

NYC Waste Characterization Study  
Final Report, Volume 1

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Section 1: Study Overview

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## Section 1 Study Overview

### 1.1 Introduction

Volume 1 of the Final Report presents the results of the **PWCS**<sup>1</sup>, conducted in May and June 2004, and the **WCS**, conducted from October 2004 through August 2005. Both of these studies were conducted under a contract (PIN #82702BR00015) between the **DSNY** and R. W. Beck, Inc. (“R. W. Beck”).

The purpose of both the PWCS and WCS was to characterize **the City’s residential Waste**. Both studies involved taking **samples of Refuse and Recycling (MGP and Paper)** and then **sorting** and weighing the materials in those Samples to arrive at an estimate of the composition of the Waste.

The PWCS took place in May and June 2004. The goal of the PWCS was to develop a snapshot of the City’s curbside residential Waste. The PWCS was conducted in two phases. The PWCS Refuse Sort, designed to characterize curbside residential Refuse, took place from May 15 through May 28, 2004. The PWCS Recycling Sort, designed to characterize the Paper and MGP set out for Recycling collection, took place from June 7 through June 12, 2004.

The WCS took place from October 2004 through August 2005. It included the following components:

- A **Residential Study**, to characterize curbside-collected residential Waste by housing density and income strata over four seasons and estimate generation rates;
- A **Street Basket Waste Study** to characterize the Waste collected from the City’s street baskets; and
- A **Multi-Unit Apartment Study** to identify correlations between Recycling success and the physical, operational, and demographic characteristics of the buildings.

The WCS included four seasonal **Sorting Periods**, the dates of which are shown in Table 1-1. Table 1-1 summarizes the structure of the PWCS and the WCS and some of the key differences such as the number and type of study components, the **Sampling** criteria, and the number of **Sampling Units** sorted. Volume 1 will report Residential results from the PWCS and the Residential/Street Basket results from the WCS. Volume 2 will cover methodology for the PWCS and Residential and Street Basket methodology for the WCS. Results and methodology for the **MUS** will be reported separately in Volume 3.

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<sup>1</sup> Terms and abbreviations defined in the glossary are printed in bold the first time they appear in each Volume.

**Table 1-1  
Structure of PWCS and WCS**

	PWCS	WCS
Study Components	Residential Study	<ul style="list-style-type: none"> <li>▪Residential Study</li> <li>▪Street Basket Waste Study</li> <li>▪Multi-Unit Apartment Study</li> </ul>
Purpose	"Snapshot" of the composition of New York City's residential waste stream	<ul style="list-style-type: none"> <li>▪Residential: Seasonal composition of the waste stream by density and income strata</li> <li>▪Residential: Generation Rates</li> <li>▪Street Basket: Composition of street basket waste</li> <li>▪Multi-Unit: Correlation between building characteristics and recycling success</li> </ul>
Sorting Periods	<ul style="list-style-type: none"> <li>▪Refuse: May 15 through May 28, 2004</li> <li>▪Recycling: June 7 through June 12, 2004</li> </ul>	<ul style="list-style-type: none"> <li>▪Refuse &amp; Recycling: October 18 through November 6, 2004</li> <li>▪Refuse &amp; Recycling: March 8 through March 29, 2005</li> <li>▪Refuse &amp; Recycling: May 9 through May 27, 2005</li> <li>▪Refuse &amp; Recycling: August 1 through August 27, 2005</li> </ul>
Generator Sectors	Curbside Residential (includes all types of residential housing from single family homes through 150+ unit apartment buildings)	<ul style="list-style-type: none"> <li>▪Curbside Residential (includes all types of residential housing from single family homes through 150+ unit apartment buildings)</li> <li>▪Street Basket</li> <li>▪Multi-Unit Apartment Buildings</li> </ul>
Sampling Criterion <sup>(1)</sup>	<ul style="list-style-type: none"> <li>▪Borough</li> <li>▪Late Week/Early Week</li> </ul>	<ul style="list-style-type: none"> <li>▪Residential: Housing Density and Income Strata</li> <li>▪Street Basket Waste: Dedicated DSNY Street Basket Routes</li> <li>▪Multi-Unit Apartments: Randomly selected multi-unit apartment buildings of six or more units</li> </ul>
Number of Sampling Units	<ul style="list-style-type: none"> <li>▪Refuse: 200</li> <li>▪Recycling Paper: 100</li> <li>▪Recycling MGP: 100</li> </ul>	<ul style="list-style-type: none"> <li>▪Refuse: 1,600 (200 per each of 8 strata) total; 400 (50 per each of 8 strata) per each of 4 seasons</li> <li>▪Recycling Paper: 320 (40 per each of 8 strata) total; 80 (10 per each of 8 strata) per each of 4 seasons</li> <li>▪Recycling MGP: 1,280 (160 per each of 8 strata) total; 320 (40 per each of 8 strata) per each of 4 seasons</li> <li>▪Street Basket: 200 total; 50 per each of 4 seasons</li> </ul>
Targeted Weights of Sampling Units	<ul style="list-style-type: none"> <li>▪Refuse: 200 pounds</li> <li>▪Recycling Paper: 100 pounds</li> <li>▪Recycling MGP: 100 pounds</li> </ul>	<ul style="list-style-type: none"> <li>▪Refuse (includes street basket waste): 200 pounds</li> <li>▪Recycling Paper: 100 pounds</li> <li>▪Recycling MGP: 100 pounds</li> </ul>
Sampling Sites	<ul style="list-style-type: none"> <li>▪Refuse: WMI Harlem River Yards, Bronx</li> <li>▪Refuse: WMI Varick I, Brooklyn</li> <li>▪Recycling Paper: Metropolitan Paper, Brooklyn</li> <li>▪Recycling MGP: Hugo Neu, Long Island City</li> </ul>	<ul style="list-style-type: none"> <li>▪Refuse (includes street basket waste): WMI Harlem River Yards, Bronx</li> <li>▪Refuse (includes street basket waste): WMI Varick I, Brooklyn</li> <li>▪Recycling Paper: Metropolitan Paper, Brooklyn</li> <li>▪Recycling MGP: Hugo Neu, Long Island City</li> </ul>
Sorting Sites	<ul style="list-style-type: none"> <li>▪Refuse: Greenpoint Marine Transfer Station</li> <li>▪Recycling: Greenpoint Marine Transfer Station</li> </ul>	<ul style="list-style-type: none"> <li>▪Refuse (includes street basket waste): North Shore Marine Transfer Station</li> <li>▪Recycling: Greenpoint Marine Transfer Station</li> </ul>

(1) The standard used to determine how study samples were selected. The sampling criteria used for the PWCS were the borough in which the waste was collected and late-week/early week collection; the sampling criterion used for the WCS Residential Study was Housing Density and Income Strata in which the waste was collected.

## 1.2 Basis for Sampling

### 1.2.1 PWCS

The number of Refuse and Recycling samples taken for analysis in the PWCS was distributed among the five **Boroughs** according to the amount of Refuse and Recycling, respectively, that each Borough contributes to the total Waste Stream, using tonnage data averaged over 2003 and 2004, accounting for the temporary suspension of glass and plastics recycling that concluded in April 2004.

Samples were also selected based on early in the week or late in the week collection days. This criteria was used to examine the hypothesis that the composition of Refuse set out for collection early in the week (i.e., Monday or Tuesday) would be significantly different from Refuse set out late in the week (i.e., Wednesday through Saturday). This issue is discussed in more detail in Volume 2, Section 2. All Samples were randomly selected after determining the number of Samples targeted based on these two criteria.

### 1.2.2 WCS Residential Study

Sampling for the WCS Residential Study was based on housing density and income strata. There are two reasons for using these criteria as a basis for Sampling. First, published data indicates that these demographic criteria affect **Waste Generation**, Recycling compliance, and/or Waste composition. The following documents, listed in Appendix P in Volume 4, are examples of studies that demonstrate this:

- Waste Composition Analysis for the State of Washington; Green Solutions, 2003;
- Waste Prevention, Recycling and Composting Options: Lessons from 30 U.S. “Communities” Demographic and Materials Generation and Recovery Levels”; U.S. EPA, 1994; and
- Katzev, Blake, Messer; “Determinants of Participation in Multi-Family Recycling Programs”, Journal of Applied Social Psychology, 1993.

Second, the City’s **1989/1990 WCS** study used density and income as a basis for Sampling. In order to compare the results of that study with the results of the WCS, density and income were also used in the WCS.

The City’s **Census Tracts** were originally divided into nine **Density/Income Strata** as defined in Table 1-2. Given the small number of Census Tracts in the low density/low income stratum, the dispersion of those Census Tracts, and the small number of residents in those Census Tracts (fewer than 3,000), it was decided to eliminate this stratum from the Study and focus resources on the remaining eight strata.

### 1.2.3 WCS Street Basket Study

Sampling for the WCS Street Basket Study was based on the DSNY’s dedicated street basket routes. These are routes that collect only street basket Waste and do not collect residential or

institutional Waste on the same route. Samples of street basket Waste were selected at random from these routes.

The 1989/1990 Study did not include a study of street basket Waste.

### 1.3 New York City Demographics

Tables 1-2 through 1-5 present the definition of Density and Income Strata; the distribution of Census Tracts among Density/Income Strata; and the distribution of the **Population** of New York City among the Density/Income Strata, respectively.

Table 1-2  
Definition of Density and Income Strata

	Housing Density Census Tracts	Income Census Tracts
High	67% of residential structures contain 10 or more units	Median Household Income \$46,193 or greater
Medium	Census tracts not in High or Low Group	Median Household Income less than \$46,193 and greater than \$30,763
Low	67% of residential structures contain 2 or fewer units	Median Household Income \$30,763 or less

Source: U.S. Census Bureau Data from Year 2000

Table 1-3  
Distribution of Census Tracts Among Density and Income Strata

	Number of Tracts				Percentage of Tracts			
	High Income	Medium Income	Low Income	Total	High Income	Medium Income	Low Income	Total
High Density	167	127	342	636	7.53%	5.73%	15.43%	28.69%
Medium Density	162	435	392	989	7.31%	19.62%	17.68%	44.61%
Low Density	410	177	5	592	18.49%	7.98%	0.23%	26.70%
Total	739	739	739	2,217	33.33%	33.33%	33.33%	100.00%

Source: US Census Bureau, Census 2000

Table 1-4  
Distribution of Population Among Density and Income Strata

	Number of Persons				Percentage of Persons			
	High Income	Medium Income	Low Income	Total	High Income	Medium Income	Low Income	Total
High Density	883,319	710,418	1,753,021	3,346,758	11.03%	8.87%	21.89%	41.79%
Medium Density	444,298	1,442,180	1,129,673	3,016,151	5.55%	18.01%	14.11%	37.66%
Low Density	1,171,081	471,531	2,757	1,645,369	14.62%	5.89%	0.03%	20.55%
Total	2,498,698	2,624,129	2,885,451	8,008,278	31.20%	32.77%	36.03%	100.00%

Source: US Census Bureau, Census 2000; Table P1 - Total Population

**Table 1-5  
Distribution of Housing Units Among Density and Income Strata**

	Number of Housing Units				Percentage of Housing Units			
	High Income	Medium Income	Low Income	Total	High Income	Medium Income	Low Income	Total
High Density	538,713	304,316	643,449	1,486,478	16.83%	9.51%	20.10%	46.44%
Medium Density	192,219	546,971	402,202	1,141,392	6.01%	17.09%	12.57%	35.66%
Low Density	412,754	159,269	1,019	573,042	12.89%	4.98%	0.03%	17.90%
<b>Total</b>	<b>1,143,686</b>	<b>1,010,556</b>	<b>1,046,670</b>	<b>3,200,912</b>	<b>35.73%</b>	<b>31.57%</b>	<b>32.70%</b>	<b>100.00%</b>

Source: US Census Bureau, Census 2000; Table H1 - Housing Units

### **1.3.1 Maps of Study Area**

Figures 1-1 through 1-4 present color and grayscale maps of the Census Tracts by Income; Housing Density; and then by the eight Density/Income Strata. As the maps in Figures 1-1A through 1-4E show, the Census Tracts for the eight strata are distributed throughout the city, intermingled with one another.

