 tpd (7%); Suffolk County received 216 tpd (9%); Westchester County received 58 tpd (2%); and unspecified locations outside the City received 2,072 tpd (82%). These intermediate destinations included transfer stations, recycling facilities, and disposal facilities. By category, 658 tpd (26%) were putrescible waste; 1,336 tpd (53%) were non-putrescible waste; and 536 tpd (21%) were recycling/fill material. See **Table 2**.

In contrast with the intermediate destinations, the final destinations of commercial waste (including excess) were divided almost equally between in-City and out-of-City locations. Of the 17,571 tpd of commercial waste with in-City final destinations, Manhattan received 53 tpd (<1%); the Bronx

received 812 tpd (5%); Brooklyn received 1,445 tpd (8%); Staten Island received 1,992 tpd (11%); Queens received 2,991 tpd (17%); and unspecified locations within the City received 10,278 tpd (58%). By category, 443 tpd (3%) were putrescible waste; 4,214 tpd (24%) were non-putrescible waste; and 12,914 tpd (73%) were recycling/fill material. See Table 1 and Figure 1a. In addition to the Fresh Kills Landfill, which received asphalt millings and fill material, the in-City final destinations included construction and excavation sites, asphalt plants, waste handlers such as scrap metal dealers and automobile crushers, the Visy paper recycling facility in Staten Island, and yard waste composting facilities.

Of the 21,139 tpd of commercial waste (including excess) with out-of-City final destinations, Nassau County received 1,915 tpd (9%); Suffolk County received 1,657 tpd (8%); Westchester County received 217 tpd (1%); and unspecified locations outside the City received 17,350 tpd (82%). By category, 8,593 tpd (41%) were putrescible waste; 6,109 tpd (29%) were non-putrescible waste; and 6,437 tpd (30%) were recycling/fill material. See **Table 1** and **Figure 1c.** The out-of-City final destinations included landfills, resource recovery facilities, construction and excavation sites, and transfer stations (which then presumably sent the waste to final disposal locations).

# B. New York City Residential (DOS-Managed) Waste Stream (Tables 5-6; Figures 5-6c)

#### **Origins:**

As is mentioned in Section I, DOS has long maintained comprehensive records of the residential/institutional waste which it manages. With the closure of the Fresh Kills Landfill, private transfer stations in the New York City metropolitan region now must handle all of the waste collected by DOS and historically disposed of at Fresh Kills. Because of this dramatic change in the management of the City's total waste stream and the significantly increased reliance on the region's private waste management infrastructure, DOS included in this Report the waste that it collects.

Table 5: New York City Residential (DOS-Managed) Waste Stream; Origins and Intermediate Destinations

ORIGINS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	1,978	72	538	2,588
Bronx	1,705	113	285	2,103
Brooklyn	3,266	185	676	4,127
Staten Island	905	30	213	1,148
Queens	2,946	595	747	4,288
within NYC	0	0	4,293	4,293
SUBTOTAL	10,800	995	6,752	18,547
Out-of-City				
outside NYC	0	0	0	0
SUBTOTAL	0	0	0	0
TOTAL	10,800	995	6,752	18,547

INTERMEDIATE DESTINATIONS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	0	0	0	0
Bronx	1,702	113	0	1,815
Brooklyn	2,410	104	0	2,514
Staten Island <sup>1</sup>	0	0	0	0
Queens	0	0	0	0
within NYC	0	0	3,043	3,043
SUBTOTAL	4,112	217	3,043	7,372
Out-of-City				
outside NYC	0	0	0	0
SUBTOTAL	0	0	0	0
TOTAL	4,112	217	3,043	7,372

**Note 1:** The Fresh Kills Landfill and Visy paper recycling facility on Staten Island, which received 8,410 tpd of putrescible and non-putrescible waste and recycling/fill material, are not considered in-City intermediate destinations.

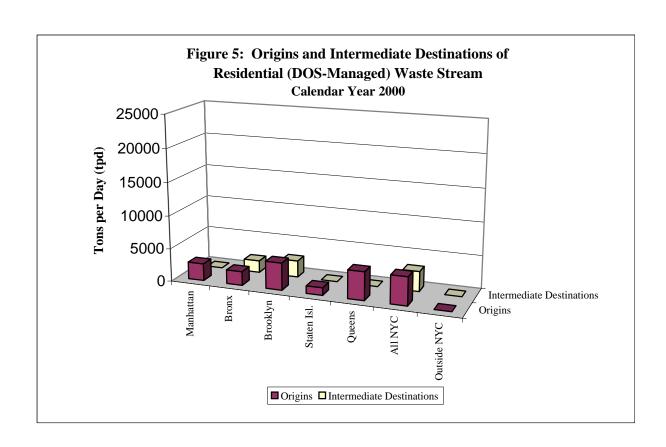


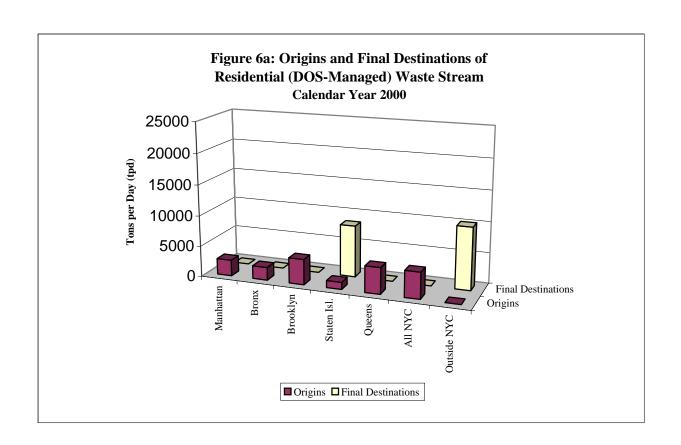
Table 6: New York City Residential (DOS-Managed) Waste Stream; Origins and Final Destinations

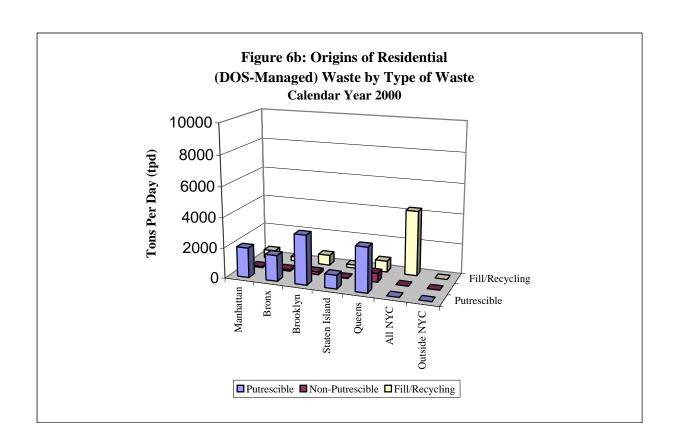
ORIGINS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	1,978	72	538	2,588
Bronx	1,705	113	285	2,103
Brooklyn	3,266	185	676	4,127
Staten Island	905	30	213	1,148
Queens	2,946	595	747	4,288
within NYC	0	0	4,293	4,293
SUBTOTAL	10,800	995	6,752	18,547
Out-of-City	0	0	0	0
SUBTOTAL	0	0	0	0
TOTAL	10,800	995	6,752	18,547

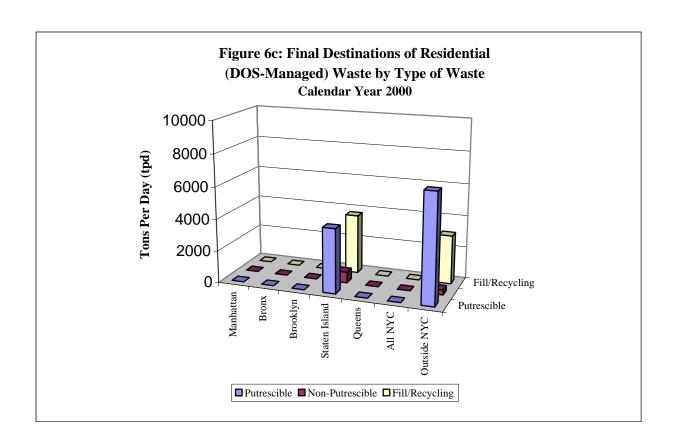
FINAL DESTINATIONS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	0	0	0	0
Bronx	0	0	0	0
Brooklyn	0	0	0	0
Staten Island <sup>1</sup>	4,018	683	3,709	8,410
Queens	0	0	0	0
within NYC	0	0	0	0
SUBTOTAL	4,018	683	3,709	8,410
Out-of-City <sup>2</sup>				
outside NYC	6,782	312	3,043	10,137
SUBTOTAL	6,782	312	3,043	10,137
TOTAL	10,800	995	6,752	18,547

**Note 1**: The Fresh Kills Landfill and Visy paper recycling facility on Staten Island are final in-City destinations.

**Note 2**: In this Report, both final and intermediate out-of-City destinations include transfer stations, recycling facilities, and disposal facilities.







According to its records, in Calendar Year 2000, DOS collected 18,547 tpd of waste from residences, institutions, not-for-profit organizations, lot cleaning operations, and other City agencies. Of this total, 4,293 tpd (23%) were recyclable materials which originated at unspecified locations throughout the five boroughs. Of the remainder, 2,588 tpd (14%) originated in Manhattan; 2,103 tpd (11%) originated in the Bronx; 4,127 tpd (22%) originated in Brooklyn; 1,148 tpd (6%) originated in Staten Island; and 4,288 tpd (23%) originated in Queens. None of the waste originated outside of the City. **Table 5** presents the data on the origins of the residential (DOS-managed) waste stream. **Figures 5, 6a** and **6b** illustrate this data. By category, DOS collected 10,800 tpd (58%) of putrescible waste; 995 tpd (5%) of non-putrescible waste; and 6,752 tpd (37%) of recyclables. DOS did not collect fill material.

#### **Destinations:**

In Calendar Year 2000, DOS was delivering some of the City's residential waste to the Fresh Kills Landfill for final disposal, and the rest to private transfer stations in and out of the City. Of the 18,547 tpd of residential (DOS-managed) waste, 7,372 tpd (40%) were transported to intermediate destinations in the City, while the other 11,175 (60%) went directly to final in-City destinations (the Fresh Kills Landfill or Visy paper recycling facility on Staten Island) or to out-of-City destinations. **Tables 5** and **6** present the data on the destinations of the residential (DOS-managed) waste stream. **Figures 5, 6a** and **6c** illustrate this data.

Of the 7,372 tpd of residential (DOS-managed) waste sent to intermediate destinations in the City, 4,112 tpd (56%) were putrescible waste; 217 tpd (3%) were non-putrescible waste primarily from lot cleaning operations; and 3,043 tpd (41%) were recyclables which DOS collected and delivered to recycling facilities at unspecified locations within the City. By borough destination, DOS delivered 1,815 tpd (25%) to transfer stations in the Bronx; and 2,514 tpd (34%) to transfer stations in Brooklyn. DOS delivered no residential waste to intermediate destinations in Manhattan or Queens because Manhattan has no putrescible waste transfer stations and DOS had not yet contracted with Queens transfer stations in Calendar Year 2000 (thus Queens' waste was transported directly to the Fresh Kills Landfill for final disposal). See Table 5 and Figure 5.

In contrast with the intermediate destinations, the final destinations of residential (DOS-managed) waste were divided almost equally between in-City and out-of-City locations. All 8,410 tpd of

residential waste with in-City final destinations went to the Fresh Kills Landfill and Visy paper recycling facility. By category, 4,018 tpd (48%) were putrescible waste; 683 tpd (8%) were non-putrescible waste; and 3,709 tpd (44%) were recycling/fill material. All 10,137 tpd of residential waste with out-of-City final destinations went to landfills, resource recovery facilities, recyclable materials processors and transfer stations. By category, 6,782 tpd (67%) were putrescible waste; 312 tpd (3%) were non-putrescible waste; and 3,043 tpd (30%) were recycling/fill material. See **Table 6, Figure 6a** and **Figure 6c**.

## C. New York City Combined Commercial and Residential (DOS-Managed) Waste Stream (Tables 7-8; Figures 7-8c)

Adding the volumes of residential (DOS-managed) waste to the volumes of commercial waste (including excess), DOS found that New York City's combined commercial and residential waste stream was 54,731 tpd in Calendar Year 2000. Of this total volume, 36,184 tpd (66%) were commercial waste (including excess) and 18,547 tpd (34%) were residential (DOS-managed) waste.

#### **Origins:**

Of the 54,731 tpd of combined commercial and residential (DOS-managed) waste, 8,630 tpd (16%) originated in Manhattan; 6,439 tpd (12%) originated in the Bronx; 7,562 tpd (14%) originated in Brooklyn; 4,815 tpd (9%) originated in Staten Island; 9,391 tpd (17%) originated in Queens; 17,047 tpd (31%) originated at unspecified locations throughout the five boroughs; and 847 tpd (2%) originated outside New York City. **Tables 7** and **8** present the data on the origins of the combined, or total, waste stream. **Figures 7**, **8a** and **8b** illustrate this data.

By category, the City's total waste stream consisted of 20,791 tpd (38%) of putrescible waste; 13,640 tpd (25%) of non-putrescible waste; and 20,300 tpd (37%) of recycling/fill material. See **Tables** 7 and 8.

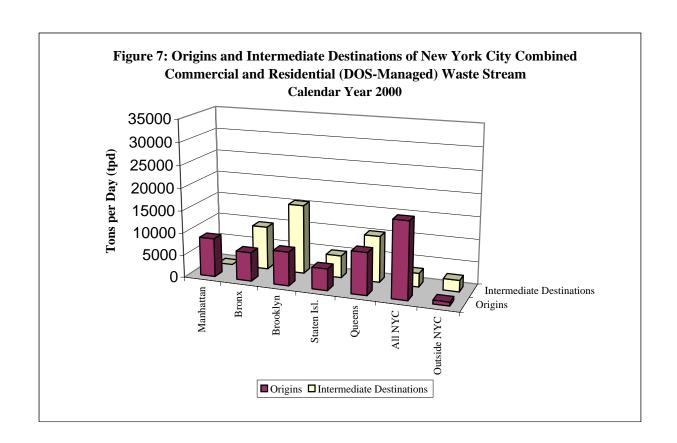
Table 7: New York City Combined Commercial and Residential (DOS-Managed) Waste Stream; Origins and Intermediate Destinations
Calendar Year 2000 in Tons Per Day (tpd)