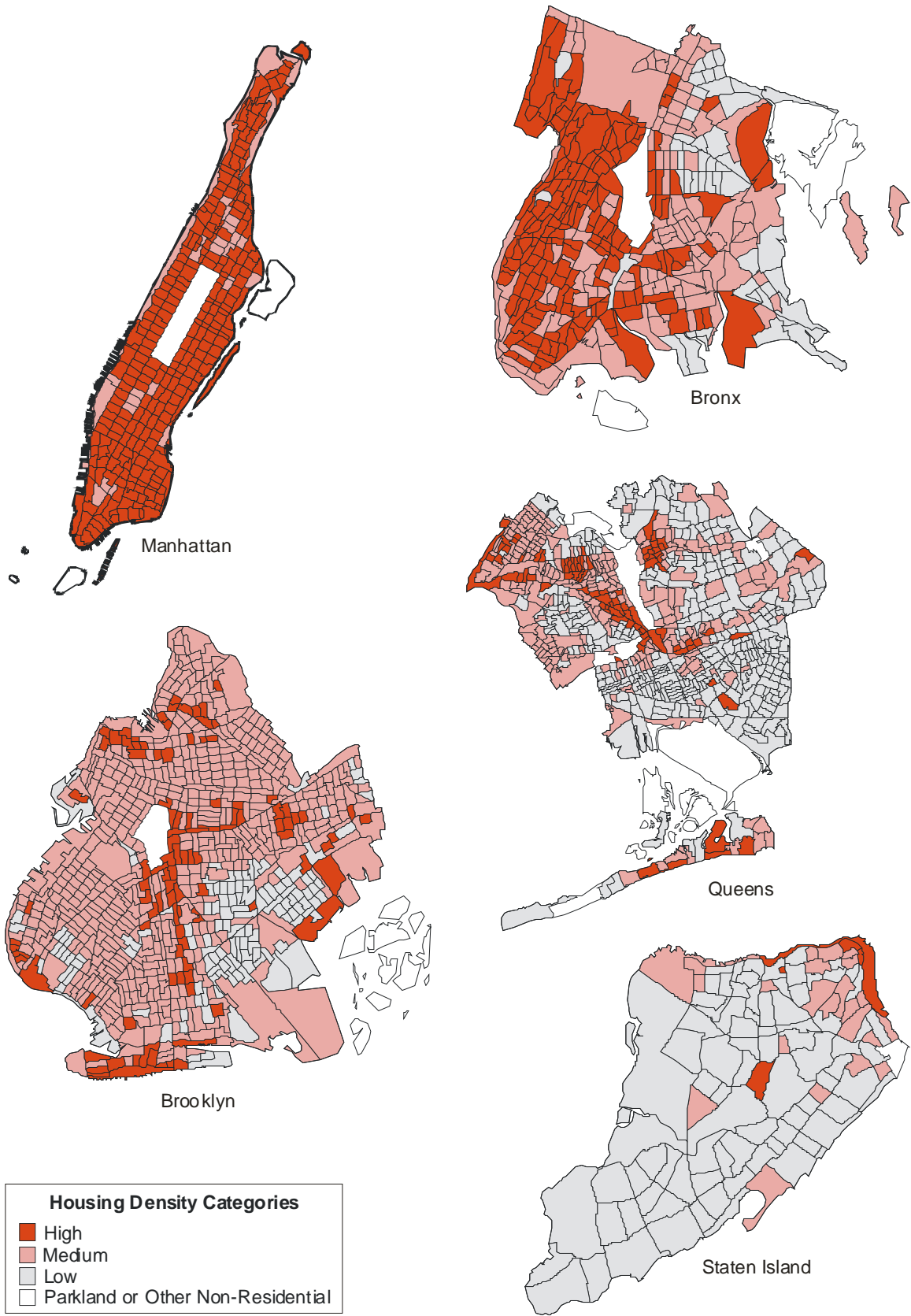


Figure 1-1A: Color Map of Census Tracts by Housing Density

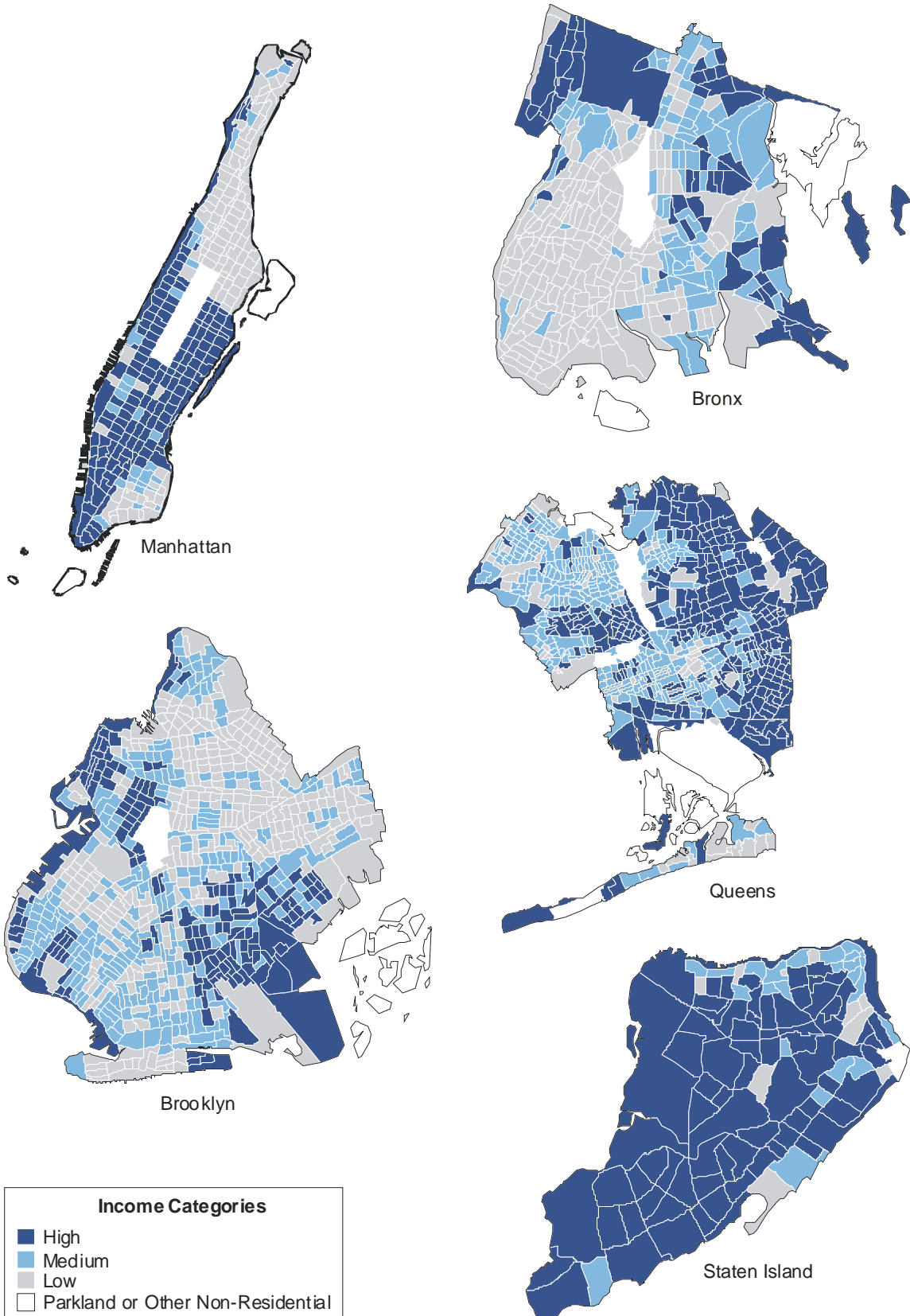


Figure 1-1B: Color Map of Census Tracts by Income

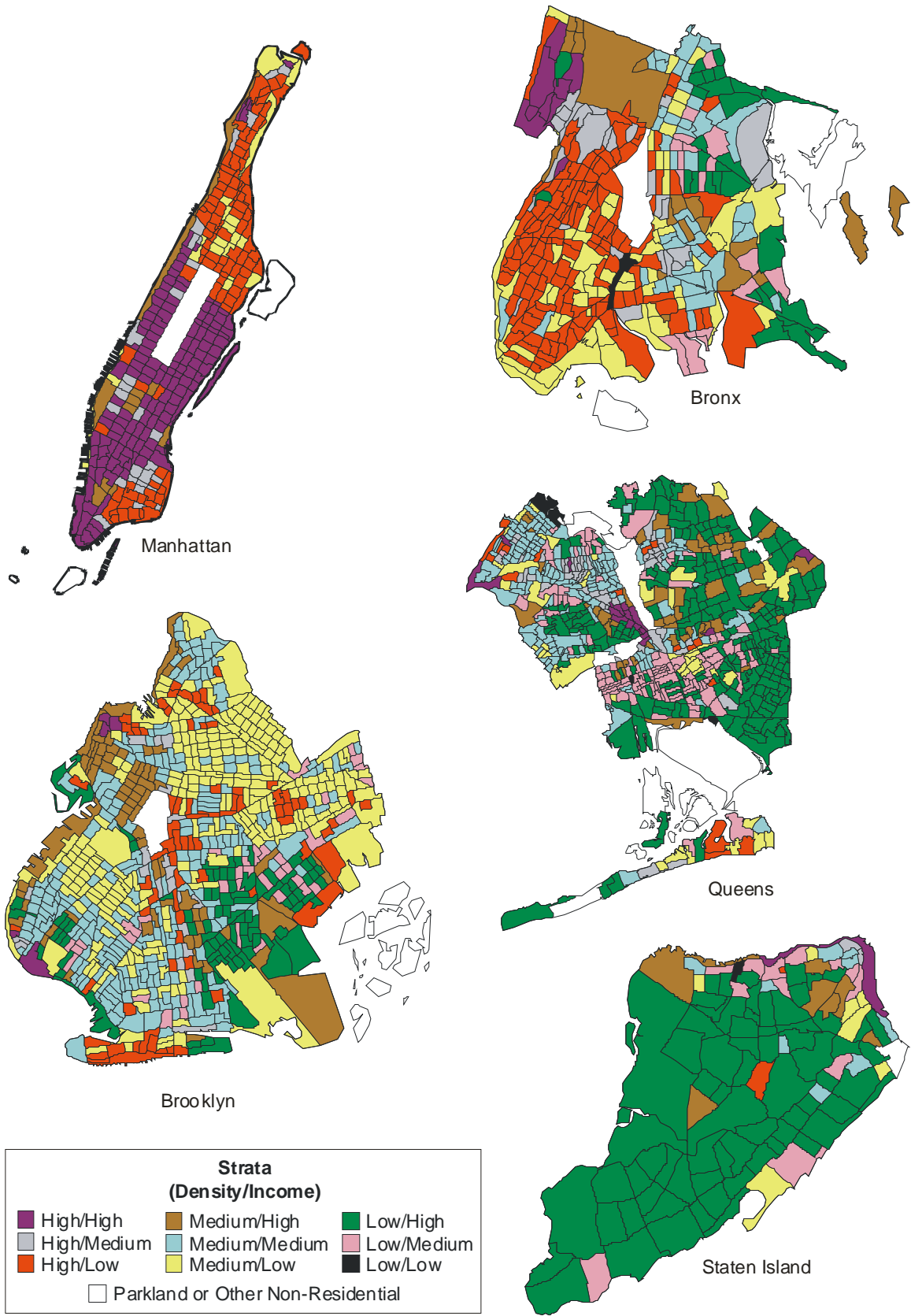


Figure 1-1C: Color Map of Census Tracts by Density/Income Strata

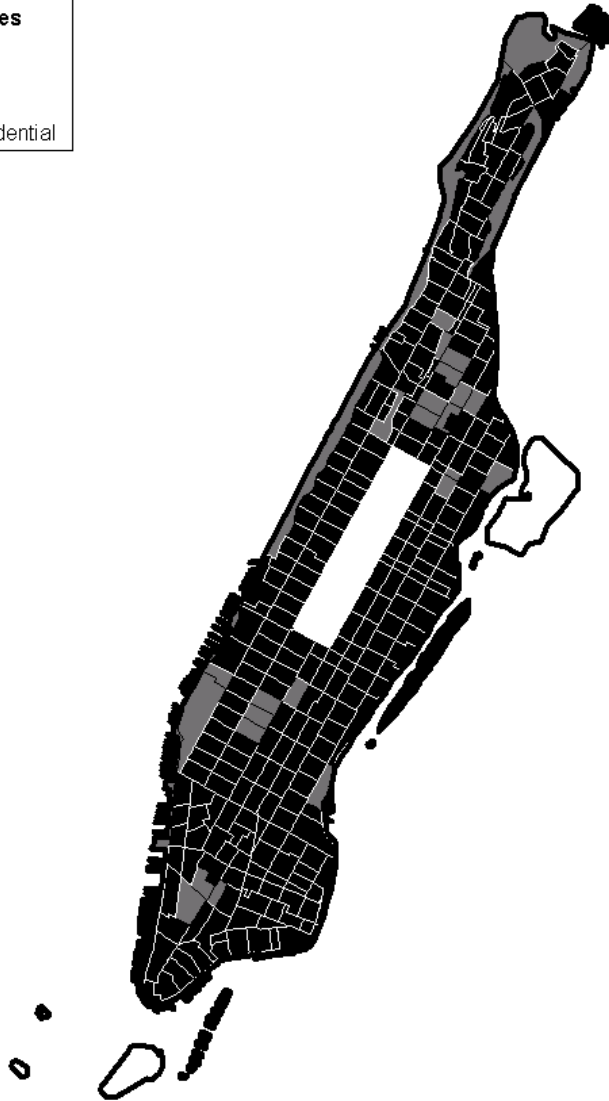
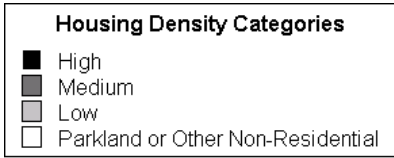


Figure 1-2A: Grayscale Map of Census Tracts by Housing Density - Manhattan

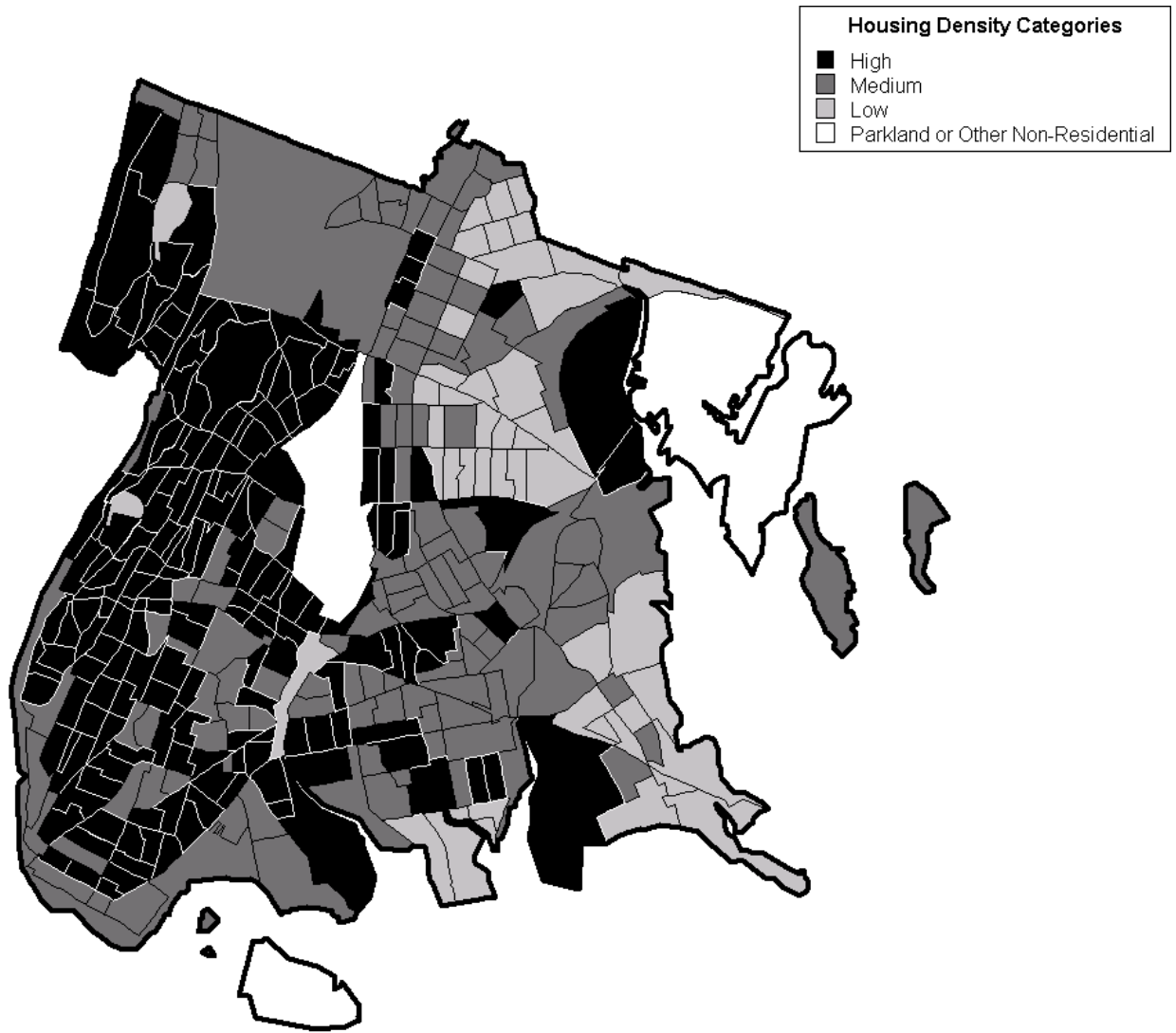


Figure 1-2B: Grayscale Map of Census Tracts by Housing Density – Bronx

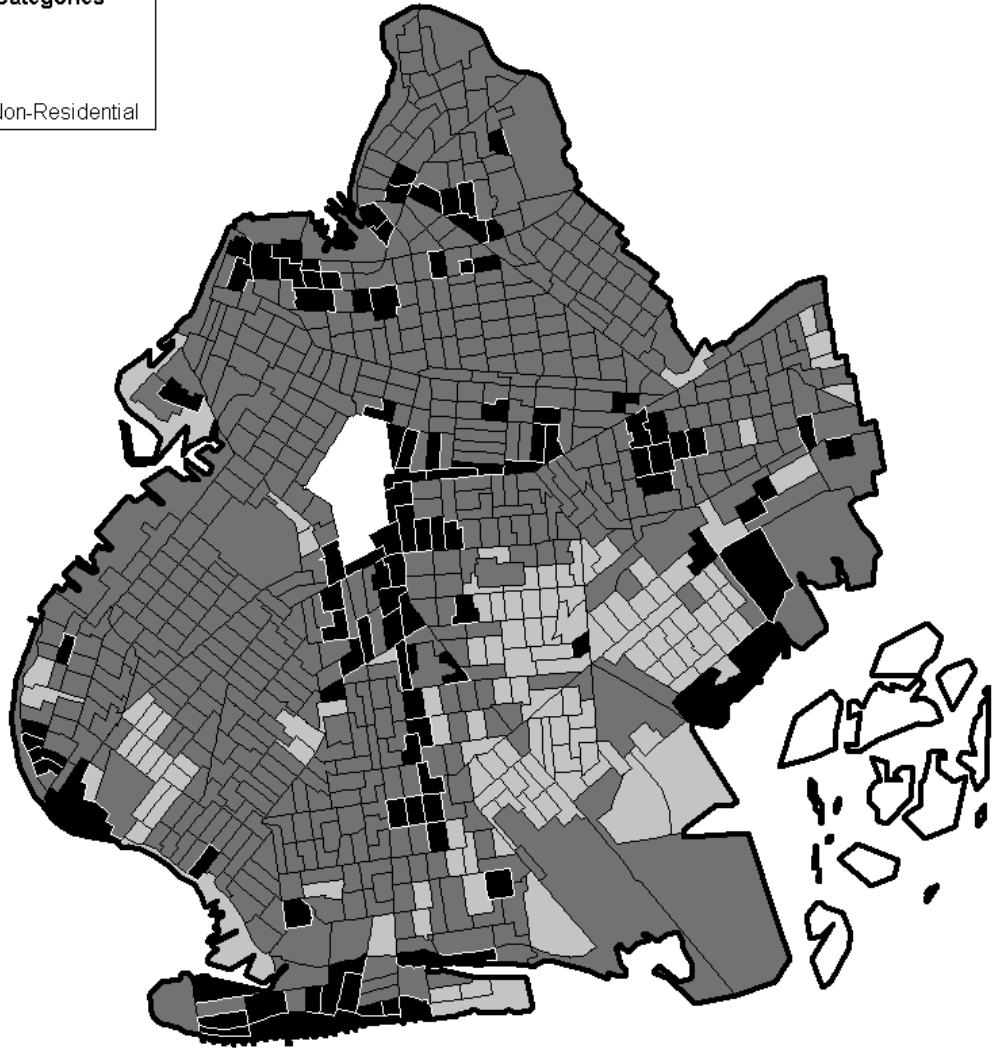
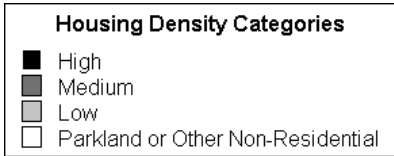


Figure 1-2C: Grayscale Map of Census Tracts by Housing Density – Brooklyn

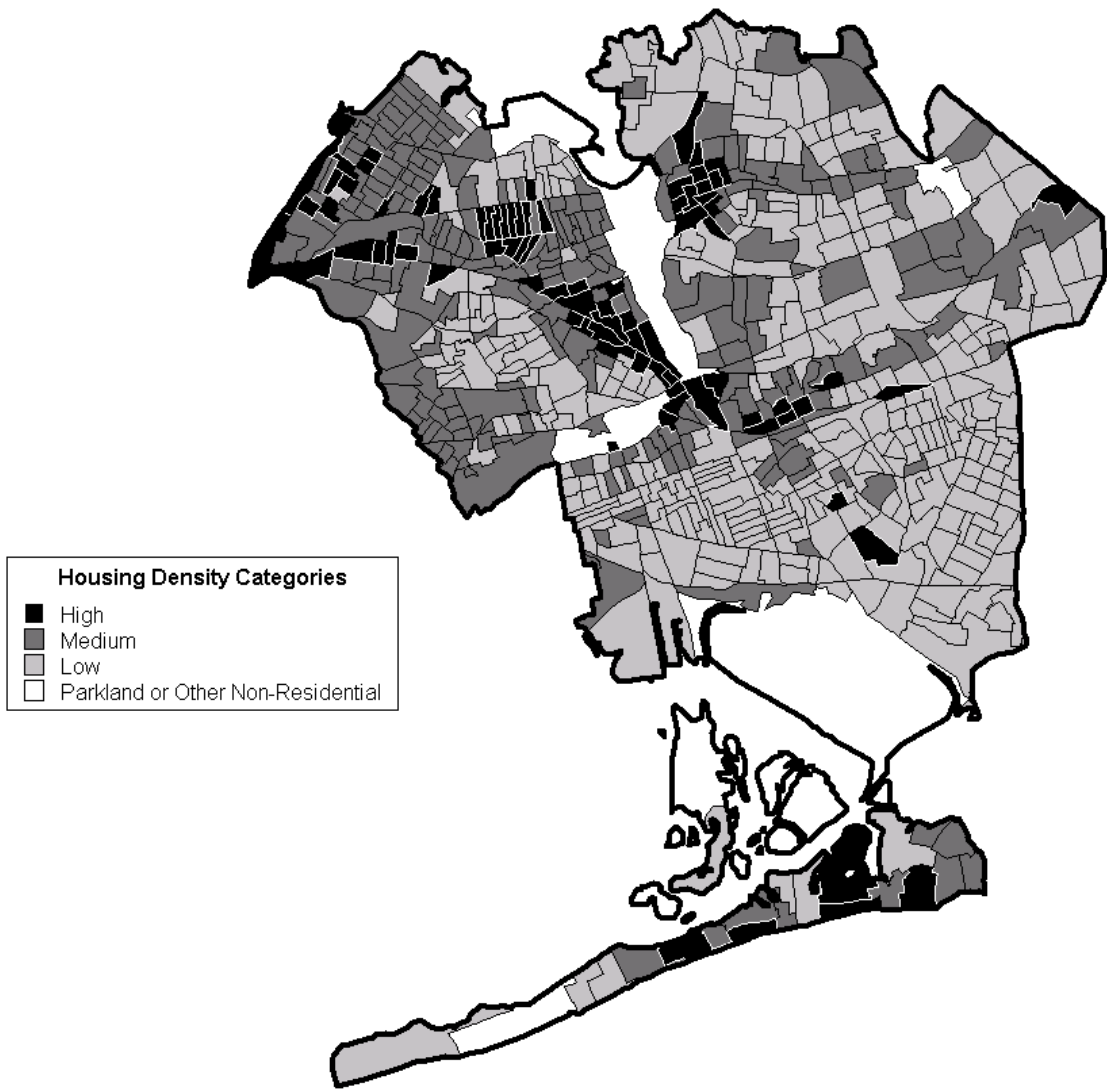


Figure 1-2D: Grayscale Map of Census Tracts by Housing Density – Queens

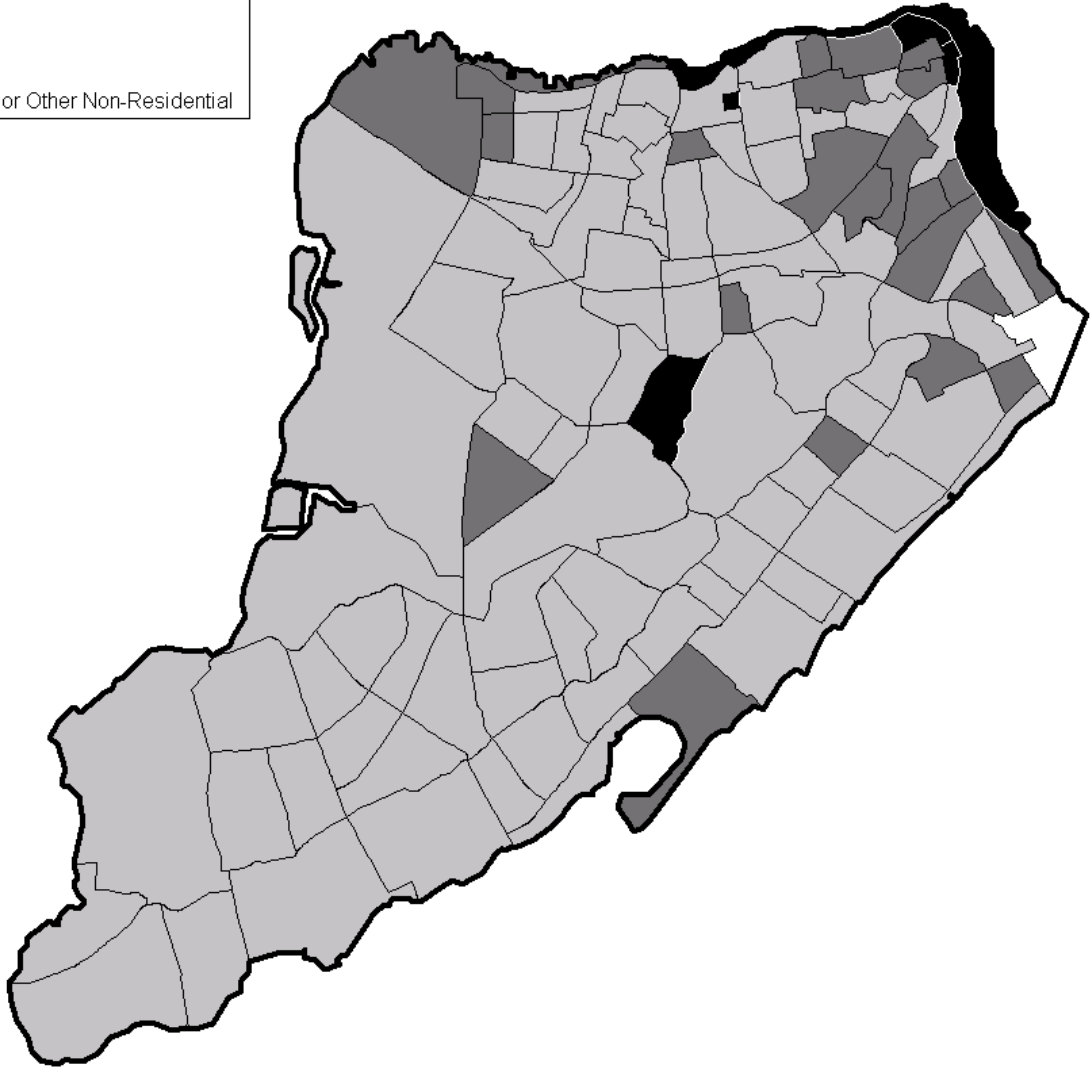
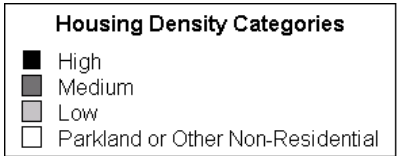


Figure 1-2E: Grayscale Map of Census Tracts by Housing Density – Staten Island

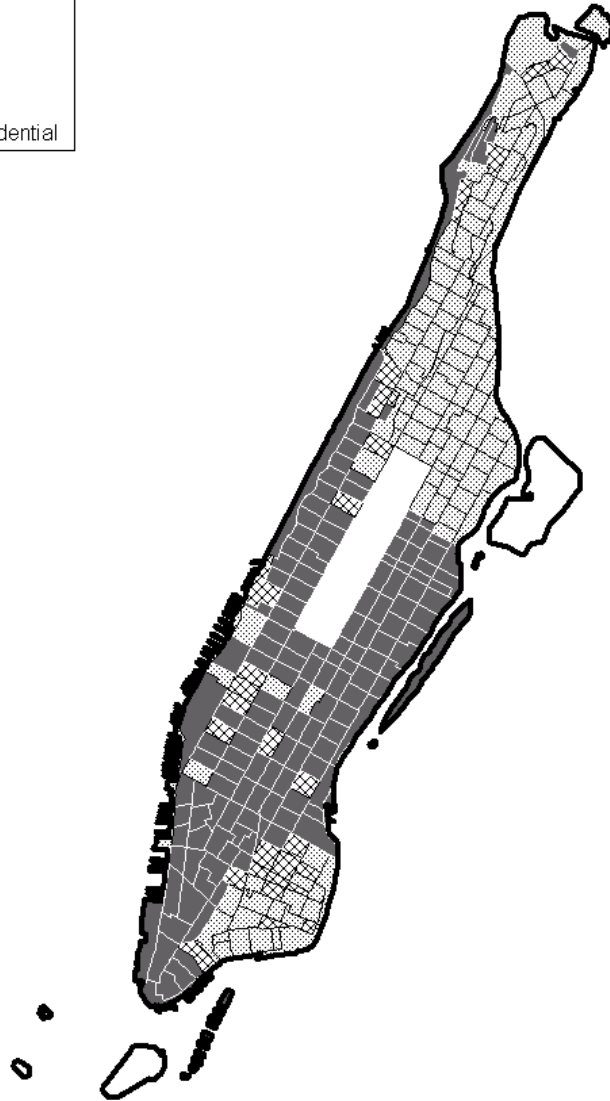
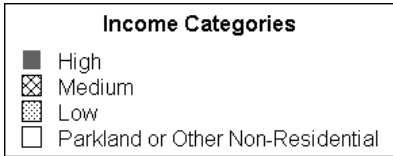


Figure 1-3A: Grayscale Map of Census Tracts by Income – Manhattan

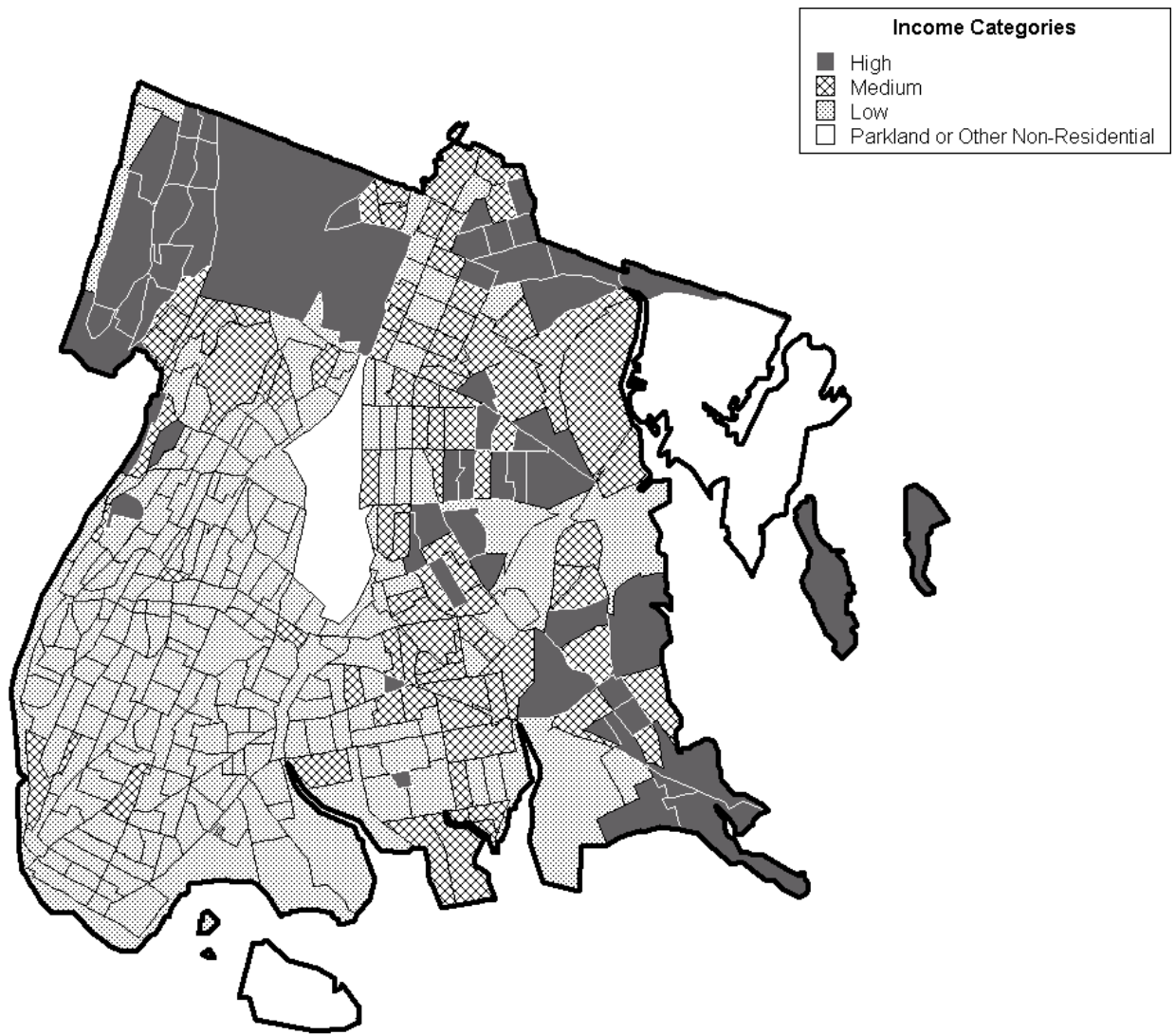


Figure 1-3B: Grayscale Map of Census Tracts by Income – Bronx

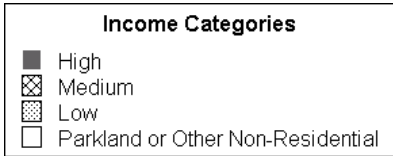


Figure 1-3C: Grayscale Map of Census Tracts by Income – Brooklyn

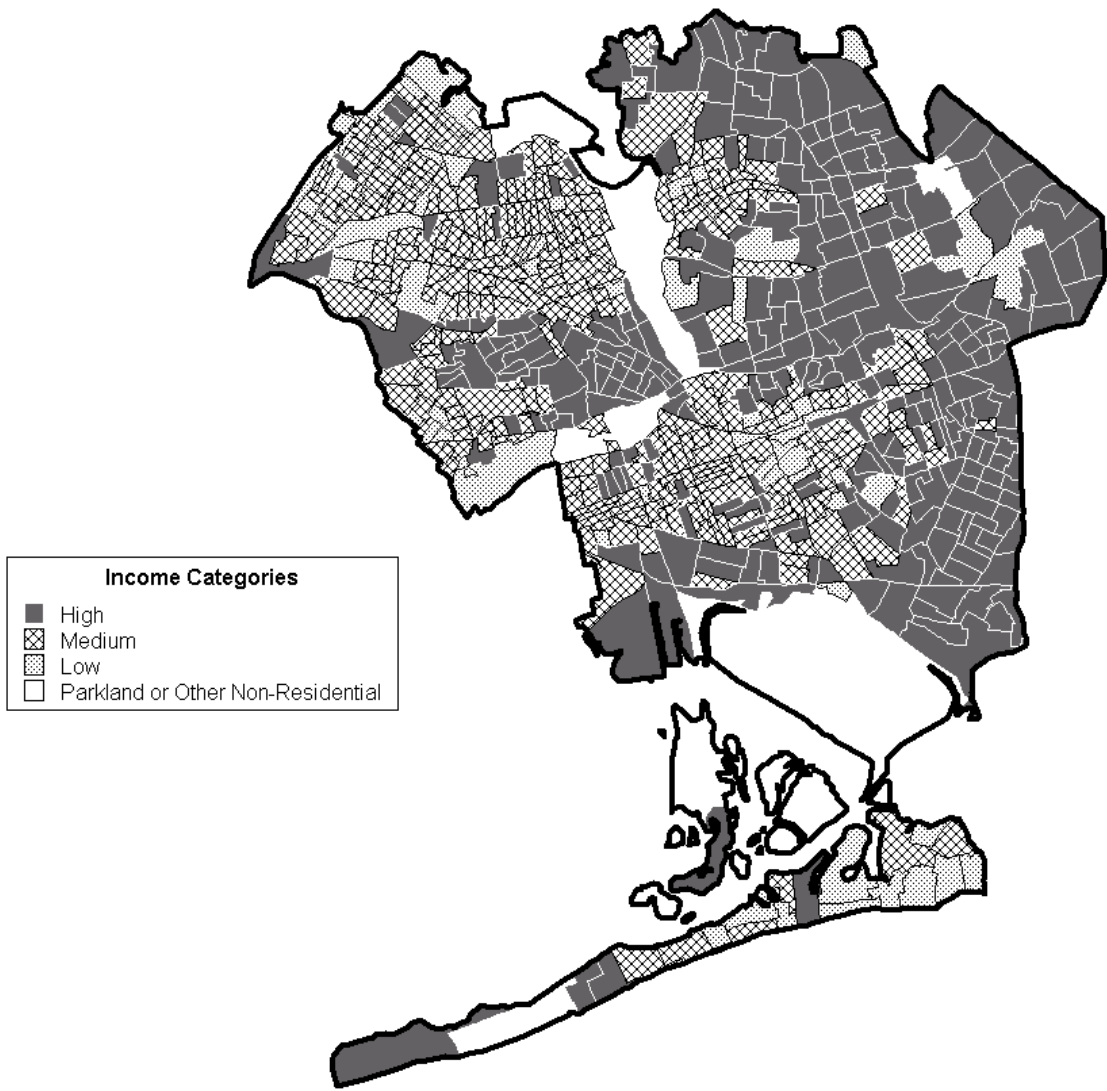


Figure 1-3D: Grayscale Map of Census Tracts by Income – Queens

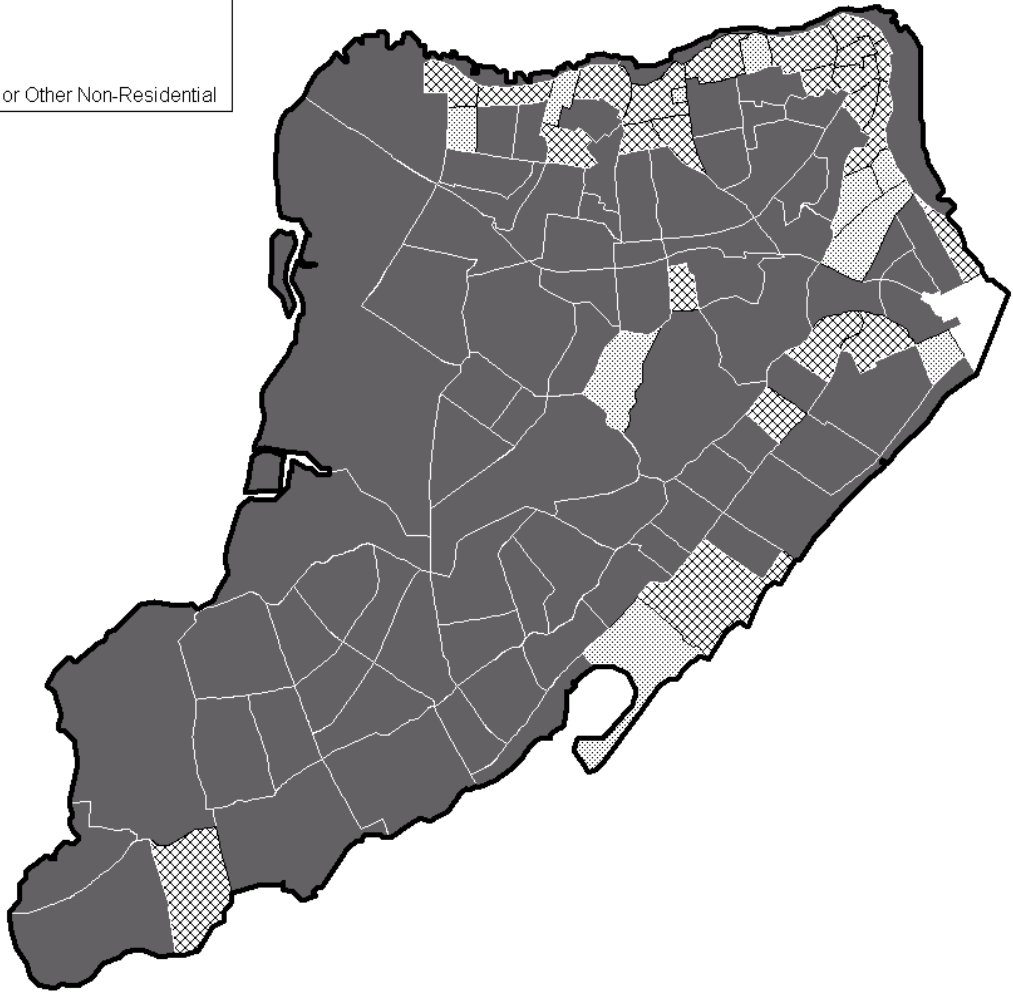
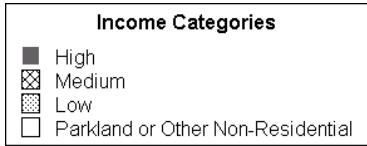