ORIGINS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	4,389	2,660	1,581	8,630
Bronx	3,000	1,965	1,474	6,439
Brooklyn	4,057	1,831	1,674	7,562
Staten Island	973	1,628	2,214	4,815
Queens	3,918	2,238	3,235	9,391
within NYC	4,239	2,795	10,013	17,047
SUBTOTAL	20,576	13,117	20,191	53,884
Out-of-City				
Nassau	0	9	0	9
Suffolk	0	0	0	0
Westchester	0	2	0	2
outside NYC	215	512	109	836
SUBTOTAL	215	523	109	847
TOTAL	20,791	13,640	20,300	54,731

INTERMEDIATE DESTINATIONS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	0	4	0	4
Bronx	4,887	1,524	3,310	9,721
Brooklyn	6,908	4,256	4,328	15,492
Staten Island <sup>1</sup>	1	846	4,131	4,978
Queens	694	2,574	7,042	10,310
within NYC	0	0	3,047	3,047
SUBTOTAL	12,490	9,204	21,858	43,552
Out-of-City <sup>2</sup>				
Nassau	13	169	2	184
Suffolk	27	147	42	216
Westchester	0	58	0	58
outside NYC	618	962	492	2,072
SUBTOTAL	658	1,336	536	2,530
TOTAL	13,148	10,540	22,394	46,082

**Note 1:** The Fresh Kills Landfill and Visy paper recycling facility on Staten Island, which received 8,410 tpd of putrescible and non-putrescible waste and recycling/fill material, are not considered in-City intermediate destinations.

Note 2: The commercial waste sent to out-of-City intermediate destinations is all excess.



# Table 8: New York City Combined Commercial and Residential (DOS-Managed) Waste Stream; Origins and Final Destinations

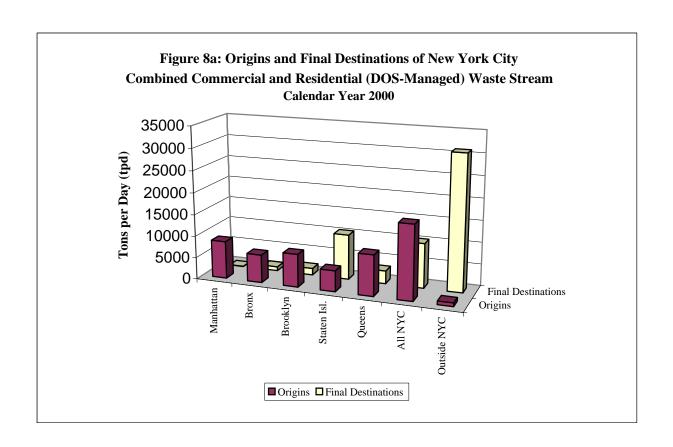
Calendar Year 2000 in Tons Per Day (tpd)

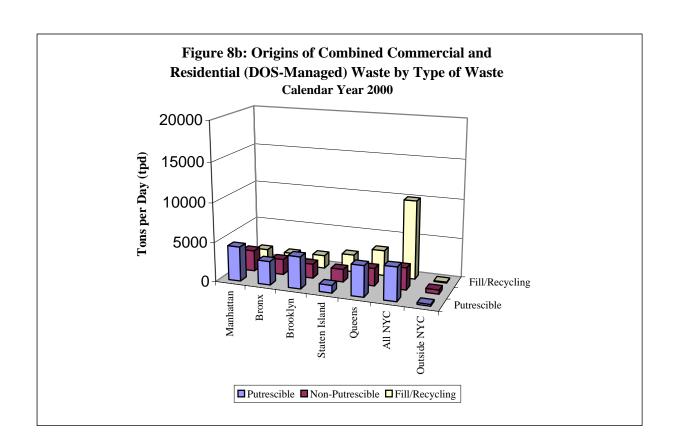
ORIGINS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City				
Manhattan	4,389	2,660	1,581	8,630
Bronx	3,000	1,965	1,474	6,439
Brooklyn	4,057	1,831	1,674	7,562
Staten Island	973	1,628	2,214	4,815
Queens	3,918	2,238	3,235	9,391
within NYC	4,239	2,795	10,013	17,047
SUBTOTAL	20,576	13,117	20,191	53,884
Out-of-City				
Nassau	0	9	0	9
Suffolk	0	0	0	0
Westchester	0	2	0	2
outside NYC	215	512	109	836
SUBTOTAL	215	523	109	847
TOTAL	20,791	13,640	20,300	54,731

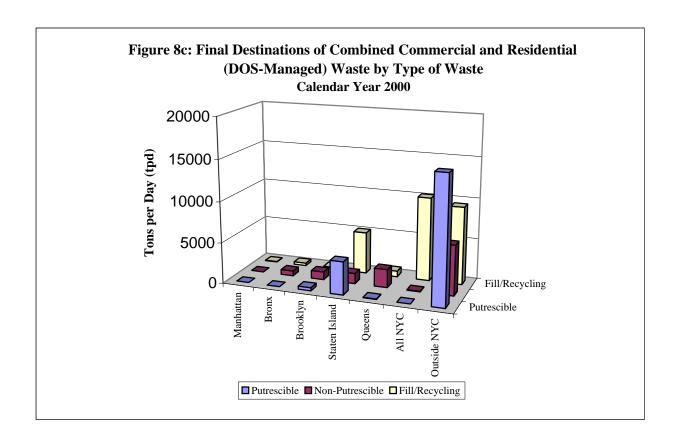
FINAL DESTINATIONS	Putrescible	Non-Putrescible	Recycling/Fill	Total
New York City <sup>1</sup>				
Manhattan	0	4	49	53
Bronx	1	489	322	812
Brooklyn	379	860	206	1,445
Staten Island	4,019	1,258	5,125	10,402
Queens	62	2,224	705	2,991
within NYC	0	62	10,216	10,278
SUBTOTAL	4,461	4,897	16,623	25,981
Out-of-City <sup>2</sup>				
Nassau	27	1,057	831	1,915
Suffolk	27	684	946	1,657
Westchester	28	89	100	217
outside NYC	15,293	4,591	7,603	27,487
SUBTOTAL	15,375	6,421	9,480	31,276
TOTAL	19,836	11,318	26,103	57,257

**Note 1**: In-City final destinations include the Fresh Kills Landfill and the Visy paper recycling facility on Staten Island.

**Note 2**: In this Report, both final and intermediate out-of-City destinations include transfer stations, recycling facilities, and disposal facilities.







#### **Destinations:**

The destinations of the combined commercial and residential (DOS-managed) waste stream obviously conformed to those of the separate commercial and residential waste streams. Of the 46,086 tpd of combined commercial and residential (DOS-managed) waste delivered to intermediate destinations, 43,556 tpd (95%) remained within the City, and 2,530 (5%) were sent out of the City. (The 8,410 tpd of waste sent directly to the Fresh Kills Landfill and Visy paper recycling facility were not included in the tonnage sent to intermediate destinations.) Of the 43,556 tpd with in-City intermediate destinations, Manhattan received 4 tpd (<1%); the Bronx received 9,721 tpd (22%); Brooklyn received 15,492 tpd (36%); Staten Island received 4,978 tpd (11%); Queens received 10,310 tpd (24%); and unspecified locations within the City received 3,047 tpd (7%). By category, 12,490 tpd (29%) were putrescible waste; 9,204 tpd (21%) were non-putrescible waste; and 21,858 tpd (50%) were recycling/fill material. See **Table 7** and **Figure 7**.