Figure 1-3E: Grayscale Map of Census Tracts by Income – Staten Island

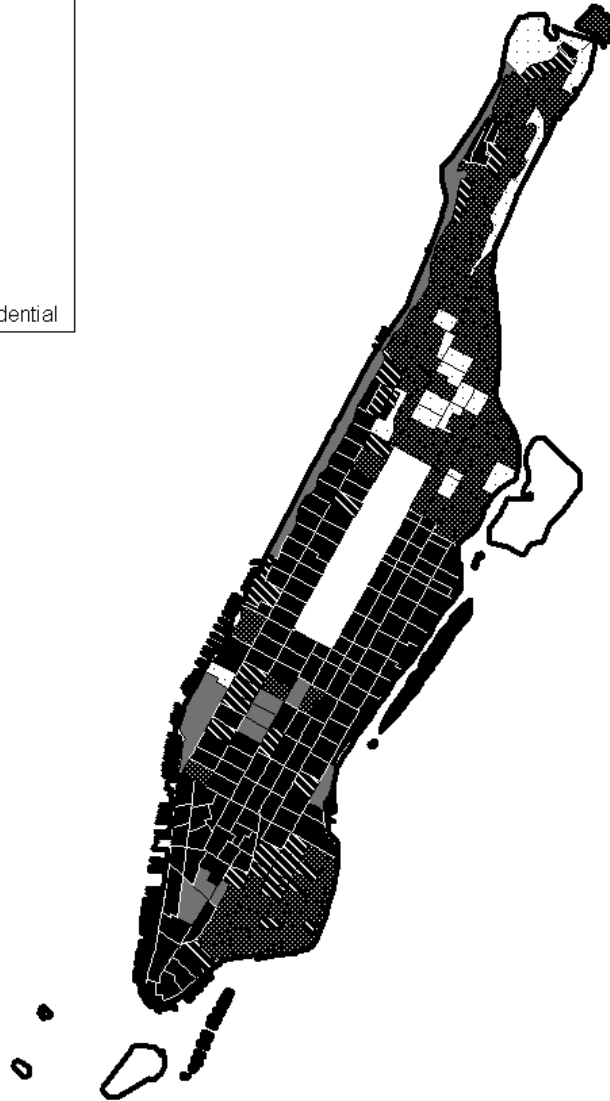
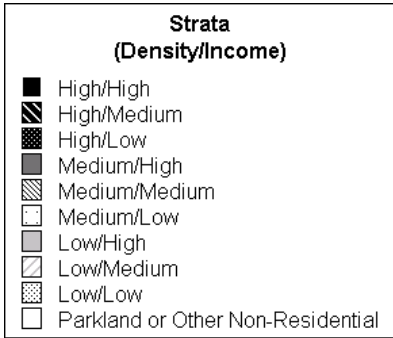


Figure 1-4A: Grayscale Map of Census Tracts by Density/Income Strata - Manhattan

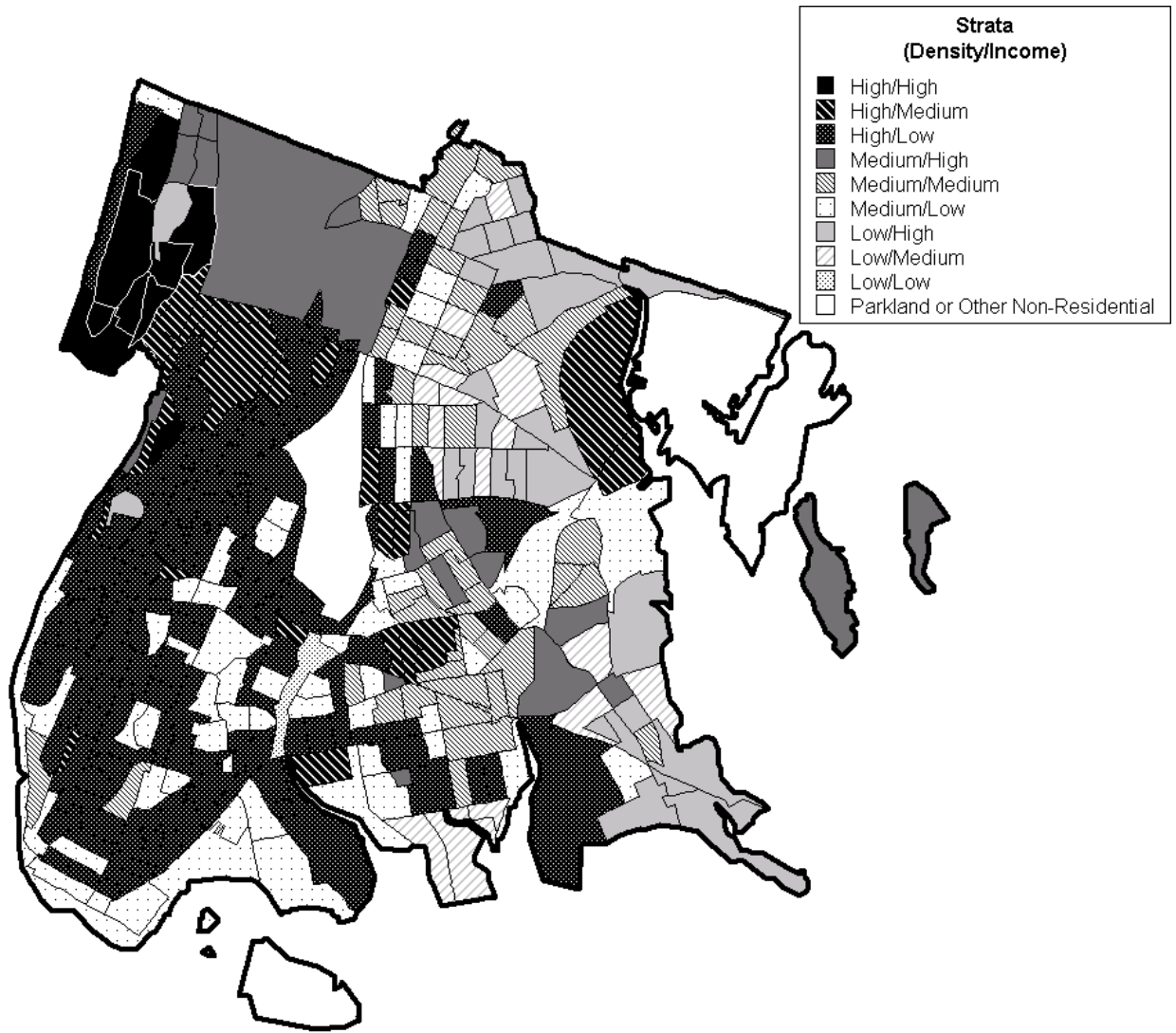


Figure 1-4B: Grayscale Map of Census Tracts by Density/Income Strata – Bronx

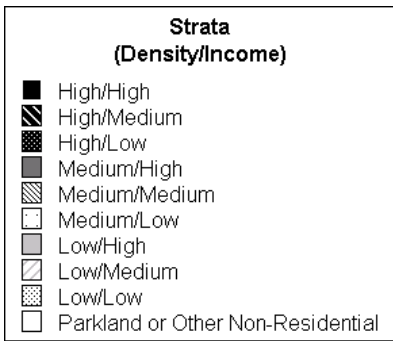


Figure 1-4C: Grayscale Map of Census Tracts by Density/Income Strata – Brooklyn

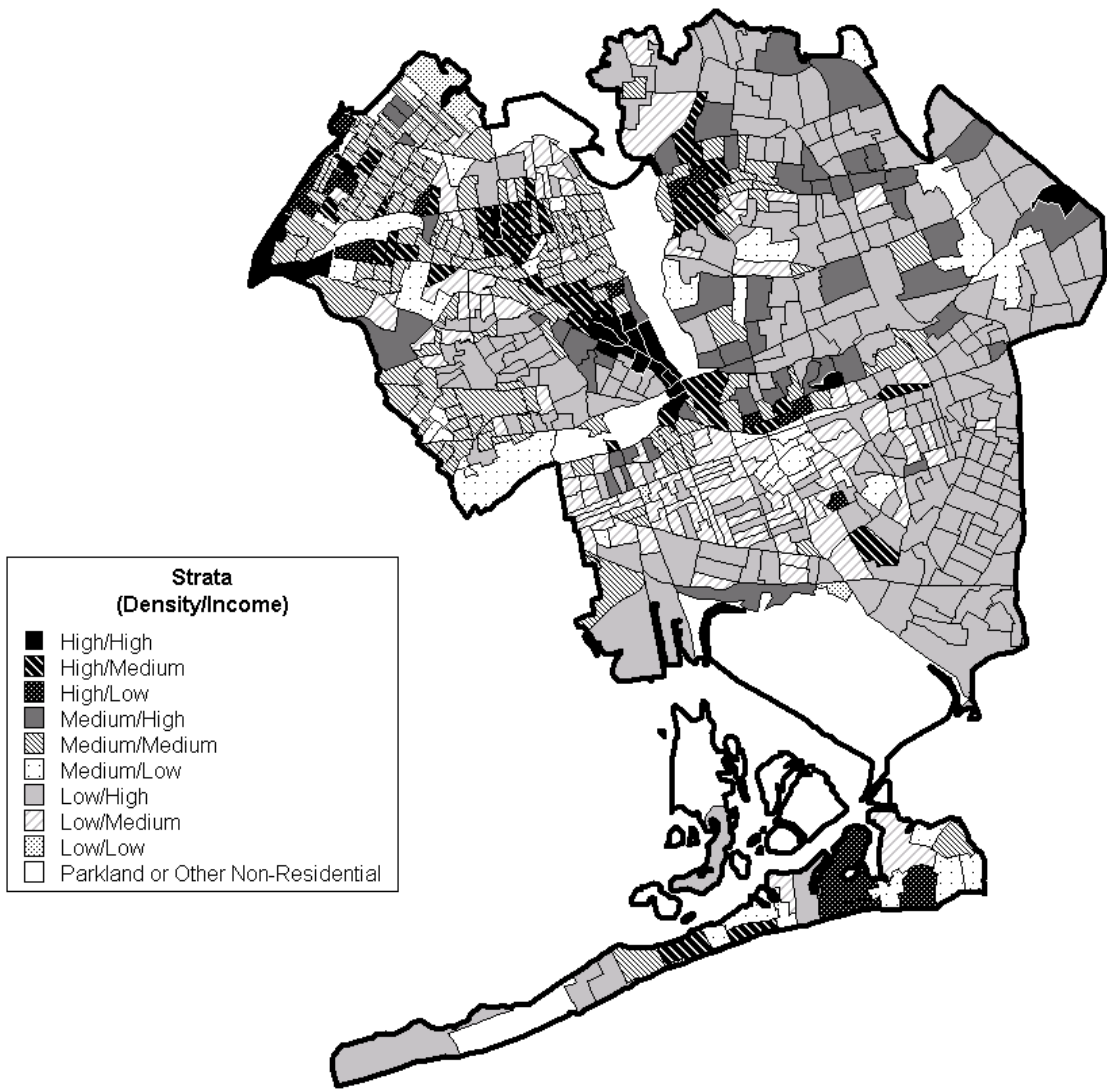


Figure 1-4D: Grayscale Map of Census Tracts by Density/Income Strata – Queens

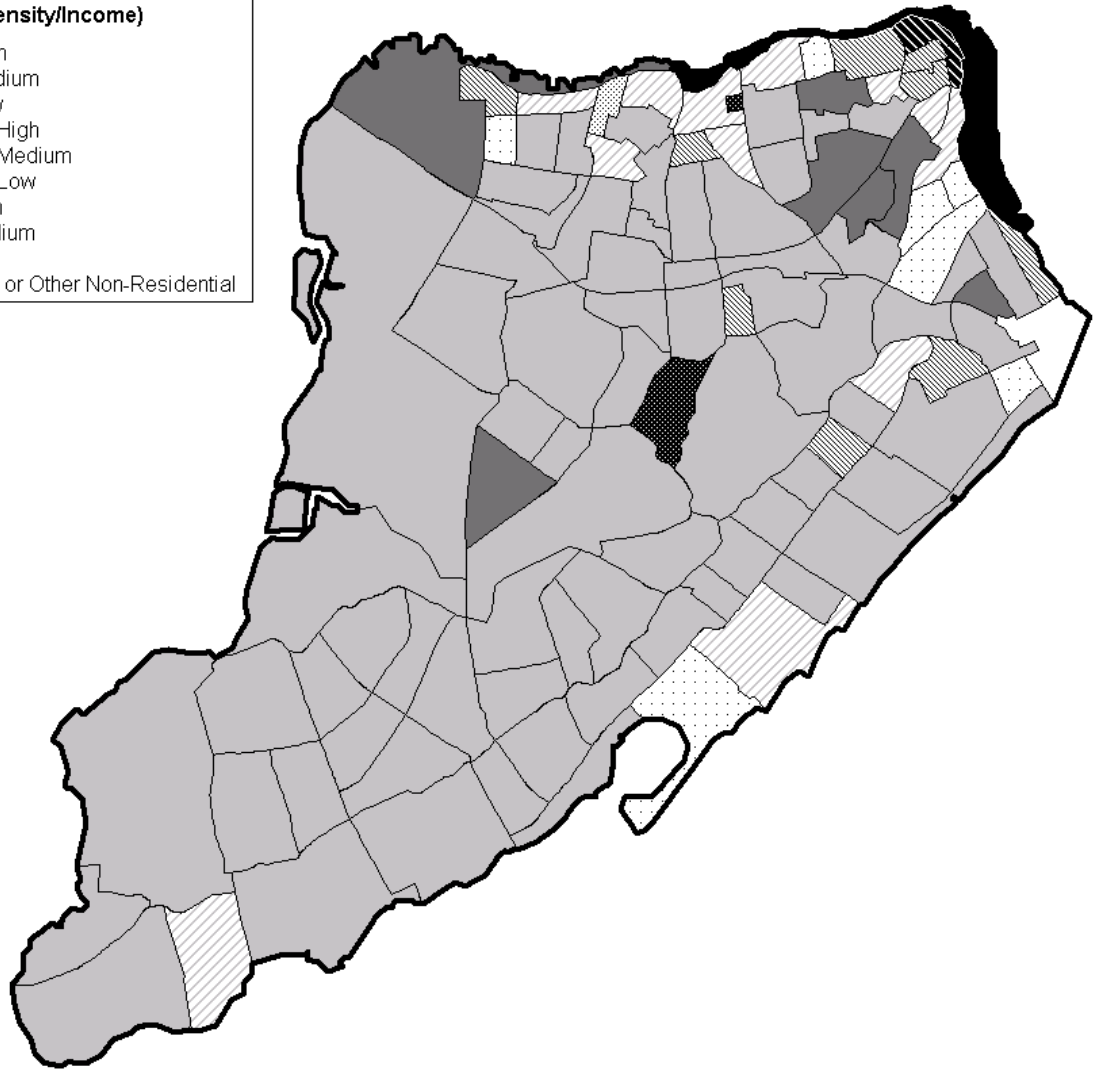
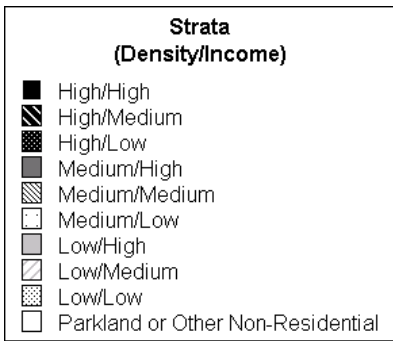


Figure 1-4E: Grayscale Map of Census Tracts by Density/Income Strata – Staten Island

#### 1.4 Identifying “Pure” Collection Routes

Typically, each DSNY collection route serves an area larger than a single Census Tract. However, there are some areas where a group of Census Tracts from the same stratum are adjacent to one another. In some of these cases, it was possible to identify “pure” routes, (i.e., routes that collect from a single density/income stratum). A list of the weekly “pure” routes within each of the eight Density/Income Strata was provided by DSNY.

The list of **Pure Routes** was used to develop a universe of Pure Routes from which Sample routes would be randomly selected, taking into account a three-week Sampling period, a Refuse collection frequency of two or three times per week, and a Recycling collection frequency of once per week. The universe of collection routes for the PWCS was larger than the universe of collection routes for the WCS because the PWCS did not seek to develop results based on Density/Income Strata. Table 1-6 presents the universe of pure collection routes.

The universe of collection routes for the Street Basket Study included only those routes that were dedicated to street basket collection. Some DSNY routes collect from street baskets, as well as residences. These mixed routes were excluded from the Street Basket Study.

**Table 1-6**  
**Universe of Pure Collection Routes<sup>(1)</sup> From Which Random Selection Was Made**

*(in numbers of routes)*

PWCS <sup>(2)</sup>	Refuse	Paper	MGP	Dual <sup>(3) (4)</sup>	Total	Total WCS	Refuse	Paper	MGP	Dual <sup>(3) (4)</sup>	Basket <sup>(5)</sup>	Total
Manhattan	711	180	106	0	997	High Density/High Income	768	282	133	0		1,183
Bronx	682	87	107	60	936	High Density/Medium Income	409	29	29	96		563
Brooklyn North	539	71	64	32	706	High Density/Low Income	376	28	41	0		445
Brooklyn South	1,120	80	77	586	1,863	Medium Density/High Income	52	22	15	0		89
Queens West	633	50	49	344	1,076	Medium Density/Medium Income	256	15	22	136		429
Queens East	992	0	0	738	1,730	Medium Density/Low Income	464	8	14	166		652
Staten Island	456	0	0	406	862	Low Density/High Income	1,367	0	0	1,126		2,493
						Low Density/Medium Income	323	0	0	300		623
<b>Total</b>	<b>5,133</b>	<b>468</b>	<b>403</b>	<b>2,166</b>	<b>8,170</b>	<b>Total</b>	<b>4,015</b>	<b>384</b>	<b>254</b>	<b>1,824</b>	<b>2,713</b>	<b>9,190</b>

Fall 2004	Refuse	Paper	MGP	Dual <sup>(3) (4)</sup>	Basket <sup>(5)</sup>	Total <sup>(6)</sup>	Winter 2005	Refuse	Paper	MGP	Dual <sup>(3) (4)</sup>	Basket <sup>(5)</sup>	Total <sup>(6)</sup>
High Density/High Income	194	66	31	0		291	High Density/High Income	191	72	34	0		297
High Density/Medium Income	28	5	5	6		44	High Density/Medium Income	125	8	8	30		171
High Density/Low Income	73	4	8	0		85	High Density/Low Income	101	8	11	0		120
Medium Density/High Income	12	4	3	0		19	Medium Density/High Income	13	6	4	0		23
Medium Density/Medium Income	51	3	4	34		92	Medium Density/Medium Income	66	4	6	34		110
Medium Density/Low Income	106	2	2	40		150	Medium Density/Low Income	115	2	4	42		163
Low Density/High Income	269	0	0	232		501	Low Density/High Income	330	0	0	298		628
Low Density/Medium Income	14	0	0	18		32	Low Density/Medium Income	94	0	0	94		188
<b>Total</b>	<b>747</b>	<b>84</b>	<b>53</b>	<b>330</b>	<b>644</b>	<b>1,858</b>	<b>Total</b>	<b>1,035</b>	<b>100</b>	<b>67</b>	<b>498</b>	<b>680</b>	<b>2,380</b>

Spring 2005	Refuse	Paper	MGP	Dual <sup>(3) (4)</sup>	Basket <sup>(5)</sup>	Total <sup>(6)</sup>	Summer 2005	Refuse	Paper	MGP	Dual <sup>(3) (4)</sup>	Basket <sup>(5)</sup>	Total <sup>(6)</sup>
High Density/High Income	197	72	34	0		303	High Density/High Income	186	72	34	0		292
High Density/Medium Income	129	8	8	30		175	High Density/Medium Income	127	8	8	30		173
High Density/Low Income	101	8	11	0		120	High Density/Low Income	101	8	11	0		120
Medium Density/High Income	13	6	4	0		23	Medium Density/High Income	14	6	4	0		24
Medium Density/Medium Income	70	4	6	34		114	Medium Density/Medium Income	69	4	6	34		113
Medium Density/Low Income	121	2	4	42		169	Medium Density/Low Income	122	2	4	42		170
Low Density/High Income	398	0	0	298		696	Low Density/High Income	370	0	0	298		668
Low Density/Medium Income	113	0	0	94		207	Low Density/Medium Income	102	0	0	94		196
<b>Total</b>	<b>1,142</b>	<b>100</b>	<b>67</b>	<b>498</b>	<b>688</b>	<b>2,495</b>	<b>Total</b>	<b>1,091</b>	<b>100</b>	<b>67</b>	<b>498</b>	<b>701</b>	<b>2,457</b>

(1) Pure collection routes are those where all waste is generated by a single housing density/income stratum. Routes where waste is collected from multiple strata are considered "impure".

(2) Housing density/income strata are not used in the PWCS.

(3) Dual routes are those on which both paper and MGP are collected simultaneously but kept separate in trucks with two different compartments.

(4) For each dual route, two routes are counted -- one route for paper plus one route for MGP.

(5) This study uses socioeconomic factors of housing density and income for the residential component only. The street basket analysis was designed to look strictly at the overall composition.

(6) Total number of routes vary by season due to fluctuations in waste generation. Total number of routes vary by stratum due to relative availability of routes in each stratum.

## 1.5 Determining the Number of Samples

For each stratum, the routes from which Samples were taken were randomly selected, using a random-number generator, from the universe of pure collection routes shown in Table 1-6.

An equal number of Samples were collected from each of the eight strata. Based on the results of the PWCS and other Waste characterization studies, it was decided that 50 Samples of Refuse would be targeted for Sorting in each of the four seasons for each of the eight strata.

Because materials in the Recycling stream show less variability and more consistency than materials in the Refuse stream, it was decided that 40 Samples of MGP and 10 Samples of Paper would be targeted for Sorting in each of the four seasons for each of the eight strata.

Based on academic research and industry practice, it was determined that a representative Sampling Unit of Refuse weighs between 200 pounds and 250 pounds and a representative Sampling Unit of Recycling weighs between 100 pounds and 150 pounds. Table 1-7 shows the average targeted weights and average acquired weights during the PWCS and WCS. Table 1-8 shows the mass of Samples sorted during the PWCS and the WCS. A full discussion of the rationale behind the **Sample Weights** is presented in Volume 2 of the Final Report.

Table 1-9 summarizes the number of Samples acquired during the PWCS and WCS. A full discussion of the Sampling methodology is included in Volume 2 of the Final Report.

Table 1-7  
Summary of Sample Weights

<i>(in pounds)</i>	Targeted Sample Weight		Average Weight of Samples Sorted					
	PWCS	WCS	PWCS	Fall 04	Winter 05	Spring 05	Summer 05	Annual
Refuse	200	200	234	216	225	228	229	224
Paper	100	100	117	113	124	136	134	127
MGP	100	100	119	124	131	153	165	143
Street Basket	NA	200	NA	209	221	233	223	221

Table 1-8  
Summary of Mass of Samples Sorted, PWCS and WCS

<i>(in tons)</i>	PWCS	Fall 2004	Winter 2005	Spring 2005	Summer 2005	Total WCS
Refuse	23	43	46	46	46	181
Paper	6	5	5	5	5	21
MGP	7	20	22	24	26	93
Basket	NA	5	6	6	6	22
Total	36	73	79	81	83	316

<i>(in pounds)</i>	PWCS	Fall 2004	Winter 2005	Spring 2005	Summer 2005	Total WCS
Refuse	46,860	86,056	92,083	91,430	91,476	361,045
Paper	11,535	9,040	10,506	10,856	10,759	41,160
MGP	13,416	39,593	44,641	48,915	52,801	185,950
Basket	NA	10,461	11,029	11,649	11,144	44,283
Total	71,811	145,149	158,260	162,849	166,180	632,439

**Table 1-9**  
**Number of Samples Acquired <sup>(1)(2)</sup>**

PWCS	Refuse	Paper	MGP	Dual <sup>(3)</sup>	Total	Total WCS	Refuse	Paper	MGP	Dual <sup>(3)</sup>	Basket	Total
Manhattan	36	22	18	0	76	High Density/High Income	203	41	162	0		406
Bronx	31	8	14	2	55	High Density/Medium Income	200	28	113	60		401
Brooklyn North	25	7	7	0	39	High Density/Low Income	201	41	164	0		406
Brooklyn South	39	9	12	20	80	Medium Density/High Income	201	39	161	1		402
Queens West	14	5	8	18	45	Medium Density/Medium Income	202	11	53	139		405
Queens East	39	0	0	34	73	Medium Density/Low Income	201	7	31	165		404
Staten Island	16	0	0	18	34	Low Density/High Income	202	0	0	205		407
						Low Density/Medium Income	199	0	0	204		403
<b>Total</b>	<b>200</b>	<b>51</b>	<b>59</b>	<b>92</b>	<b>402</b>	<b>Total</b>	<b>1,609</b>	<b>167</b>	<b>684</b>	<b>774</b>	<b>200</b>	<b>3,434</b>

Fall 2004	Refuse	Paper	MGP	Dual <sup>(3)</sup>	Basket	Total	Winter 2005	Refuse	Paper	MGP	Dual <sup>(3)</sup>	Basket	Total
High Density/High Income	50	10	40	0		100	High Density/High Income	53	11	42	0		106
High Density/Medium Income	50	10	38	2		100	High Density/Medium Income	50	10	32	9		101
High Density/Low Income	50	10	40	0		100	High Density/Low Income	51	11	44	0		106
Medium Density/High Income	50	10	40	0		100	Medium Density/High Income	51	10	41	0		102
Medium Density/Medium Income	50	3	12	35		100	Medium Density/Medium Income	51	1	13	39		104
Medium Density/Low Income	50	1	3	46		100	Medium Density/Low Income	51	2	3	48		104
Low Density/High Income	50	0	0	50		100	Low Density/High Income	52	0	0	55		107
Low Density/Medium Income	49	0	0	50		99	Low Density/Medium Income	50	0	0	54		104
<b>Total</b>	<b>399</b>	<b>44</b>	<b>173</b>	<b>183</b>	<b>50</b>	<b>849</b>	<b>Total</b>	<b>409</b>	<b>45</b>	<b>175</b>	<b>205</b>	<b>50</b>	<b>884</b>

Spring 2005	Refuse	Paper	MGP	Dual <sup>(3)</sup>	Basket	Total	Summer 2005	Refuse	Paper	MGP	Dual <sup>(3)</sup>	Basket	Total
High Density/High Income	50	10	40	0		100	High Density/High Income	50	10	40	0		100
High Density/Medium Income	50	3	24	23		100	High Density/Medium Income	50	5	19	26		100
High Density/Low Income	50	10	40	0		100	High Density/Low Income	50	10	40	0		100
Medium Density/High Income	50	9	40	1		100	Medium Density/High Income	50	10	40	0		100
Medium Density/Medium Income	51	6	15	29		101	Medium Density/Medium Income	50	1	13	36		100
Medium Density/Low Income	50	3	14	33		100	Medium Density/Low Income	50	1	11	38		100
Low Density/High Income	50	0	0	50		100	Low Density/High Income	50	0	0	50		100
Low Density/Medium Income	50	0	0	50		100	Low Density/Medium Income	50	0	0	50		100
<b>Total</b>	<b>401</b>	<b>41</b>	<b>173</b>	<b>186</b>	<b>50</b>	<b>851</b>	<b>Total</b>	<b>400</b>	<b>37</b>	<b>163</b>	<b>200</b>	<b>50</b>	<b>850</b>

(1) This table does not include samples acquired for use in the study of multi unit apartments.

(2) The number of samples acquired may differ from the number of samples targeted. These differences are due to logistical or operational difficulties, and sample availability.

(3) Samples listed under "Dual" may be paper or MGP, thus, the number of paper and MGP samples may be higher than those shown in the paper and MGP columns.

## **1.6 Residential Waste Sorting**

Determining the number of **Material Categories** to be used in Sorting residential Sampling Units was challenging because it involved striking a balance between precision and efficiency. On one hand, a large number of Material Categories provides a more accurate description of the Waste. On the other hand, a large number of Material Categories introduces more instances of potential uncertainty and requires more time to sort accurately. Typically, Waste composition studies use 40 to 60 Material Categories. The WCS used more than 90 categories with additional **Subsorts** and counts. Both product types and materials were used in developing the categories.

### **1.6.1 Overview of Material Sort Categories**

Table 1-10 shows the core 91 Material Categories used in the WCS, organized by the nine **Material Groups**.

**Table 1-10  
Overview of Material Sort Categories for New York City Waste Characterization Study <sup>(1)</sup>**

<p><b>Paper</b></p> <ul style="list-style-type: none"> <li>Newspaper</li> <li>Plain OCC/Kraft Paper</li> <li>High Grade Paper</li> <li>Mixed Low Grade Paper</li> <li>Phone Books/Paperbacks</li> <li>Paper Bags</li> <li>Polycoated Paper Containers</li> <li>Compostable/Soiled Paper/Waxed OCC/Kraft</li> <li>Single Use Paper Plates, Cups</li> <li>Other Non-recyclable Paper</li> </ul>	<p><b>Organics</b></p> <ul style="list-style-type: none"> <li>Leaves And Grass</li> <li>Prunings</li> <li>Stumps/Limbs</li> <li>Food</li> <li>Wood Furniture/Furniture Pieces</li> <li>Non-C&amp;D Untreated Wood</li> <li>Non-Clothing Textiles</li> <li>Clothing Textiles</li> <li>Carpet/Upholstery</li> <li>Disposable Diapers and Sanitary Products</li> <li>Animal By-Products</li> <li>Rubber Products</li> <li>Shoes</li> <li>Other Leather Products</li> <li>Fines</li> <li>Upholstered or Other Organic-Type Furniture</li> <li>Miscellaneous Organics</li> </ul>
<p><b>Plastics</b></p> <ul style="list-style-type: none"> <li>PET Bottles</li> <li>HDPE Bottles: Natural</li> <li>HDPE Bottles: Colored</li> <li>#1 PET Tubs/Trays/Other Containers</li> <li>#2 HDPE Tubs/Trays/Other Containers</li> <li>#3 PVC Bottles</li> <li>#4 LDPE Bottles</li> <li>#5 PP Bottles</li> <li>#7 Other Bottles</li> <li>#3 PVC Tubs</li> <li>#4 LDPE Tubs</li> <li>#5 PP Tubs</li> <li>#7 Other Tubs</li> <li>Soda Crates and Bottle Carriers</li> <li>Other PVC</li> <li>Rigid Polystyrene Containers and Packaging</li> <li>Expanded Polystyrene Containers and Packaging</li> <li>Other Rigid Containers/Packaging</li> <li>Plastic Bags</li> <li>Other Film</li> <li>Single Use Plastic Plates, Cups, Cutlery, Etc.</li> <li>Other Plastics Materials</li> </ul>	<p><b>Appliances and Electronics</b></p> <ul style="list-style-type: none"> <li>Appliances: Ferrous</li> <li>Appliances: Non-Ferrous</li> <li>Appliances: Plastic</li> <li>Audio/Visual Equipment: Cell Phones</li> <li>Audio/Visual Equipment: Other</li> <li>Computer Monitors</li> <li>Televisions</li> <li>Other Computer Equipment</li> </ul>
<p><b>Glass</b></p> <ul style="list-style-type: none"> <li>Clear Container Glass</li> <li>Green Container Glass</li> <li>Brown Container Glass</li> <li>Mixed Cullet</li> <li>Other Container Glass</li> <li>Other Glass</li> </ul>	<p><b>Construction and Demolition Debris</b></p> <ul style="list-style-type: none"> <li>Untreated Dimension Lumber, Pallets, Crates</li> <li>Treated/Contaminated Wood</li> <li>Gypsum Scrap</li> <li>Rock/Concrete/Bricks</li> <li>Other Construction Debris</li> </ul>
<p><b>Metals</b></p> <ul style="list-style-type: none"> <li>Aluminum Cans</li> <li>Aluminum Foil/Containers</li> <li>Other Aluminum</li> <li>Other Non-Ferrous</li> <li>Tin Food Cans</li> <li>Empty Aerosol Cans</li> <li>Other Ferrous</li> <li>Mixed Metals</li> </ul>	<p><b>Miscellaneous Inorganics</b></p> <ul style="list-style-type: none"> <li>Miscellaneous Inorganics</li> <li>Ceramics</li> <li>Oil Filters</li> </ul> <p><b>Household Hazardous Wastes</b></p> <ul style="list-style-type: none"> <li>Antifreeze</li> <li>Wet-Cell Batteries</li> <li>Gasoline/Kerosene/Motor Oil/Diesel Fuel</li> <li>Latex Paints/Water-Based Adhesives/Glues</li> <li>Oil-Based Paints/Solvent-Based Adhesives/Glues</li> <li>Pesticides/Herbicides/Rodenticides</li> <li>Dry-Cell Batteries</li> <li>Fluorescent Tubes</li> <li>Mercury-Laden Wastes</li> <li>Compressed Gas Cylinders, Fire Extinguishers</li> <li>Home Medical Products</li> <li>Other Potentially Harmful Wastes</li> </ul>

Total Categories: 91

(1) More detail on sort categories can be found in Volume 2 , Section 4.2.1 of this report.

## 1.7 Waste Generation

In addition to determining the composition of the Waste, the WCS Residential Study was designed to estimate the generation of Waste in each of the eight strata. These estimates would suggest how Waste behavior varies by stratum. That is, these estimates would indicate how much Refuse and Recycling is set out for collection weekly by all residents in each stratum, and how these amounts vary by stratum.

Generation estimates can be formulated based on household and on individual (per capita) behavior. Per capita generation rates would provide a widely-accepted metric for purposes of comparison. However, per capita generation rates would also ignore the effect of household size among the strata and the effect that has on estimating generation and **Diversion Rates**. Therefore, both per capita and per household generation rates were developed. Generation amounts by stratum are expressed in tons per week. Per capita and per household generation rates are expressed in tons per year. Per household generation rates are also expressed as pounds per week.

The development of generation rates is explained in some detail in Volume 2, Section 2.2 of the Final Report. The starting point, however, was the weekly curbside tonnages collected during the PWCS and the WCS, as presented in Table 1-11. These tonnages were recorded by DSNY by Sanitation District Section during the three weeks that the Study took place each season and are supplied for reference. The WCS generation estimates were based on averages of actual tonnages generated over longer periods and were attributed to housing density and income strata using a combination of geographic and statistical analytical techniques, which are described in Volume 2. The end product was an estimate of the tonnage of Refuse and Recycling generated by all residents of each housing density and income strata citywide.

The generation rates for the PWCS and the WCS on a per capita basis are shown in Table 1-12 and the generation rates on a per household basis are shown in Table 1-13. Table 1-14 shows estimated average weekly generation. These tables present generation rates for Refuse, Paper, MGP, and Waste.