Of the 2,530 tpd of combined commercial and residential (DOS-managed) waste sent to out-of-City intermediate destinations, Nassau County received 184 tpd (7%); Suffolk County received 216 tpd (9%); Westchester County received 58 tpd (2%); and unspecified locations outside the City received 2,072 tpd (82%). These intermediate destinations included transfer stations, recycling facilities, and disposal facilities. By category, 658 tpd (26%) were putrescible waste; 1,336 tpd (53%) were non-putrescible waste; and 536 tpd (21%) were recycling/fill material.

Of the 57,162 tpd of combined commercial and residential (DOS-managed) waste delivered to final destinations, 26,198 tpd (46%) remained within the City, and 30,964 (54%) were sent out of the City. Of the waste with in-City destinations, Manhattan received 53 tpd (<1%); the Bronx received 925 tpd (4%); Brooklyn received 1,549 tpd (6%); Staten Island received 10,402 tpd (40%); Queens received 2,991 tpd (11%); and unspecified locations within the City received 10,278 tpd (39%). The in-City final destinations included the Fresh Kills Landfill, construction/excavation sites, asphalt plants, waste handlers such as scrap metal dealers and automobile crushers, the Visy paper recycling facility, and yard waste composting facilities. By category, 4,461 tpd (17%) were putrescible waste; 5,114 tpd (20%) were non-putrescible waste, and 16,623 tpd (63%) was recycling/fill material. See Table 8 and Figure 8a.

Of the 30,964 tpd of combined commercial and residential (DOS-managed) waste sent to out-of-City final destinations, Nassau County received 1,915 tpd (6%); Suffolk County received 1,657 tpd (5%); Westchester County received 217 tpd (1%); and unspecified locations outside the City received 27,175 tpd (88%). The out-of-City final destinations included landfills and resource recovery facilities, construction and excavation sites, and transfer stations (which then presumably sent the waste to final disposal locations). By category, 15,375 tpd (50%) were putrescible waste; 6,109 tpd (20%) were non-putrescible waste; and 9,480 tpd (30%) were recycling/fill material. See **Table 8**.

#### D. Constituents of New York City Total Waste Stream

#### **Putrescible Waste**

In Calendar Year 2000, putrescible waste accounted for 20,791 tpd (38%) of the City's total waste stream. This volume was divided nearly evenly between commercial and residential waste: 9,991 tpd (48%) were commercial waste (including excess), and 10,800 tpd (52%) were residential (DOS-managed) waste.

Of the 20,791 tpd of putrescible waste, 4,389 tpd (21%) originated in Manhattan; 3,000 tpd (14%) originated in the Bronx; 4,057 tpd (20%) originated in Brooklyn; 973 tpd (5%) originated in Staten Island; 3,918 tpd (19%) originated in Queens; 4,239 tpd (20%) originated at unspecified locations within the City; and 215 tpd (1%) originated outside the City. See **Table 8** and **Figure 8b**.

DOS and commercial collection trucks delivered the putrescible waste to intermediate destinations in all boroughs except Manhattan, which has no putrescible waste transfer stations, and out of the City. In Calendar Year 2000, in-City transfer stations received 12,490 tpd (95%), and out-of-City transfer stations received 658 tpd (5%). See Table 7. The Bronx received 4,887 tpd (55%); Brooklyn received 6,908 tpd (39%); Queens received 694 tpd (6%). These intermediate destinations correspond to the borough locations of putrescible waste transfer stations (but not to the Staten Island location of the Fresh Kills Landfill, which still received DOS putrescible and non-putrescible waste in Calendar Year 2000, but is considered a final destination).

Of the 658 tpd of putrescible waste delivered to out-of-City intermediate destinations, Nassau County received 13 tpd (2%); Suffolk County received 27 tpd (4%); Westchester County received no tonnage; and unspecified locations outside the City received 618 tpd (94%).

The final destinations of the City's putrescible waste were located in and out of the City. In-City destinations received 4,461 tpd (22%), and out-of-City transfer stations and resource recovery facilities received 15,375 tpd (78%). See **Table 8** and **Figure 8c**. The Bronx received 1 tpd (<1%); Brooklyn received 379 tpd (8%); Staten Island received 4,019 tpd (90%); and Queens received 62 tpd (1%). While the unspecified locations could be the Fresh Kills Landfill, the Brooklyn and Queens destinations result from inconsistent and erroneous reporting by carters and haulers, because neither borough had a putrescible waste disposal facility in Calendar Year 2000.

Of the 15,375 tpd of putrescible waste delivered to out-of-City final destinations, Nassau County received 27 tpd (<1%); Suffolk County also received 27 tpd (<1%); Westchester County received 28 tpd (<1%); and unspecified locations outside the City received 15,293 tpd (99%). These final destinations included landfills, resource recovery facilities and transfer stations (which then presumably sent the waste to final disposal locations) in the metropolitan region and in many states.

#### **Non-putrescible Waste**

In Calendar Year 2000, non-putrescible waste accounted for 13,640 tpd (25%) of the City's total waste stream. Only 995 tpd (7%) were residential (DOS-managed) waste, while the rest, 12,645 tpd (93%), was commercial waste (including excess).

Of the 13,640 tpd of non-putrescible waste, 2,660 tpd (20%) originated in Manhattan; 1,965 tpd (15%) originated in the Bronx; 1,831 tpd (13%) originated in Brooklyn; 1,628 tpd (12%) originated in Staten Island; 2,238 tpd (16%) originated in Queens; 2,795 tpd (20%) originated at unspecified locations within the City; and 523 tpd (4%) originated outside the City. See Table 8 and Figure 8b.

DOS and commercial carters and haulers delivered the non-putrescible waste to intermediate destinations in and out of the City, including transfer stations handling C&D debris, fill material, and recycling; other waste handlers; construction and excavation sites; and the Fresh Kills Landfill.

Most of the non-putrescible waste went to in-City intermediate destinations which received 9,204 tpd (87%), while out-of-City intermediate destinations received only 1,336 tpd (13%). See **Table 7.** Manhattan received 4 tpd (<1%); the Bronx received 1,524 tpd (17%); Brooklyn received 4,256 tpd (46%); Staten Island received 846 tpd (9%); and Queens received 2,574 tpd (28%). No non-putrescible waste went to unspecified locations within the City.

Of the 1,336 tpd of non-putrescible waste delivered to out-of-City intermediate destinations, Nassau County received 169 tpd (13%); Suffolk County received 147 tpd (11%); Westchester County received 58 tpd (4%); and unspecified locations outside the City received 962 tpd (72%).

The final destinations of the City's non-putrescible waste were divided almost evenly between in-City and out-of-City locations. In-City destinations received 5,114 tpd (46%); out-of-City destinations received 6,109 tpd (54%). See **Table 8** and **Figure 8c**. Manhattan received 4 tpd (<1%); the Bronx received 602 tpd (12%); Brooklyn received 964 tpd (19%); Staten Island received 1,258 tpd (25%); Queens received 2,224 tpd (43%); and unspecified locations within the City received 62 tpd (1%). The in-City final destinations of non-putrescible waste included construction and excavation sites and the Fresh Kills Landfill.