**Table 1-11**  
**Weekly Curbside Tonnages Collected during the PWCS and WCS**

<i>(in tons)</i> <sup>(1)</sup>	Week 1				Week 2				Week 3			
	PWCS	Refuse	Paper	MGP	Total	Refuse	Paper	MGP	Total	Refuse	Paper	MGP
Manhattan	10,109	1,759	844	12,712	10,068	1,760	876	12,704	10,329	1,878	886	13,094
Bronx	9,117	667	686	10,471	9,347	676	726	10,749	9,309	674	708	10,691
Brooklyn North	5,803	452	382	6,636	5,844	455	397	6,696	5,815	441	413	6,669
Brooklyn South	12,532	1,618	1,014	15,164	13,013	1,600	1,067	15,680	12,888	1,579	1,068	15,535
Queens West	7,520	985	682	9,187	7,755	985	698	9,437	7,703	994	708	9,405
Queens East	9,738	1,184	778	11,700	10,259	1,185	819	12,263	10,222	1,195	850	12,267
Staten Island	5,199	686	379	6,264	5,549	721	410	6,680	5,479	734	406	6,620
<b>Total</b>	<b>60,019</b>	<b>7,350</b>	<b>4,764</b>	<b>72,133</b>	<b>61,836</b>	<b>7,382</b>	<b>4,993</b>	<b>74,211</b>	<b>61,746</b>	<b>7,495</b>	<b>5,039</b>	<b>74,280</b>
<i>Week Covering:</i>	05/10/2004 through 05/16/2004				05/17/2004 through 05/23/2004				05/24/2004 through 05/30/2004			

<i>(in tons)</i> <sup>(1)</sup>	Week 1				Week 2				Week 3			
	Fall 2004	Refuse	Paper	MGP	Total	Refuse	Paper	MGP	Total	Refuse	Paper	MGP
Manhattan	9,743	2,077	896	12,715	9,586	1,933	864	12,383	10,254	1,914	844	13,012
Bronx	8,332	746	719	9,798	8,237	636	636	9,510	8,560	562	530	9,652
Brooklyn North	5,336	528	420	6,283	5,222	459	376	6,057	5,375	381	313	6,069
Brooklyn South	11,394	1,801	1,094	14,290	11,198	1,650	985	13,833	11,873	1,342	823	14,039
Queens West	6,954	1,136	710	8,799	6,840	982	633	8,455	7,061	840	557	8,458
Queens East	7,971	1,351	782	10,104	8,005	1,153	711	9,869	7,513	937	570	9,020
Staten Island	3,954	846	418	5,218	4,026	748	369	5,143	3,820	617	304	4,741
<b>Total</b>	<b>53,683</b>	<b>8,484</b>	<b>5,040</b>	<b>67,208</b>	<b>53,114</b>	<b>7,562</b>	<b>4,573</b>	<b>65,250</b>	<b>54,456</b>	<b>6,593</b>	<b>3,941</b>	<b>64,990</b>
<i>Week Covering:</i>	10/18/2004 through 10/24/2004				10/25/2004 through 10/31/2004				11/01/2004 through 11/07/2004			

<i>(in tons)</i> <sup>(1)</sup>	Week 1				Week 2				Week 3			
	Winter 2005	Refuse	Paper	MGP	Total	Refuse	Paper	MGP	Total	Refuse	Paper	MGP
Manhattan	9,451	1,706	863	12,020	9,378	1,761	858	11,997	9,347	1,760	838	11,945
Bronx	7,875	618	592	9,086	8,064	681	655	9,399	7,940	647	609	9,196
Brooklyn North	5,014	469	365	5,848	5,192	459	380	6,031	5,013	448	357	5,818
Brooklyn South	10,392	1,619	931	12,942	10,764	1,655	975	13,394	10,802	1,599	926	13,327
Queens West	6,155	941	615	7,711	6,448	1,049	633	8,131	6,255	964	585	7,804
Queens East	6,297	1,032	633	7,962	7,129	1,243	716	9,089	7,114	1,127	666	8,907
Staten Island	3,199	679	346	4,224	3,455	745	373	4,573	3,667	713	349	4,729
<b>Total</b>	<b>48,383</b>	<b>7,065</b>	<b>4,344</b>	<b>59,793</b>	<b>50,431</b>	<b>7,593</b>	<b>4,591</b>	<b>62,615</b>	<b>50,139</b>	<b>7,258</b>	<b>4,329</b>	<b>61,726</b>
<i>Week Covering:</i>	03/07/2005 through 03/13/2005				03/14/2005 through 03/20/2005				03/21/2005 through 03/27/2005			

<i>(in tons)</i> <sup>(1)</sup>	Week 1				Week 2				Week 3			
	Spring 2005	Refuse	Paper	MGP	Total	Refuse	Paper	MGP	Total	Refuse	Paper	MGP
Manhattan	9,647	1,676	856	12,179	9,777	1,683	870	12,330	9,863	1,759	876	12,498
Bronx	8,482	619	631	9,732	8,720	622	656	9,998	8,585	637	635	9,857
Brooklyn North	5,279	429	401	6,109	5,347	432	386	6,165	5,396	443	373	6,212
Brooklyn South	11,543	1,491	1,017	14,051	11,757	1,475	1,012	14,245	11,717	1,501	974	14,191
Queens West	6,987	920	673	8,580	7,144	917	652	8,713	6,989	927	630	8,545
Queens East	8,706	1,085	813	10,604	9,216	1,097	770	11,083	8,830	1,101	724	10,656
Staten Island	4,638	677	401	5,717	4,794	679	408	5,881	4,573	701	395	5,669
<b>Total</b>	<b>55,282</b>	<b>6,897</b>	<b>4,793</b>	<b>66,971</b>	<b>56,756</b>	<b>6,905</b>	<b>4,755</b>	<b>68,415</b>	<b>55,953</b>	<b>7,069</b>	<b>4,607</b>	<b>67,629</b>
<i>Week Covering:</i>	05/09/2005 through 05/15/2005				05/16/2005 through 05/22/2005				05/23/2005 through 05/29/2005			

<i>(in tons)</i> <sup>(1)</sup>	Week 1				Week 2				Week 3			
	Summer 2005	Refuse	Paper	MGP	Total	Refuse	Paper	MGP	Total	Refuse	Paper	MGP
Manhattan	9,151	1,444	833	11,428	9,437	1,488	831	11,757	9,179	1,462	835	11,476
Bronx	8,572	604	682	9,858	8,913	639	687	10,238	8,595	590	679	9,864
Brooklyn North	5,113	382	413	5,909	5,335	406	424	6,165	5,124	391	406	5,920
Brooklyn South	11,256	1,314	1,052	13,622	11,301	1,308	1,023	13,631	11,060	1,311	1,011	13,382
Queens West	6,974	930	671	8,575	7,386	1,106	681	9,172	7,055	1,005	667	8,727
Queens East	8,411	1,040	780	10,231	8,710	1,137	773	10,619	8,567	1,099	772	10,437
Staten Island	4,029	624	420	5,072	4,004	611	398	5,013	4,037	617	400	5,054
<b>Total</b>	<b>53,505</b>	<b>6,339</b>	<b>4,851</b>	<b>64,695</b>	<b>55,086</b>	<b>6,693</b>	<b>4,817</b>	<b>66,596</b>	<b>53,616</b>	<b>6,475</b>	<b>4,769</b>	<b>64,860</b>
<i>Week Covering:</i>	08/08/2005 through 08/14/2005				08/15/2005 through 08/21/2005				08/22/2005 through 08/28/2005			

(1) Refuse, paper, and MGP tonnage values obtained from DSNY curbside refuse, MGP, and paper collection (without school collection) by week for FY 2004 (May 2004 through September 2005).

**Table 1-12  
Annual Generation Rates Per Capita, PWCS and WCS**

Borough <i>(in tons/year)</i>	PWCS				WCS Annual			
	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste
Manhattan	0.35	0.06	0.03	0.45	0.32	0.05	0.03	0.41
Bronx	0.39	0.03	0.03	0.45	0.32	0.03	0.02	0.37
Brooklyn	0.19	0.02	0.02	0.23	0.34	0.04	0.03	0.40
Queens	0.20	0.03	0.02	0.24	0.35	0.05	0.03	0.43
Staten Island	0.60	0.08	0.05	0.73	0.41	0.06	0.04	0.51
<b>Total</b>	<b>0.28</b>	<b>0.03</b>	<b>0.02</b>	<b>0.34</b>	<b>0.34</b>	<b>0.04</b>	<b>0.03</b>	<b>0.41</b>

Density/Income Strata <i>(in tons/year)</i>	WCS Annual			
	Refuse	Paper	MGP	Waste
High Density/High Income	0.34	0.09	0.04	0.47
High Density/Medium Income	0.27	0.03	0.02	0.31
High Density/Low Income	0.31	0.01	0.02	0.34
Medium Density/High Income	0.28	0.08	0.03	0.39
Medium Density/Medium Income	0.33	0.05	0.03	0.41
Medium Density/Low Income	0.35	0.02	0.02	0.40
Low Density/High Income	0.44	0.07	0.04	0.56
Low Density/Medium Income	0.36	0.02	0.03	0.42
<b>Total</b>	<b>0.34</b>	<b>0.04</b>	<b>0.03</b>	<b>0.41</b>

Density/Income Strata <i>(in tons/year)</i>	Fall 2004				Winter 2005				Spring 2005				Summer 2005			
	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste
High Density/High Income	0.35	0.10	0.04	0.49	0.34	0.09	0.04	0.47	0.35	0.09	0.04	0.48	0.33	0.08	0.04	0.45
High Density/Medium Income	0.27	0.03	0.02	0.32	0.24	0.03	0.02	0.29	0.27	0.03	0.02	0.32	0.28	0.03	0.02	0.32
High Density/Low Income	0.31	0.01	0.02	0.34	0.31	0.01	0.02	0.34	0.32	0.01	0.02	0.35	0.32	0.01	0.02	0.35
Medium Density/High Income	0.29	0.08	0.03	0.40	0.25	0.08	0.03	0.36	0.29	0.08	0.03	0.41	0.28	0.07	0.03	0.39
Medium Density/Medium Income	0.34	0.05	0.03	0.42	0.30	0.05	0.03	0.38	0.34	0.05	0.03	0.42	0.33	0.05	0.03	0.41
Medium Density/Low Income	0.37	0.03	0.02	0.42	0.33	0.02	0.02	0.37	0.37	0.02	0.02	0.41	0.34	0.02	0.02	0.39
Low Density/High Income	0.44	0.08	0.04	0.56	0.36	0.07	0.04	0.47	0.51	0.07	0.05	0.63	0.47	0.07	0.05	0.59
Low Density/Medium Income	0.36	0.02	0.03	0.41	0.30	0.02	0.03	0.35	0.38	0.02	0.04	0.44	0.40	0.02	0.04	0.46
<b>Total</b>	<b>0.35</b>	<b>0.05</b>	<b>0.03</b>	<b>0.42</b>	<b>0.31</b>	<b>0.04</b>	<b>0.03</b>	<b>0.38</b>	<b>0.36</b>	<b>0.04</b>	<b>0.03</b>	<b>0.43</b>	<b>0.35</b>	<b>0.04</b>	<b>0.03</b>	<b>0.42</b>

Note: Tonnage values based on DSNY average weekly curbside tonnages for the months of September 2004 through September 2005. More detail on how and why tonnages from this period were used to estimate generation can be found in Section 2.2.6 in Volume 2.

**Table 1-13  
Annual Generation Rates Per Housing Unit, PWCS and WCS**

Borough <i>(in tons/year)</i>	PWCS				WCS Annual			
	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste
Manhattan	0.68	0.12	0.06	0.86	0.64	0.11	0.06	0.80
Bronx	1.06	0.08	0.08	1.21	0.85	0.08	0.06	0.99
Brooklyn	0.51	0.06	0.04	0.61	0.90	0.10	0.07	1.07
Queens	0.55	0.07	0.05	0.66	0.92	0.14	0.09	1.15
Staten Island	1.62	0.23	0.13	1.97	1.16	0.18	0.11	1.45
<b>Total</b>	<b>0.70</b>	<b>0.09</b>	<b>0.06</b>	<b>0.84</b>	<b>0.85</b>	<b>0.11</b>	<b>0.07</b>	<b>1.03</b>

Density/Income Strata <i>(in tons/year)</i>	WCS Annual			
	Refuse	Paper	MGP	Waste
High Density/High Income	0.53	0.14	0.06	0.74
High Density/Medium Income	0.65	0.08	0.05	0.78
High Density/Low Income	0.84	0.04	0.05	0.92
Medium Density/High Income	0.54	0.17	0.07	0.78
Medium Density/Medium Income	0.85	0.13	0.09	1.06
Medium Density/Low Income	1.02	0.06	0.07	1.15
Low Density/High Income	1.25	0.21	0.12	1.58
Low Density/Medium Income	1.20	0.09	0.11	1.40
<b>Total</b>	<b>0.85</b>	<b>0.11</b>	<b>0.07</b>	<b>1.03</b>

Density/Income Strata <i>(in tons/year)</i>	Fall 2004				Winter 2005				Spring 2005				Summer 2005			
	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste
High Density/High Income	0.55	0.16	0.06	0.77	0.54	0.14	0.06	0.74	0.54	0.14	0.06	0.75	0.51	0.13	0.06	0.69
High Density/Medium Income	0.65	0.08	0.05	0.78	0.60	0.08	0.05	0.72	0.67	0.08	0.05	0.80	0.68	0.08	0.05	0.80
High Density/Low Income	0.83	0.04	0.05	0.92	0.82	0.04	0.05	0.90	0.85	0.04	0.05	0.93	0.85	0.03	0.05	0.93
Medium Density/High Income	0.56	0.18	0.07	0.81	0.50	0.16	0.06	0.72	0.57	0.17	0.07	0.81	0.54	0.16	0.07	0.76
Medium Density/Medium Income	0.88	0.14	0.09	1.11	0.79	0.13	0.08	1.00	0.87	0.13	0.09	1.09	0.85	0.12	0.09	1.06
Medium Density/Low Income	1.07	0.07	0.07	1.21	0.95	0.06	0.06	1.07	1.06	0.07	0.07	1.19	1.00	0.06	0.07	1.13
Low Density/High Income	1.25	0.22	0.12	1.59	1.00	0.21	0.11	1.31	1.43	0.21	0.14	1.78	1.32	0.20	0.13	1.65
Low Density/Medium Income	1.21	0.09	0.11	1.41	1.00	0.08	0.10	1.18	1.28	0.09	0.12	1.49	1.32	0.09	0.12	1.53
<b>Total</b>	<b>0.86</b>	<b>0.12</b>	<b>0.07</b>	<b>1.06</b>	<b>0.77</b>	<b>0.11</b>	<b>0.07</b>	<b>0.95</b>	<b>0.89</b>	<b>0.11</b>	<b>0.08</b>	<b>1.08</b>	<b>0.86</b>	<b>0.11</b>	<b>0.08</b>	<b>1.04</b>

Note: Tonnage values based on DSNY average weekly curbside tonnages for the months of September 2004 through September 2005. More detail on how and why tonnages from this period were used to estimate generation can be found in Section 2.2.6 in Volume 2.

**Table 1-14**  
**Weekly Generation Rates Per Housing Unit, PWCS and WCS**

Borough <i>(in pounds/week/housing unit)</i>	PWCS				WCS Annual			
	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste
Manhattan	26.11	4.60	2.23	32.94	24.50	4.08	2.14	30.73
Bronx	40.60	2.97	3.10	46.66	32.57	2.94	2.40	37.92
Brooklyn	19.72	2.15	1.55	23.42	34.58	3.87	2.86	41.31
Queens	21.08	2.64	1.83	25.56	35.56	5.22	3.42	44.20
Staten Island	62.20	8.70	4.97	75.87	44.48	6.98	4.35	55.81
<b>Total</b>	<b>26.86</b>	<b>3.34</b>	<b>2.19</b>	<b>32.39</b>	<b>32.59</b>	<b>4.30</b>	<b>2.84</b>	<b>39.74</b>

Density/Income Strata <i>(in pounds/week/housing unit)</i>	WCS Annual			
	Refuse	Paper	MGP	Waste
High Density/High Income	20.56	5.51	2.31	28.37
High Density/Medium Income	24.98	2.97	1.89	29.84
High Density/Low Income	32.18	1.42	1.84	35.44
Medium Density/High Income	20.84	6.41	2.62	29.87
Medium Density/Medium Income	32.50	5.04	3.40	40.94
Medium Density/Low Income	39.25	2.47	2.52	44.24
Low Density/High Income	48.07	8.11	4.78	60.96
Low Density/Medium Income	46.30	3.37	4.35	54.03
<b>Total</b>	<b>32.59</b>	<b>4.30</b>	<b>2.84</b>	<b>39.74</b>

Density/Income Strata <i>(in pounds/week/housing unit)</i>	Fall 2004				Winter 2005				Spring 2005				Summer 2005			
	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste	Refuse	Paper	MGP	Waste
High Density/High Income	21.15	6.15	2.31	29.62	20.61	5.45	2.36	28.42	20.91	5.51	2.34	28.76	19.56	4.92	2.22	26.71
High Density/Medium Income	25.00	3.08	1.92	30.00	23.03	2.93	1.80	27.76	25.83	2.95	1.93	30.72	26.05	2.91	1.91	30.87
High Density/Low Income	31.92	1.54	1.92	35.38	31.65	1.38	1.74	34.77	32.56	1.45	1.82	35.83	32.59	1.33	1.88	35.80
Medium Density/High Income	21.54	6.92	2.69	31.15	19.11	6.28	2.48	27.88	21.94	6.36	2.75	31.04	20.77	6.09	2.56	29.42
Medium Density/Medium Income	33.85	5.38	3.46	42.69	30.20	5.00	3.13	38.32	33.33	5.00	3.50	41.83	32.63	4.76	3.51	40.90
Medium Density/Low Income	41.15	2.69	2.69	46.54	36.55	2.44	2.21	41.20	40.79	2.50	2.58	45.88	38.51	2.23	2.59	43.34
Low Density/High Income	48.08	8.46	4.62	61.15	38.40	7.93	4.19	50.52	55.07	8.25	5.24	68.57	50.74	7.78	5.07	63.59
Low Density/Medium Income	46.54	3.46	4.23	54.23	38.47	3.16	3.91	45.54	49.30	3.46	4.68	57.44	50.91	3.41	4.58	58.90
<b>Total</b>	<b>33.17</b>	<b>4.62</b>	<b>2.87</b>	<b>40.66</b>	<b>29.80</b>	<b>4.23</b>	<b>2.63</b>	<b>36.65</b>	<b>34.28</b>	<b>4.33</b>	<b>2.96</b>	<b>41.57</b>	<b>33.12</b>	<b>4.04</b>	<b>2.91</b>	<b>40.07</b>

Note: Tonnage values based on DSNY average weekly curbside tonnages for the months of September 2004 through September 2005. More detail on how and why tonnages from this period were used to estimate generation can be found in Section 2.2.6 in Volume 2.

## **1.8 Summary Results**

Although the PWCS used Borough-based Sampling and the WCS used strata-based Sampling, both results of the two studies were aggregated to provide PWCS and Annual WCS citywide results for Refuse, Recycling and Waste.

### **1.8.1 Citywide Results at a Glance, PWCS and Annual WCS Results**

A summary of the PWCS and Annual WCS citywide results is presented in Tables 1-15 and 1-16. These tables compare Refuse, Paper, MGP, and Waste composition results for each material category. The tables also provide weekly tonnage generation for each stream. These tables are useful for comparing the material composition of different streams at the citywide level. Citywide Results at a Glance for each season (fall, winter, spring, and summer) can be found in Volume 1, Section 3.