Of the 6,109 tpd of non-putrescible waste delivered to out-of-City final destinations, Nassau County received 1,057 tpd (17%); Suffolk County received 684 tpd (12%); Westchester County received 89 tpd (2%); and unspecified locations outside the City received 4,279 tpd (70%). These final destinations included landfills, resource recovery facilities, recycling facilities, construction and excavation sites, and transfer stations (which then presumably sent the waste to final disposal locations) in the metropolitan region and in many states.

#### **Recycling and Fill Material**

In Calendar Year 2000, recycling/fill material accounted for 20,300 tpd (37%) of the City's total waste stream. Of this volume, 13,548 tpd (67%) was commercial waste (including excess), and 6,752 tpd (33%) was residential (DOS-managed) waste.

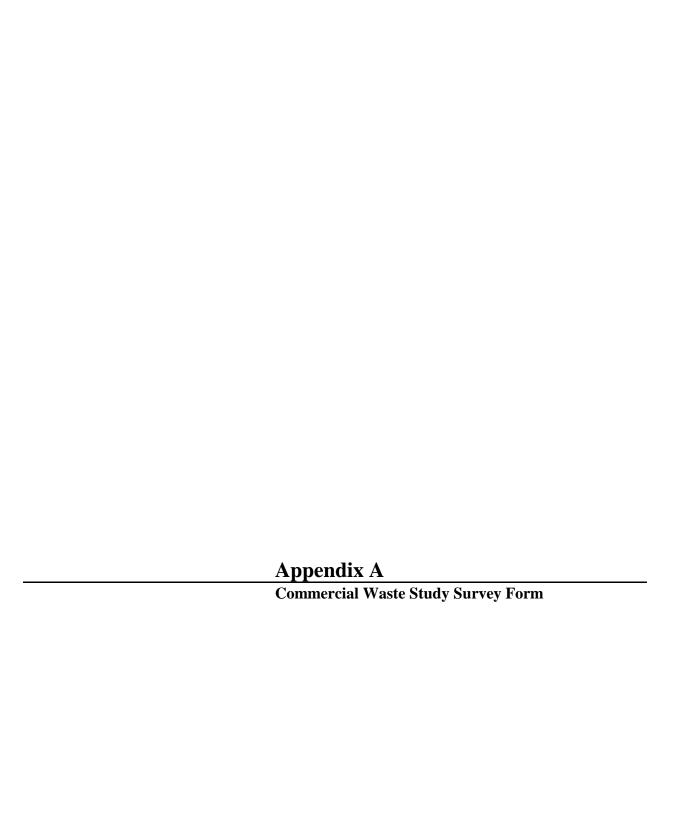
Of the 20,300 tpd of recycling/fill material, 1,581 tpd (8%) originated in Manhattan; 1,474 tpd (7%) originated in the Bronx; 1,674 tpd (8%) originated in Brooklyn; 2,214 tpd (10%) originated in Staten Island; 3,235 tpd (16%) originated in Queens; 10,013 tpd (49%) originated at unspecified locations within the City; and 109 tpd (1%) originated outside the City. See **Table 8** and **Figure 8b**.

The flow of recyclables and fill material among waste handlers is the most complex of any waste materials. After sorting, sifting, and separating, useable and unuseable residue is transported to numerous, varied facilities and destinations, where it is stored, sent to building material yards or construction sites, used in asphalt plants, taken to scrap yards, or transferred yet elsewhere. The volume of the material can be converted from tons to cubic yards and from cubic yards to tons at various points during the transfer process. The result of these conversions is that the volume of recycling/fill material reportedly sent to intermediate and final destinations exceeds the volume reportedly originating in the City. Moreover, almost all of the recycling/fill material went to in-City intermediate destinations, which received 21,858 tpd (98%), while out-of-City intermediate destinations received only 536 tpd (2%). See Table 7. Manhattan received no tonnage; the Bronx received 3,310 tpd (15%); Brooklyn received 4,328 tpd (20%); Staten Island received 4,131 tpd (19%); Queens received 7,042 tpd (32%); and unspecified locations within the City received 3,047 tpd (14%).

Of the 536 tpd of recycling/fill material delivered to out-of-City intermediate destinations, Nassau County received 2 tpd (<1%); Suffolk County received 42 tpd (8%); Westchester County received no tonnage; and unspecified locations outside the City received 492 tpd (91%).

Of the 26,103 tpd of recycling/fill material delivered to final destinations, 16,623 tpd (64%) remained within the City, and 9,480 (36%) were sent out of the City. Of the waste with in-City destinations, Manhattan received 49 tpd (<1%); the Bronx received 322 tpd (2%); Brooklyn received 206 tpd (1%); Staten Island received 5,125 tpd (31%); Queens received 705 tpd (4%); and unspecified locations within the City received 10,216 tpd (62%). See Table 8 and Figure 8c. The in-City final destinations included the Fresh Kills Landfill, construction and excavation sites, asphalt plants, waste handlers such as scrap metal dealers and automobile crushers, the Visy paper recycling facility in Staten Island, and yard waste composting facilities.

Of the 9,480 tpd of recycling/fill material sent to out-of-City final destinations, Nassau County received 831 tpd (9%); Suffolk County received 946 tpd (10%); Westchester County received 100 tpd (1%); and unspecified locations outside the City received 7,603 tpd (80%). The out-of-City final destinations included landfills, construction and excavation sites, waste handlers, manufacturers reusing recycled materials, and other out-of-City transfer stations (which then presumably sent the waste to final disposal locations).



#### INTERVIEW METHODOLOGY

Given the number of firms to be interviewed, DOS established four interview teams to interview all operators within four major geographic areas within and around NYC. These four geographic sectors were Bronx/Queens, Brooklyn/Queens, Northern New York/Connecticut/Long Island, and Staten Island/New Jersey.

Two teams conducted twenty-two test interviews during a three-day test period on May 9, 10, and 11, 2001, in the boroughs of Brooklyn and the Bronx. The two teams sought to determine how the survey would apply to the different waste handlers interviewed and if the initial project schedule could realistically apply to the required task. DOS made changes to the interview form according to comments received at the kick-off meeting and as a result of the experience gained during the test interview period. Suggestions to improve the test interview process included that the amount of waste collected should be listed in either tons or cubic yards on the interview form. The team made these changes to reflect issues encountered during the preliminary test interviews.

The weekly schedule required that approximately 100 letters and preliminary interview forms per week be sent out on each Monday for eight consecutive weeks. The letters and interview forms, sent out one-and-a-half weeks in advance of the interview, allowed adequate preparation by each interviewee. The letter presented a preview of the information that would be expected in the interview and provided a list of three days on which the interview would be conducted.

The day before the interviews, team leaders attempted to contact the firms to be interviewed to confirm the team's intent to visit the site the following day and, if possible, set a specific time. If the team leader was unable to contact the company due to a missing/incorrect number or unreachable by phone, the team leader visited the firm unannounced.

The interviews allowed an opportunity for the waste handlers to provide clarification of the information filled out on the preliminary interview forms. In addition, the interviewers had the

opportunity to ensure that the surveys were properly filled out. The project coordinator reviewed the completed interview surveys with team leaders every week. Reviewing the work on a weekly basis ensured that the information collected was accurate and complete. In addition, clarifications could be made to the information collected during the interviews. This step helped to eliminate any unnecessary confusion that the database administrator would encounter when inputting the collected data into the database.