**Table 1-15  
Citywide Results at a Glance, Preliminary Waste Characterization Study**

Material Group	Material Subgroup	Material Category: Subcategory	Notes	% of Refuse Stream	% of Paper Stream	% of MGP Stream	% of Aggregated Recycling Stream	% of Waste Stream	Recycling Subindicator
Paper	ONP	Newspaper		3.71%	39.84%	0.65%	24.14%	7.17%	R Paper
Paper	OCC	Plain OCC/Kraft Paper		1.35%	20.64%	0.25%	12.47%	3.24%	R Paper
Paper	Mixed Paper	High Grade Paper		0.67%	4.22%	0.08%	2.56%	0.99%	R Paper
Paper	Mixed Paper	Mixed Low Grade Paper		7.34%	25.04%	1.07%	15.43%	8.71%	R Paper
Paper	Mixed Paper	Phone Books/Paperbacks		0.41%	4.52%	0.05%	2.73%	0.80%	R Paper
Paper	Mixed Paper	Paper Bags		0.60%	0.53%	0.06%	0.34%	0.56%	R Paper
Paper	Bev Cartons	Polycoated Paper Containers		0.47%	0.27%	1.67%	0.83%	0.53%	R Bev Cartons
Paper	Compostable Paper	Compostable/Soiled Paper/Waxed OCC/Kraft		7.49%	0.13%	0.33%	0.21%	6.25%	NR_Paper
Paper	Compostable Paper	Single Use Paper Plates, Cups		0.51%	0.01%	0.02%	0.01%	0.43%	NR_Paper
Paper	Other Paper	Other Nonrecyclable Paper		0.65%	1.36%	0.63%	1.07%	0.72%	NR_Paper
<b>Paper Total</b>				<b>23.19%</b>	<b>96.55%</b>	<b>4.80%</b>	<b>59.79%</b>	<b>29.40%</b>	
Plastic	PET Bottles	PET Bottles		0.98%	0.06%	5.94%	2.42%	1.22%	R Plastics
Plastic	HDPE Bottles	HDPE Bottles: Natural		0.31%	0.02%	2.69%	1.09%	0.44%	R Plastics
Plastic	HDPE Bottles	HDPE Bottles: Colored		0.45%	0.03%	2.68%	1.09%	0.56%	R Plastics
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #1 PET		0.03%	0.00%	0.00%	0.00%	0.02%	PR_Plastics
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #2 HDPE		0.08%	0.00%	0.11%	0.05%	0.07%	PR_Plastics
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #3 PVC		0.01%	0.00%	0.06%	0.02%	0.02%	PR_Plastics
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #4 LDPE		0.01%	0.00%	0.01%	0.01%	0.01%	PR_Plastics
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #5 PP		0.22%	0.00%	0.66%	0.27%	0.23%	PR_Plastics
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #7 Other		0.07%	0.01%	0.17%	0.07%	0.07%	PR_Plastics
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #3 PVC	1	0.00%	0.00%	0.00%	0.00%	0.00%	PR_Plastics
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #4 LDPE	1	0.00%	0.00%	0.00%	0.00%	0.00%	PR_Plastics
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #5 PP	1	0.00%	0.00%	0.00%	0.00%	0.00%	PR_Plastics
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #7 Other	1	0.00%	0.00%	0.00%	0.00%	0.00%	PR_Plastics
Plastic	Other Rigid Containers/Packaging	Soda Crates and Bottle Carriers		0.06%	0.00%	0.13%	0.05%	0.06%	PR_Plastics
Plastic	Other Plastic Products	Other PVC		0.07%	0.00%	0.08%	0.03%	0.06%	NR_Plastics
Plastic	Other Rigid Containers/Packaging	Rigid Polystyrene Containers and Packaging		0.16%	0.00%	0.40%	0.16%	0.16%	PR_Plastics
Plastic	Other Rigid Containers/Packaging	Expanded Polystyrene Containers and Packaging		0.69%	0.05%	0.11%	0.07%	0.59%	PR_Plastics
Plastic	Other Rigid Containers/Packaging	Other Rigid Containers/Packaging		0.61%	0.01%	1.53%	0.62%	0.61%	PR_Plastics
Plastic	Film	Plastic Bags		2.79%	0.22%	0.76%	0.44%	2.39%	PR_Plastics
Plastic	Film	Other Film		5.21%	0.86%	2.46%	1.50%	4.58%	PR_Plastics
Plastic	Other Plastic Products	Single Use Plastic Plates, Cups, Cutlery, Etc.		0.78%	0.01%	0.16%	0.07%	0.66%	NR_Plastics
Plastic	Other Plastic Products	Other Plastics Materials		1.67%	0.31%	3.56%	1.61%	1.66%	NR_Plastics
<b>Plastic Total</b>				<b>14.19%</b>	<b>1.58%</b>	<b>21.53%</b>	<b>9.57%</b>	<b>13.41%</b>	
Glass	Container Glass	Clear Container Glass		1.28%	0.08%	7.13%	2.91%	1.55%	R Glass
Glass	Container Glass	Green Container Glass		0.31%	0.00%	3.71%	1.49%	0.51%	R Glass
Glass	Container Glass	Brown Container Glass		0.31%	0.00%	1.40%	0.56%	0.35%	R Glass
Glass	Mixed Cullet	Mixed Cullet		0.50%	0.04%	22.24%	8.94%	1.94%	R Glass
Glass	Container Glass	Other Container Glass		0.20%	0.00%	0.62%	0.25%	0.21%	R Glass
Glass	Other Glass	Other Glass	2	0.00%	0.00%	0.00%	0.00%	0.00%	PR_Glass
<b>Glass Total</b>				<b>2.60%</b>	<b>0.13%</b>	<b>35.11%</b>	<b>14.15%</b>	<b>4.56%</b>	

**Table 1-15**  
**Citywide Results at a Glance, Preliminary Waste Characterization Study (continued)**

Material Group	Material Subgroup	Material Category: Subcategory	Notes	% of Refuse Stream	% of Paper Stream	% of MGP Stream	% of Aggregated Recycling Stream	% of Waste Stream	Recycling Subindicator
Metal	Aluminum	Aluminum Cans		0.20%	0.01%	0.79%	0.32%	0.22%	R Metal
Metal	Aluminum	Aluminum Foil/Containers		0.60%	0.02%	0.97%	0.40%	0.57%	R Metal
Metal	Aluminum	Other Aluminum		0.05%	0.01%	0.20%	0.09%	0.05%	R Metal
Metal	Non-Ferrous	Other Non-Ferrous		0.06%	0.00%	0.27%	0.11%	0.07%	R Metal
Metal	Ferrous	Tin Food Cans		0.91%	0.04%	7.12%	2.88%	1.25%	R Metal
Metal	Ferrous	Empty Aerosol Cans		0.12%	0.00%	0.64%	0.26%	0.15%	R Metal
Metal	Ferrous	Other Ferrous		1.03%	0.04%	20.20%	8.12%	2.23%	R Metal
Metal	Other Metal	Mixed Metals		0.56%	0.09%	0.90%	0.42%	0.54%	R Metal
<b>Metal Total</b>				<b>3.54%</b>	<b>0.22%</b>	<b>31.08%</b>	<b>12.59%</b>	<b>5.07%</b>	
Organics	Yard	Leaves and Grass		6.23%	0.00%	0.03%	0.01%	5.17%	NR_Other
Organics	Yard	Prunings		3.04%	0.00%	0.03%	0.01%	2.53%	NR_Other
Organics	Wood	Stumps/Limbs		0.67%	0.00%	0.00%	0.00%	0.56%	NR_Other
Organics	Food	Food		15.93%	0.40%	1.20%	0.72%	13.35%	NR_Other
Organics	Wood	Wood Furniture/Furniture Pieces	3	0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
Organics	Wood	Non-C&D Untreated Wood		0.38%	0.00%	0.07%	0.03%	0.32%	NR_Other
Organics	Textiles	Non-Clothing Textiles		2.07%	0.18%	0.16%	0.17%	1.75%	NR_Other
Organics	Textiles	Clothing Textiles		3.70%	0.12%	0.05%	0.09%	3.09%	NR_Other
Organics	Textiles	Carpet/Upholstery		1.27%	0.01%	0.00%	0.01%	1.05%	NR_Other
Organics	Diapers/Hygiene	Disposable Diapers and Sanitary Products		3.81%	0.07%	0.08%	0.08%	3.17%	NR_Other
Organics	Misc. Organic	Animal By-Products		1.25%	0.02%	0.01%	0.02%	1.04%	NR_Other
Organics	Misc. Organic	Rubber Products		0.32%	0.01%	0.17%	0.08%	0.28%	NR_Other
Organics	Textiles	Shoes		0.67%	0.02%	0.07%	0.04%	0.56%	NR_Other
Organics	Textiles	Other Leather Products		0.05%	0.00%	0.02%	0.01%	0.05%	NR_Other
Organics	Misc. Organic	Fines		4.20%	0.38%	1.24%	0.72%	3.61%	NR_Other
Organics	Textiles	Upholstered or Other Organic-Type Furniture	3	0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
Organics	Misc. Organic	Miscellaneous Organics		3.98%	0.01%	0.19%	0.08%	3.31%	NR_Other
<b>Organics Total</b>				<b>47.56%</b>	<b>1.23%</b>	<b>3.31%</b>	<b>2.07%</b>	<b>39.84%</b>	
Appliance/Electronic	Ferrous	Appliances: Ferrous	4	0.00%	0.00%	0.00%	0.00%	0.00%	R Metal
Appliance/Electronic	Non-Ferrous	Appliances: Non-Ferrous	5	0.00%	0.00%	0.00%	0.00%	0.00%	R Metal
Appliance/Electronic	Household Appliance - Plastic	Appliances: Plastic		0.27%	0.06%	2.09%	0.87%	0.37%	NR_Other
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Cell Phones		0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Other		0.24%	0.00%	0.00%	0.00%	0.20%	NR_Other
Appliance/Electronic	Electronic/AV/Computer	Computer Monitors		0.05%	0.00%	0.00%	0.00%	0.04%	NR_Other
Appliance/Electronic	Electronic/AV/Computer	Televisions		0.10%	0.00%	0.00%	0.00%	0.08%	NR_Other
Appliance/Electronic	Electronic/AV/Computer	Other Computer Equipment		0.19%	0.00%	0.81%	0.33%	0.22%	NR_Other
<b>Appliance/Electronic Total</b>				<b>0.86%</b>	<b>0.06%</b>	<b>2.91%</b>	<b>1.20%</b>	<b>0.92%</b>	
C & D Debris	Wood	Untreated Dimension Lumber, Pallets, Crates		0.45%	0.06%	0.13%	0.09%	0.39%	NR_Other
C & D Debris	Wood	Treated/Contaminated Wood		2.99%	0.02%	0.08%	0.04%	2.49%	NR_Other
C & D Debris	Inorganic C&D	Gypsum Scrap		1.16%	0.01%	0.00%	0.01%	0.97%	NR_Other
C & D Debris	Inorganic C&D	Rock/Concrete/Bricks		0.58%	0.00%	0.06%	0.02%	0.49%	NR_Other
C & D Debris	Inorganic C&D	Other Construction Debris		1.82%	0.11%	0.01%	0.07%	1.52%	NR_Other
<b>C &amp; D Debris Total</b>				<b>7.01%</b>	<b>0.20%</b>	<b>0.28%</b>	<b>0.23%</b>	<b>5.86%</b>	
Miscellaneous Inorganics	Misc. Inorganic	Miscellaneous Inorganics		0.23%	0.01%	0.41%	0.17%	0.22%	NR_Other
Miscellaneous Inorganics	Misc. Inorganic	Ceramics		0.36%	0.01%	0.45%	0.19%	0.33%	NR_Other
<b>Miscellaneous Inorganics Total</b>				<b>0.59%</b>	<b>0.02%</b>	<b>0.86%</b>	<b>0.36%</b>	<b>0.55%</b>	

**Table 1-15  
Citywide Results at a Glance, Preliminary Waste Characterization Study (continued)**

Material Group	Material Subgroup	Material Category: Subcategory	Notes	% of Refuse Stream	% of Paper Stream	% of MGP Stream	% of Aggregated Recycling Stream	% of Waste Stream	Recycling Subindicator
HHW	HHW	Oil Filters		0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
HHW	HHW	Antifreeze		0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
HHW	HHW	Wet-Cell Batteries		0.07%	0.00%	0.00%	0.00%	0.06%	NR_Other
HHW	HHW	Gasoline/Kerosene/Motor Oil/Diesel Fuel		0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
HHW	HHW	Latex Paints/Water-Based Adhesives/Glues		0.11%	0.00%	0.01%	0.00%	0.09%	NR_Other
HHW	HHW	Oil-Based Paints/Solvent-Based Adhesives/Glues		0.07%	0.00%	0.06%	0.02%	0.06%	NR_Other
HHW	HHW	Pesticides/Herbicides/Rodenticides		0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
HHW	HHW	Dry-Cell Batteries		0.07%	0.00%	0.04%	0.02%	0.06%	NR_Other
HHW	HHW	Fluorescent Tubes		0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
HHW	HHW	Mercury-Laden Wastes		0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
HHW	HHW	Compressed Gas Cylinders, Fire Extinguishers		0.00%	0.00%	0.01%	0.00%	0.00%	NR_Other
HHW	HHW	Home Medical Products		0.04%	0.00%	0.00%	0.00%	0.03%	NR_Other
HHW	HHW	Other Potentially Harmful Wastes		0.09%	0.00%	0.00%	0.00%	0.07%	NR_Other
<b>HHW Total</b>				<b>0.45%</b>	<b>0.01%</b>	<b>0.12%</b>	<b>0.05%</b>	<b>0.38%</b>	
<b>Grand Total</b>				<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	

**Weekly Generation Tonnage<sup>(6)</sup>**

Material Group	Refuse	Paper	MGP	Aggregated Recycling	Waste
Paper Total	7	9,747.96	3,314.67	250.84	5,174.84
Plastic Total	7	5,966.11	54.20	1,124.22	828.52
Glass Total	7	1,094.75	4.54	1,833.52	1,224.54
Metal Total	8	1,486.83	7.70	1,623.01	1,089.52
Organics Total		19,989.40	42.24	173.11	178.78
Appliance/Electronic Total		360.68	2.11	152.11	104.21
C & D Debris Total		2,944.54	6.70	14.52	19.76
Miscellaneous Inorganics Total		249.92	0.73	44.78	30.84
HHW Total		190.35	0.23	6.35	4.56
<b>Grand Total</b>		<b>42,030.55</b>	<b>3,433.11</b>	<b>5,222.46</b>	<b>8,655.57</b>

**Subtotals by Recycling Designation**

Recycling Designation	% of Refuse Stream	% of Paper Stream	% of MGP Stream	% of Aggregated Recycling Stream	% of Waste Stream
Percent Designated Paper	14.07%	94.78%	2.15%	57.66%	21.47%
Percent Designated MGP	8.34%	0.74%	79.17%	32.16%	12.38%
Percent Designated Recycling	22.42%	95.51%	81.32%	89.82%	33.85%

(1) In the PWCS, no distinction was made between #3 through #7 plastic bottles and tubs. PWCS results are shown here in the #3 through #7 bottle categories.

(2) In the PWCS, "Other Container Glass" was grouped with "Other Glass," and is shown here in the "Other Container Glass" category.

(3) In the PWCS, furniture and parts of furniture did not have their own categories. They were included in wood, textiles, or miscellaneous organic categories.

(4) In the PWCS, there was no category for "Appliances: Ferrous." PWCS results are shown here in the "Other Ferrous" category.

(5) In the PWCS, there was no category for "Appliances: Non-Ferrous." PWCS results are shown here in the "Other Non-Ferrous" category.

(6) Tonnage values calculated using DSNY average weekly curbside tonnages over the period from May 2004 through June 2004. More detail on how and why tonnages from this period were used to estimate generation can be found in Section 2.2.6 in Volume 2.

(7) The paper, plastic, and glass tonnages include the weight of materials both designated and non-designated for recycling.

(8) The metal tonnages do not include the weight of metals found within the appliance/electronic material group.

**Table 1-16  
Citywide Results at a Glance, Annual Waste Characterization Study**

Material Group	Material Subgroup	Material Category: Subcategory	% of Refuse Stream	% of Paper Stream	% of MGP Stream	% of Aggregated Recycling Stream	% of Waste Stream	Recycling Subindicator
Paper	ONP	Newspaper	3.65%	41.55%	0.62%	25.30%	7.54%	R Paper
Paper	OCC	Plain OCC/Kraft Paper	1.16%	13.64%	0.28%	8.34%	2.44%	R Paper
Paper	Mixed Paper	High Grade Paper	0.68%	3.16%	0.06%	1.93%	0.90%	R Paper
Paper	Mixed Paper	Mixed Low Grade Paper	8.35%	31.28%	1.36%	19.40%	10.33%	R Paper
Paper	Mixed Paper	Phone Books/Paperbacks	0.49%	4.90%	0.08%	2.99%	0.94%	R Paper
Paper	Mixed Paper	Paper Bags	0.70%	0.36%	0.05%	0.24%	0.62%	R Paper
Paper	Bev Cartons	Polycoated Paper Containers	0.40%	0.25%	1.95%	0.93%	0.50%	R Bev Cartons
Paper	Compostable Paper	Compostable/Soiled Paper/Waxed OCC/Kraft	6.67%	1.34%	0.33%	0.94%	5.64%	NR_Paper
Paper	Compostable Paper	Single Use Paper Plates, Cups	0.52%	0.02%	0.06%	0.04%	0.43%	NR_Paper
Paper	Other Paper	Other Nonrecyclable Paper	0.70%	0.75%	0.41%	0.61%	0.69%	NR_Paper
<b>Paper Total</b>			<b>23.32%</b>	<b>97.25%</b>	<b>5.22%</b>	<b>60.70%</b>	<b>30.04%</b>	
Plastic	PET Bottles	PET Bottles	0.90%	0.07%	6.46%	2.61%	1.21%	R Plastics
Plastic	HDPE Bottles	HDPE Bottles: Natural	0.28%	0.01%	3.15%	1.25%	0.46%	R Plastics
Plastic	HDPE Bottles	HDPE Bottles: Colored	0.30%	0.01%	3.27%	1.30%	0.48%	R Plastics
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #1 PET	0.00%	0.00%	0.02%	0.01%	0.01%	PR_Plastics
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #2 HDPE	0.05%	0.00%	0.21%	0.08%	0.05%	PR_Plastics
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #3 PVC	0.01%	0.00%	0.04%	0.02%	0.01%	PR_Plastics
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #4 LDPE	0.01%	0.00%	0.01%	0.00%	0.01%	PR_Plastics
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #5 PP	0.01%	0.00%	0.10%	0.04%	0.02%	PR_Plastics
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #7 Other	0.07%	0.00%	0.20%	0.08%	0.07%	PR_Plastics
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #3 PVC	0.00%	0.00%	0.01%	0.00%	0.00%	PR_Plastics
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #4 LDPE	0.01%	0.00%	0.01%	0.00%	0.00%	PR_Plastics
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #5 PP	0.17%	0.00%	0.42%	0.17%	0.17%	PR_Plastics
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #7 Other	0.04%	0.00%	0.06%	0.03%	0.04%	PR_Plastics
Plastic	Other Rigid Containers/Packaging	Soda Crates and Bottle Carriers	0.01%	0.00%	0.07%	0.03%	0.01%	PR_Plastics
Plastic	Other Plastic Products	Other PVC	0.02%	0.00%	0.04%	0.01%	0.02%	NR_Plastics
Plastic	Other Rigid Containers/Packaging	Rigid Polystyrene Containers and Packaging	0.27%	0.01%	0.28%	0.12%	0.24%	PR_Plastics
Plastic	Other Rigid Containers/Packaging	Expanded Polystyrene Containers and Packaging	0.64%	0.04%	0.10%	0.06%	0.54%	PR_Plastics
Plastic	Other Rigid Containers/Packaging	Other Rigid Containers/Packaging	0.79%	0.04%	1.34%	0.55%	0.75%	PR_Plastics
Plastic	Film	Plastic Bags	3.22%	0.23%	0.94%	0.51%	2.73%	PR_Plastics
Plastic	Film	Other Film	5.44%	0.71%	3.09%	1.66%	4.76%	PR_Plastics
Plastic	Other Plastic Products	Single Use Plastic Plates, Cups, Cutlery, Etc.	0.60%	0.02%	0.22%	0.10%	0.51%	NR_Plastics
Plastic	Other Plastic Products	Other Plastics Materials	1.92%	0.20%	3.54%	1.53%	1.85%	NR_Plastics
<b>Plastic Total</b>			<b>14.76%</b>	<b>1.36%</b>	<b>23.57%</b>	<b>10.18%</b>	<b>13.94%</b>	
Glass	Container Glass	Clear Container Glass	1.20%	0.05%	8.15%	3.26%	1.57%	R Glass
Glass	Container Glass	Green Container Glass	0.30%	0.01%	4.13%	1.65%	0.54%	R Glass
Glass	Container Glass	Brown Container Glass	0.29%	0.01%	1.98%	0.79%	0.38%	R Glass
Glass	Mixed Cullet	Mixed Cullet	0.60%	0.02%	18.06%	7.18%	1.78%	R Glass
Glass	Container Glass	Other Container Glass	0.02%	0.00%	0.18%	0.07%	0.03%	R Glass
Glass	Other Glass	Other Glass	0.20%	0.02%	0.42%	0.18%	0.19%	PR_Glass
<b>Glass Total</b>			<b>2.60%</b>	<b>0.10%</b>	<b>32.93%</b>	<b>13.13%</b>	<b>4.49%</b>	