DOS assumed that some firms would not be contacted during the interview process due to incorrect addresses or telephone numbers, company relocation, a change of name, or absorption by another company. To allow for the required completion time, DOS reserved an additional two and a half week period for make-up interviews. The make-up interviews included those companies that were unable to meet due to scheduling conflicts or those that were unreachable for an interview. The project coordinator sought current, accurate information for those companies that could not be contacted by telephone or whose address seemed incorrect after a site visit. DOS contacted and interviewed these companies only if updated information was found for them. The presence of the DOS or TWC officer convinced most carters to cooperate with the interviewer.

Carter's Nam	e	•	TWC License/Registration or Pending Application Number		
Address	· · · · · ·	*		TWC #	Expiration Date:
Type of Carting (	T T			1	Expiration Date:
Putrescible .	Fall	Other (write in)	Explanation of Other If Necessary	Do you also collect material  Please circle yes or no	OUTSIDE OF N.Y.C. Yes:\No
Non-Putrescible	Medical Waste			is all or part of this material dis	
				Please circle yes or no	Yes No.

#### Section II

#### Where do you dispose of putrescible, non-putrescible, fill and other material collected in NYC?

Please check appr	opriete box(s)				( em-			OTHER PACE TIES NOT
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)ESI	110 50th St.	Н	Eastern	518-526 Columbia S	1_	Allocco .	540 Kingsland Blvd.	
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BFI	598 Scholes	Н	Allas Roll-Off Corp.	889 Essex St.	L	Bklyn Crush, Mat.	640 Columbia	
— Hi-Tech	130 Varick	Н	BF1	594 Scholes	L	Red Hook Crusher	s 186 Third	
Allied	941 Stanley Ave.	Ц	BFI	575 Scholes	L	Bronx City Recyc.	1190 Commerce Ave.	
Republic	246-52 Plymouth	Ц	Casalino .	213 Meadow St.	Ŀ	Con Agg	980 E. 149	
IESI .	577 Court _	Ш	Cooper Tank .	222 Maspeth Ave.	Ŀ	Bronk County Recy	n475 Exterior	
Waste MgL of NYC	485 Scott Ave.	Ц	City Recycling	151 Anthony		Justus Recycling	3330 Provost Ave.	
Waste MgL of NYC	215 Varick	Ц	DeCostole Carting	1481 Troy Ave.		Pebcie Lane	57-00 47th St.	
Waste MgL of NYC	123 Varick	Ц	iesi	548 Varick Ave.		Ourante Brothers	31-40 123 St.	
iesi	325 Casanova		Point Recycling	686 Morgan		Evergreen Recyc.	Corona Meadows	
ESI	246 Canal	Ц	Waste Mgt. of NYC	75 Thomas		Grace	151-17 Skeh Rd.	
Hunts Point Recy.	350 Casanova		Waste MgL of NYC	232 Gardner Ave.		Maspeth recycling	58-08 48 St.	
Metropolitan Transle	r287 Halleck St.		Waste MgL of NYC	123 Varick		N.Y. Paving	37-18 Railroad Ave.	
Paper Fibers Corp.,	960 Bronx River Av		A.J. Recycling	325 Faile St.		Quadrozzi/Rockawa	Beach 75 St.	
_usa.orn.y.c.	510 Faile		Waste MgL of NYC	620 Truston St.		Russo	248-12 Brookville	
U.S.A. Waste NYC	132nd St.		G&M Transfer	216 Manida St.		T. Novelli	97-07 Merrick	
U.S.A. Waste NYC	891 E. 135		J. Danne & sons	318 Bryant Ave.		Waste Mgt. of NYC	73rd Place/S. Railroad	
U.S.A. Waste NYC	900 E. 138	┛	Gds Waterfront Corp	1264 Viele Ave.		Interstate Materials	3000 Arthur IGII Fld.	
U.S.A. Waste NYC	98 Lincoln Ave.	_}	Waste Mgt./Baretto	315 Barretto St.		J.A. Bruno	280 Meredith Ave.	
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Republic Ser.	920 E. 132	_}	Five Counties	172-33 Douglas		Con Edision	276-290 Ave. C.	
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<u> L</u>		h	Red Ball	625-635 W. 29th	٦			

Section II Please list locations outside of New York City where you dispose of material collected in N.Y.C.

It is imperative that you indicate county/city/state of the disposal facility.

Usi	ing the circled I	etter(s) enter Type	of Facility as one	of the following:				
		NP - Non-Putresc				TS) - Transfer Station	(ba) -lackerstor	ě.
	Type of Material	Name	12	Address				Type of
1		1		- AUGUS			County/City/State	Facility
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Using the circled letter(s) enter Type of Facility as one of the	ie following
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Phone Number

Contact Person



THE CITY OF NEW YORK
TRADE WASTE COMMISSION
253 BROADWAY, 10TH FLOOR
NEW YORK, NEW YORK 10007

#### **COMMISSION DIRECTIVE**

July 9, 2001

Dear Licensees, Registrants, and License and Registration Applicants:

In accordance with Local Law 74, the Department of Sanitation ("DOS") and the Trade Waste Commission ("Commission") are conducting a study of the commercial waste generated in New York City.

In February 2001, you were sent a brief, three question survey. As a follow-up to that survey, representatives of the Commission and DOS will be conducting on-site interviews with owners or senior corporate officers of companies that collect, transport, or dispose commercial waste or debris. The purpose of the interviews is to clarify the information on the previously submitted surveys and to obtain additional details on the volume of waste your company handles and its origin. To facilitate the interview process and minimize the interview time for both your company and the interviewers, please gather the information requested on the enclosed Waste Handler Interview form and complete it before the scheduled interview with your company.

On the days listed below, a principal or other senior manager must be available during the hours of 9:00 a.m. to 5:00 p.m. to answer any questions that the Commission and DOS might have.

Representatives of the Commission and DOS will visit your facility to conduct the interview on one of the following three days:

Thursday July 19th, Friday July 20th, or Monday July 23rd

Unfortunately, we cannot schedule specific times for our interview meeting given the volume of interviews that must be conducted. However, we will make every effort to contact you the day before our expected visit.

Your full cooperation is expected and required. Please be advised that failure to cooperate with Commission and DOS representatives and/or with the on-site interview process may result in administrative action and fines being brought against your company.

If you have any questions, please call Linda Urbanski at (212) 788-4009.

Thank you in advance for your cooperation with this commercial waste study.

Sincerely,

Raymond V. Casey, Esq.

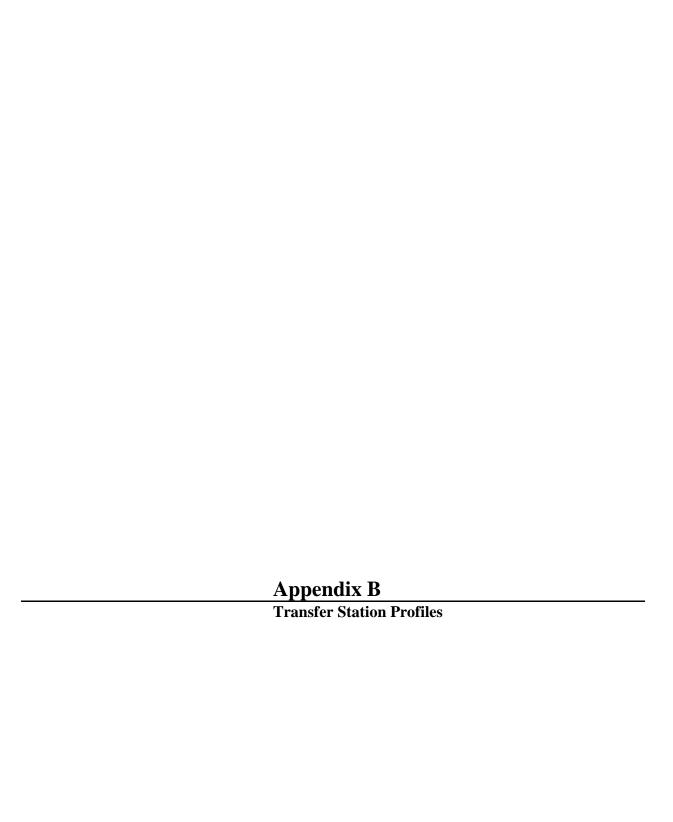
Chairman

cc: Commissioner Kevin Farrell
Department of Sanitation

Thomas McCormack
Assistant Commissioner for Enforcement

### Waste Handler Interview

1)	copy)	a Survey Comp	oletion Checklist (Note	e comments on Backgr	ound Survey
	All quarties				
	Name and a	is fully answered ddress consisten	t with TWC listing		
	Name consi	stent with teleph	one listing		
	Outor manife	or mis admicss			
	Onice forms	mied out for th	is address		
	Disposal loc	ation information	n consistent within for	m	
-		endar Year 200			•
Was	s calender ye	ar 2000 typical?	If not, why	not?	· · · · · · · · · · · · · · · · · · ·
3)	Calendar Y the City.	ear 2000: Wast	e <u>collected</u> outside of l	New York City and <u>dis</u>	posed of inside
Origin (City/State)		Туре	Amount Collected (tns. <u>or</u> cu. yds.)	Destination (Facility)	Amount Disposed (tns. <u>or</u> cu. yds.)
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6)	Field Note	es:		·	
Note local	tion of exit t	o waste facility	ility		
Site notes	(queuing, et	(C.)		·	
Loads per	year or wee	k		ra grava traklara e e e o j	



WASTE MANAGEMENT OF NY, LLC (USA WASTE **Facility Name:** 

SERVICES OF NYC, INC.)



Facility Type: TRANSFER STATION: PUTR.

Street Address: 98 LINCOLN AVE (HARLEM RVR YD)

**Boro / County: BRONX** 

City: NEW YORK

State: NY

Zipcode: 10454

**CAPACITY** 

Permit:

**Tons** 3,000

Operating:

1,078

**Dedicated to** Recycling:

0

**Property Information** 

Zone: M-3 CD#: BX1

**Block: 2260** 

Lot: 62

Material Received:

6 days 6 days

**Material Processed:** 

Scale: No

Certified: No

Input Weighed: No

Output Weighed: No

PHOTO UNAVAILABLE

**Material Input** (tons per year)

for Year:

2000

MSW:

336,391

C & D:

0

SSR:

0

Residue:

0

Total:

336,391

WASTE MANAGEMENT OF NY, LLC(U.S.A. WASTE Facility Name:

SERVICES OF NYC, INC.)



**Tons** 0

0

Facility Type: TRANSFER STATION: PUTR.

Street Address: 132ND ST AND ST. ANNS AVE

**Boro / County: BRONX** 

City: NEW YORK

State: NY

Zipcode: 10454

CAPACITY

Permit:

Operating:

**Dedicated to** Recycling:

0

0 days Material Received:

0 days **Material Processed:** 

> Scale: No

No Certified:

Input Weighed:

Νo

Output Weighed: No

**Property Information** 

Zone: M-3

CD#: BX1

**Block: 2543** 

Lot: 1

**Material Input** (tons per year)

for Year:

2000

MSW:

0 C & D:

SSR:

0

Residue:

0

0

Total:

0

Facility Name: WASTE SERVICES OF NY, INC.



**Tons** 

**Material Input** (tons per year)

for Year: 2000

Facility Type: TRANSFER STATION: PUTR.

**CAPACITY** Street Address: 920 E 132ND ST

Boro / County: BRONX

Permit: 2,999 City: NEW YORK

State: NY Operating: 2,227

**Dedicated to** Zipcode: 10454 0 Recycling:

Material Received: 6 days

**Property Information** Material Processed: 6 days

Scale: Yes Zone: M-3

Certified: Yes CD#: BX1 **Block: 2583** Input Weighed: Yes

Lot: 50 Output Weighed: Yes

> MSW: 694,786

C & D: 0

SSR: 2,750 0 Residue:

697,536 Total:

Facility Name: HUNTS POINT RECYCLING CORP.



**Tons** 

**Material Input** (tons per year)

for Year: 2000

Facility Type: TRANSFER STATION: PUTR.

**CAPACITY** Street Address: 315 CASANOVA ST

**Boro / County: BRONX** 

Permit: 1,000 City: NEW YORK

State: NY Operating: 530

**Dedicated to** Zipcode: 10474 250 Recycling:

Material Received: 6 days

**Property Information** Material Processed: 6 days

Scale: Yes Zone: M-3

**CD#**: BX2 Certified: Yes

**Block: 2774** Input Weighed: Yes Lot: 225, 227, 229 Output Weighed: Yes

> MSW: 165,304

C & D: 0

SSR: 86,412 Residue:

251,716 Total:

Facility Name: IESI NY CPRP.



Facility Type: TRANSFER STATION: PUTR.

Street Address: 325 CASANOVA

Boro / County: BRONX

City: NEW YORK

State: NY

Zipcode: 10474

**CAPACITY** 

Permit:

225

Operating:

200

**Tons** 

**Dedicated to** Recycling:

0

**Property Information** 

Zone: M-3

CD#: BX2

**Block: 2774** 

Lot: 142

Material Received: 0 days

**Material Processed:** 

0 days No

Scale:

Certified: No

Input Weighed: No

Output Weighed: No

PHOTO UNAVAILABLE

**Material Input** (tons per year)

for Year: 2000

MSW:

62,541

C & D:

0

SSR:

0

Residue:

0

Total:

62,541

## Facility Name: METROPOLITAN TRANSFER STATION



Facility Type: TRANSFER STATION: PUTR.

Street Address: 287 HALLECK ST

Boro / County: BRONX

City: NEW YORK

State: NY

Zipcode: 10474

**CAPACITY** 

Permit:

Operating:

**Dedicated to** Recycling:

666 100

**Tons** 

825

Material Received:

6 days 6 days

**Material Processed:** 

Scale: Yes

Certified: Yes

Input Weighed:

Yes Output Weighed: Yes

**Property Information** 

Zone: M-3

**CD#**: BX2

**Block: 2777** Lot: 420

> **Material Input** (tons per year)

> > for Year: 2000

MSW: 207,674

C & D:

0 0

SSR:

Residue:

0

Total:

207,674

Facility Name: WASTE MANAGEMENT OF NY, LLC



**Tons** 

0

0

Facility Type: TRANSFER STATION: PUTR.

Street Address: OAKPOINT AVE/ BARRY ST

Boro / County: BRONX

City: NEW YORK

State: NY

Zipcode: 10474

**CAPACITY** 

Permit:

Operating:

**Dedicated to** 

0 Recycling:

> 6 days Material Received:

**Material Processed:** 6 days

Scale:

No

Certified: No

Input Weighed: No

**Output Weighed:** No

**Property Information** 

Zone: M-3

CD#: BX2 Block:

Lot:

**Material Input** (tons per year)

for Year: 2000

MSW:

206,011

C & D: SSR:

0

0

0

Residue:

Total:

206,011

Facility Name: PAPER FIBERS CORP.



Facility Type: TRANSFER STATION: PUTR.

Street Address: 960 BRONX RIVER AVE

Boro / County: BRONX

City: NEW YORK

State: NY

Zipcode: 10473

**CAPACITY** 

Permit: Operating:

65

**Dedicated to** Recycling:

300

Tons 74

Material Received:

6 days 6 days

**Material Processed:** 

Scale: Yes

Certified: No

Input Weighed:

Yes **Output Weighed:** Yes

**Property Information** 

Zone: M-1

**CD#**: BX9

Block: 3647 Lot: 20

> **Material Input** (tons per year)

> > for Year: 2000

MSW:

20,324

C & D:

0

SSR:

64,194

Residue:

0

Total:

84,518

Facility Name: BFI WASTE SYSTEMS OF NJ, INC.



Facility Type: TRANSFER STATION: PUTR.

Street Address: 115 THAMES ST

Boro / County: BROOKLYN

City: NEW YORK

State: NY

Zipcode: 11237

**CAPACITY** 

Permit:

Operating:

524

560

**Tons** 

Dedicated to Recycling:

0

**Property Information** 

Zone: M-1 CD#: BK1 Block: 3009

Lot: 25

Material Received: 6 days

Material Processed: 6 days

Scale: Yes

Certified: Yes

Input Weighed: Yes

Output Weighed: Yes



## Material Input (tons per year)

for Year: 2000

**MSW**: 163,390

**C & D**: 0

**SSR**: 0

Residue: 0

**Total:** 163,390

Facility Name: BFI WASTE SYSTEMS OF NJ, INC.



Facility Type: TRANSFER STATION: PUTR.

Street Address: 598-636 SCHOLES ST

Boro / County: BROOKLYN

City: NEW YORK

State: NY

Zipcode: 11237

**CAPACITY** 

**Tons** 220

Operating:

165

Dedicated to

. . . .

Recycling:

Permit:

0

**Property Information** 

Zone: M-3 CD#: BK1

**Block:** 2971

Lot: 15

Material Received: 6 days

Material Processed: 6 days

Scale: Yes

Certified: Yes

Input Weighed: Yes

Output Weighed: Yes



## Material Input (tons per year)

(tons per year)

for Year: 2000

MSW:

C & D:

51,470 0

SSR:

0

Residue:

Total:

0 51,470

Facility Name: HI-TECH RESOURCE RECOVERY



Facility Type: TRANSFER STATION: PUTR.

Street Address: 130 VARICK AVE

Boro / County: BROOKLYN

City: NEW YORK

State: NY

Zipcode: 11237

**CAPACITY** 

Permit:

**Tons** 500

Operating:

355

Dedicated to Recycling:

80

**Property Information** 

**Zone:** M-3 **CD#:** BK1 **Block:** 2969

Lot: 1

Material Received: 5 days

Material Processed: 5 days

Scale:

Yes

Certified: Yes

Input Weighed: Yes

Output Weighed: No



## Material Input (tons per year)

for Year: 2000

MSW:

110,636

C & D:

0

SSR:

3,680

Residue:

0

**Total:** 114,316

Facility Name: WASTE MANAGEMENT OF NY, LLC



Facility Type: TRANSFER STATION: PUTR.

Street Address: 215-221 VARICK AVE

Boro / County: BROOKLYN

City: NEW YORK

State: NY

Zipcode: 11237

**CAPACITY** 

Permit:

**Tons** 3,700

Operating:

3,167

**Dedicated to** 

0

Recycling:

Material Received: **Material Processed:** 

6 days 6 days

Scale:

Yes

Certified:

Yes

Input Weighed: Yes

Yes

**Output Weighed:** 

**Material Input** (tons per year)

for Year: 2000

MSW:

988,004

C & D:

0

SSR:

0

Residue:

0

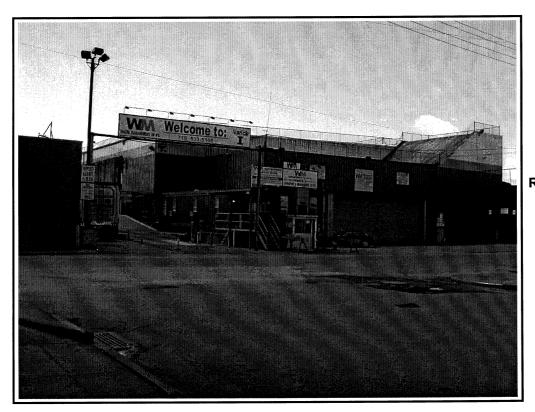
Total:

988,004

#### **Property Information**

Zone: M-3 **CD#**: BK1

Block: 2943, 2950 Lot: 1, 7, 20, 44



WASTE MANAGEMENT OF NY, LLC



Facility Type: TRANSFER STATION: PUTR.

Street Address: 485 SCOTT AVE

Boro / County: BROOKLYN

City: NEW YORK

State: NY

Zipcode: 11222

**CAPACITY** 

1,125 Permit:

Operating:

1,002

**Dedicated to** Recycling:

617

Tons

Material Received: 6 days

**Material Processed:** 6 days

> Scale: Yes

Certified: Yes

Input Weighed: Yes

Output Weighed: Yes

**Property Information** 

Zone: M-3

CD#: BK1

**Block: 2802** 

Lot: 11, 14

**Material Input** (tons per year)

for Year: 2000

MSW:

312,532 0

C & D: SSR:

96,238

Residue:

0

408,770

PHOTO UNAVAILABLE

Total:

Facility Name: WASTE SERVICES OF NY, INC. (ALLIED)



Facility Type: TRANSFER STATION: PUTR.

Street Address: 941 STANLEY AVE

Boro / County: BROOKLYN

City: NEW YORK

State: NY

Zipcode: 11208

**CAPACITY** 

Permit:

375

Operating:

359

**Tons** 

Dedicated to Recycling:

100

**Property Information** 

Zone: M-1 CD#: BK5 Block: 4500 Lot: 28 Material Received: 7 days

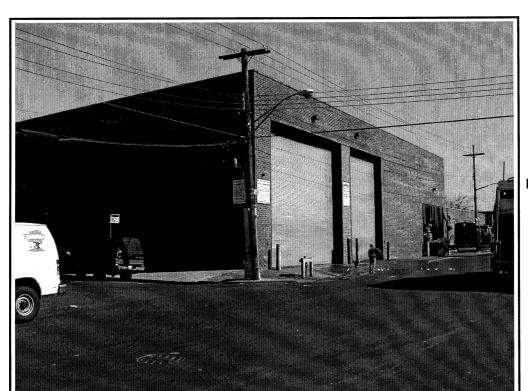
Material Processed: 7 days

Scale: Yes

Certified: Yes

Input Weighed: Yes

Output Weighed: Yes



## Material Input (tons per year)

for Year: 2000

MSW:

112,124

C & D:

0

SSR:

Total:

4,421

Residue:

40.545

0

116,545