**Table 1-16**  
**Citywide Results at a Glance, Annual Waste Characterization Study (continued)**

Material Group	Material Subgroup	Material Category: Subcategory	% of Refuse Stream	% of Paper Stream	% of MGP Stream	% of Aggregated Recycling Stream	% of Waste Stream	Recycling Subindicator
Metal	Aluminum	Aluminum Cans	0.20%	0.01%	0.65%	0.26%	0.21%	R Metal
Metal	Aluminum	Aluminum Foil/Containers	0.57%	0.02%	0.97%	0.40%	0.54%	R Metal
Metal	Aluminum	Other Aluminum	0.04%	0.00%	0.37%	0.15%	0.06%	R Metal
Metal	Non-Ferrous	Other Non-Ferrous	0.13%	0.01%	0.78%	0.32%	0.17%	R Metal
Metal	Ferrous	Tin Food Cans	0.83%	0.03%	7.25%	2.90%	1.20%	R Metal
Metal	Ferrous	Empty Aerosol Cans	0.13%	0.01%	0.69%	0.28%	0.16%	R Metal
Metal	Ferrous	Other Ferrous	1.25%	0.04%	12.82%	5.12%	1.94%	R Metal
Metal	Other Metal	Mixed Metals	0.50%	0.01%	3.35%	1.34%	0.65%	R Metal
<b>Metal Total</b>			<b>3.65%</b>	<b>0.14%</b>	<b>26.87%</b>	<b>10.75%</b>	<b>4.92%</b>	
Organics	Yard	Leaves and Grass	4.01%	0.01%	0.01%	0.01%	3.29%	NR_Other
Organics	Yard	Prunings	0.94%	0.00%	0.01%	0.00%	0.77%	NR_Other
Organics	Wood	Stumps/Limbs	0.19%	0.00%	0.00%	0.00%	0.16%	NR_Other
Organics	Food	Food	21.40%	0.30%	1.56%	0.80%	17.70%	NR_Other
Organics	Wood	Wood Furniture/Furniture Pieces	1.42%	0.01%	0.12%	0.06%	1.18%	NR_Other
Organics	Wood	Non-C&D Untreated Wood	0.22%	0.02%	0.05%	0.03%	0.19%	NR_Other
Organics	Textiles	Non-Clothing Textiles	1.64%	0.07%	0.11%	0.09%	1.36%	NR_Other
Organics	Textiles	Clothing Textiles	3.03%	0.07%	0.09%	0.07%	2.50%	NR_Other
Organics	Textiles	Carpet/Upholstery	1.49%	0.00%	0.01%	0.00%	1.23%	NR_Other
Organics	Diapers/Hygiene	Disposable Diapers and Sanitary Products	3.89%	0.04%	0.07%	0.05%	3.20%	NR_Other
Organics	Misc. Organic	Animal By-Products	1.34%	0.00%	0.03%	0.01%	1.10%	NR_Other
Organics	Misc. Organic	Rubber Products	0.33%	0.03%	0.10%	0.06%	0.28%	NR_Other
Organics	Textiles	Shoes	0.72%	0.04%	0.06%	0.05%	0.60%	NR_Other
Organics	Textiles	Other Leather Products	0.12%	0.00%	0.01%	0.00%	0.10%	NR_Other
Organics	Misc. Organic	Fines	4.34%	0.34%	0.23%	0.29%	3.61%	NR_Other
Organics	Textiles	Upholstered or Other Organic-Type Furniture	1.09%	0.00%	0.11%	0.04%	0.90%	NR_Other
Organics	Misc. Organic	Miscellaneous Organics	0.87%	0.02%	0.10%	0.05%	0.72%	NR_Other
<b>Organics Total</b>			<b>47.05%</b>	<b>0.95%</b>	<b>2.67%</b>	<b>1.63%</b>	<b>38.89%</b>	
Appliance/Electronic	Ferrous	Appliances: Ferrous	0.39%	0.00%	5.54%	2.20%	0.71%	R Metal
Appliance/Electronic	Non-Ferrous	Appliances: Non-Ferrous	0.03%	0.00%	0.14%	0.06%	0.03%	R Metal
Appliance/Electronic	Household Appliance - Plastic	Appliances: Plastic	0.24%	0.01%	0.87%	0.35%	0.26%	NR_Other
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Cell Phones	0.01%	0.00%	0.00%	0.00%	0.00%	NR_Other
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Other	0.27%	0.01%	0.29%	0.12%	0.25%	NR_Other
Appliance/Electronic	Electronic/AV/Computer	Computer Monitors	0.08%	0.00%	0.08%	0.03%	0.07%	NR_Other
Appliance/Electronic	Electronic/AV/Computer	Televisions	0.14%	0.00%	0.00%	0.00%	0.12%	NR_Other
Appliance/Electronic	Electronic/AV/Computer	Other Computer Equipment	0.20%	0.01%	0.52%	0.21%	0.20%	NR_Other
<b>Appliance/Electronic Total</b>			<b>1.36%</b>	<b>0.04%</b>	<b>7.45%</b>	<b>2.98%</b>	<b>1.65%</b>	
C & D Debris	Wood	Untreated Dimension Lumber, Pallets, Crates	0.75%	0.01%	0.01%	0.01%	0.62%	NR_Other
C & D Debris	Wood	Treated/Contaminated Wood	1.96%	0.04%	0.10%	0.06%	1.62%	NR_Other
C & D Debris	Inorganic C&D	Gypsum Scrap	1.09%	0.00%	0.02%	0.01%	0.90%	NR_Other
C & D Debris	Inorganic C&D	Rock/Concrete/Bricks	0.80%	0.00%	0.08%	0.03%	0.66%	NR_Other
C & D Debris	Inorganic C&D	Other Construction Debris	1.68%	0.07%	0.21%	0.12%	1.40%	NR_Other
<b>C &amp; D Debris Total</b>			<b>6.28%</b>	<b>0.12%</b>	<b>0.41%</b>	<b>0.24%</b>	<b>5.20%</b>	
Miscellaneous Inorganics	Misc. Inorganic	Miscellaneous Inorganics	0.25%	0.01%	0.10%	0.05%	0.21%	NR_Other
Miscellaneous Inorganics	Misc. Inorganic	Ceramics	0.46%	0.02%	0.46%	0.19%	0.42%	NR_Other
<b>Miscellaneous Inorganics Total</b>			<b>0.71%</b>	<b>0.03%</b>	<b>0.56%</b>	<b>0.24%</b>	<b>0.63%</b>	

**Table 1-16**  
**Citywide Results at a Glance, Annual Waste Characterization Study (continued)**

Material Group	Material Subgroup	Material Category: Subcategory	% of Refuse Stream	% of Paper Stream	% of MGP Stream	% of Aggregated Recycling Stream	% of Waste Stream	Recycling Subindicator
HHW	HHW	Oil Filters	0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
HHW	HHW	Antifreeze	0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
HHW	HHW	Wet-Cell Batteries	0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
HHW	HHW	Gasoline/Kerosene/Motor Oil/Diesel Fuel	0.00%	0.00%	0.01%	0.00%	0.00%	NR_Other
HHW	HHW	Latex Paints/Water-Based Adhesives/Glues	0.05%	0.01%	0.11%	0.05%	0.05%	NR_Other
HHW	HHW	Oil-Based Paints/Solvent-Based Adhesives/Glues	0.02%	0.00%	0.06%	0.02%	0.02%	NR_Other
HHW	HHW	Pesticides/Herbicides/Rodenticides	0.01%	0.00%	0.01%	0.00%	0.01%	NR_Other
HHW	HHW	Dry-Cell Batteries	0.08%	0.00%	0.03%	0.02%	0.07%	NR_Other
HHW	HHW	Fluorescent Tubes	0.01%	0.00%	0.00%	0.00%	0.01%	NR_Other
HHW	HHW	Mercury-Laden Wastes	0.00%	0.00%	0.00%	0.00%	0.00%	NR_Other
HHW	HHW	Compressed Gas Cylinders, Fire Extinguishers	0.01%	0.00%	0.01%	0.01%	0.01%	NR_Other
HHW	HHW	Home Medical Products	0.06%	0.00%	0.02%	0.01%	0.05%	NR_Other
HHW	HHW	Other Potentially Harmful Wastes	0.03%	0.00%	0.07%	0.03%	0.03%	NR_Other
<b>HHW Total</b>			<b>0.27%</b>	<b>0.02%</b>	<b>0.33%</b>	<b>0.14%</b>	<b>0.25%</b>	
<b>Grand Total</b>			<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	

**Weekly Generation Tonnage <sup>(1)</sup>**

Material Group	Refuse	Paper	MGP	Aggregated Recycling	Waste
Paper Total <sup>(2)</sup>	12,360.75	6,801.33	240.32	7,041.65	19,402.41
Plastic Total <sup>(2)</sup>	7,823.45	94.79	1,085.78	1,180.58	9,004.02
Glass Total <sup>(2)</sup>	1,375.71	6.77	1,516.80	1,523.57	2,899.28
Metal Total <sup>(3)</sup>	1,932.65	9.65	1,237.63	1,247.28	3,179.93
Organics Total	24,934.08	66.39	122.84	189.23	25,123.31
Appliance/Electronic Total	720.27	2.46	342.99	345.45	1,065.72
C & D Debris Total	3,329.44	8.56	18.98	27.54	3,356.98
Miscellaneous Inorganics Total	377.17	2.17	25.72	27.89	405.06
HHW Total	142.72	1.50	15.16	16.66	159.38
<b>Grand Total</b>	<b>52,996.24</b>	<b>6,993.63</b>	<b>4,606.23</b>	<b>11,599.86</b>	<b>64,596.10</b>

**Subtotals by Recycling Designation**

Recycling Designation	% of Refuse Stream	% of Paper Stream	% of MGP Stream	% of Aggregated Recycling Stream	% of Waste Stream
Percent Designated Paper	15.03%	94.89%	2.46%	58.19%	22.78%
Percent Designated MGP	8.34%	0.55%	79.89%	32.06%	12.60%
Percent Designated Recycling	23.37%	95.45%	82.35%	90.25%	35.38%

(1) Tonnage values calculated using DSNY average weekly curbside tonnages over the period from September 2004 through September 2005. More detail on how and why tonnages from this period were used to estimate generation can be found in Section 2.2.6 in Volume 2.

(2) The paper, plastic, and glass tonnages include the weight of materials both designated and non-designated for recycling.

(3) The metal tonnages do not include the weight of metals found within the appliance/electronic material group.

## 1.8.2 Housing Density and Income Details

Although the Sampling for the WCS took place over four seasons, the results of the WCS can be aggregated to provide annual estimates of composition for each of the strata for each stream. Tables 1-17 through 1-21 summarize these results. These tables show the percentage of each material in each of the eight Density/Income Strata for Refuse, Paper, MGP, and Waste. They are useful for comparing the composition of the four streams by Density/Income Strata. Each material is identified by its Material Group, Subgroup, Category, and Subcategory. The table also shows the percentage of each material for each stream citywide. The column labeled “**Recycling Subindicator**” indicates those materials currently designated for Recycling by DSNY (“R”), those materials not designated for Recycling by DSNY (“NR”), and those materials that are not designated for Recycling under the City’s current curbside Recycling program, but which might be added to a future curbside program, or potentially recyclable (“PR”).

The far right-hand column shows the possible correlations between the percentage of a given material with housing density and/or income. These possible correlations were developed by visually examining the results for each material category, by strata. For example, to ascertain whether a correlation between “housing density” and “material category” existed, we examined the percentage composition of the material for each density strata, looking to see whether the percentages of the material consistently increased or decreased. If the percentages increased, from the low to the medium to the high density strata, then a positive correlation existed between the material and housing density. If the percentage of material decreased consistently, then a negative correlation between the material and housing density existed. If there was no consistent pattern, then no correlation was evident. For example, in Table 1-17, the percentage of newspaper in the Refuse stream increases from low high density housing to medium density housing to high density housing for each income level, indicating a positive correlation between newspaper and housing density.

**Table 1-17  
Housing Density and Income Details, Annual Waste Characterization Study, Refuse**

Material Group	Material Subgroup	Material Category: Subcategory	% of Citywide Refuse Stream	Recycling Subindicator	High Density/	High Density/	High Density/	Medium Density/	Medium Density/	Medium Density/	Low Density/	Low Density/	Possible Correlations with Housing Density and Income
					High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	
Paper	ONP	Newspaper	3.65%	R Paper	5.53%	5.10%	4.26%	3.26%	3.01%	3.65%	2.50%	2.68%	Positive correlation with density
Paper	OCC	Plain OCC/Kraft Paper	1.16%	R Paper	1.72%	1.22%	1.23%	0.92%	0.80%	1.36%	0.98%	1.08%	No discernible pattern
Paper	Mixed Paper	High Grade Paper	0.68%	R Paper	1.53%	0.87%	0.61%	1.02%	0.42%	0.59%	0.53%	0.44%	Positive correlation with income, except MD
Paper	Mixed Paper	Mixed Low Grade Paper	8.35%	R Paper	16.05%	8.66%	7.65%	9.51%	6.76%	7.20%	7.37%	6.70%	Positive correlation with density
Paper	Mixed Paper	Phone Books/Paperbacks	0.49%	R Paper	0.84%	0.69%	0.42%	0.38%	0.30%	0.63%	0.40%	0.41%	Positive correlation with HD income
Paper	Mixed Paper	Paper Bags	0.70%	R Paper	1.55%	0.64%	0.67%	0.99%	0.63%	0.57%	0.50%	0.47%	Positive correlation with density
Paper	Bev Cartons	Polycoated Paper Containers	0.40%	R Bev Cartons	0.58%	0.55%	0.43%	0.50%	0.35%	0.46%	0.27%	0.25%	Positive correlation with density, except LI
Paper	Compostable Paper	Compostable/Soiled Paper/Waxed OCC/Kraft	6.67%	NR_Paper	8.58%	6.70%	5.83%	7.70%	7.14%	5.42%	6.83%	6.55%	Positive correlation with density
Paper	Compostable Paper	Single Use Paper Plates, Cups	0.52%	NR_Paper	0.69%	0.42%	0.29%	0.72%	0.42%	0.27%	0.85%	0.73%	Positive correlation with density
Paper	Other Paper	Other Nonrecyclable Paper	0.70%	NR_Paper	0.77%	0.73%	0.73%	0.94%	0.69%	0.58%	0.72%	0.62%	Positive correlation with density, except HI
<b>Paper Total</b>			<b>23.32%</b>		<b>37.84%</b>	<b>25.58%</b>	<b>22.11%</b>	<b>25.93%</b>	<b>20.51%</b>	<b>20.72%</b>	<b>20.96%</b>	<b>19.92%</b>	<b>Positive correlation with density</b>
Plastic	PET Bottles	PET Bottles	0.90%	R Plastics	1.03%	0.96%	1.21%	0.74%	0.77%	1.15%	0.55%	0.64%	Positive correlation with density
Plastic	HDPE Bottles	HDPE Bottles: Natural	0.28%	R Plastics	0.22%	0.29%	0.44%	0.13%	0.23%	0.32%	0.25%	0.14%	Negative correlation with income, except LD
Plastic	HDPE Bottles	HDPE Bottles: Colored	0.30%	R Plastics	0.33%	0.33%	0.42%	0.27%	0.24%	0.33%	0.23%	0.19%	Positive correlation with density
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #1 PET	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	No discernible pattern
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #2 HDPE	0.05%	PR_Plastics	0.07%	0.09%	0.03%	0.03%	0.04%	0.06%	0.02%	0.03%	Positive correlation with density, except LI
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #3 PVC	0.01%	PR_Plastics	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #4 LDPE	0.01%	PR_Plastics	0.00%	0.00%	0.01%	0.00%	0.01%	0.01%	0.00%	0.01%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #5 PP	0.01%	PR_Plastics	0.01%	0.01%	0.02%	0.01%	0.01%	0.01%	0.01%	0.02%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #7 Other	0.07%	PR_Plastics	0.05%	0.07%	0.07%	0.05%	0.06%	0.06%	0.09%	0.05%	Positive correlation with density, except HI
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #3 PVC	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #4 LDPE	0.01%	PR_Plastics	0.04%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	Positive correlation with HD income
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #5 PP	0.17%	PR_Plastics	0.26%	0.19%	0.17%	0.28%	0.16%	0.12%	0.15%	0.16%	Positive correlation with income, except LD
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #7 Other	0.04%	PR_Plastics	0.07%	0.05%	0.04%	0.09%	0.03%	0.03%	0.04%	0.04%	Positive correlation with HD income
Plastic	Other Rigid Containers/Packaging	Soda Crates and Bottle Carriers	0.01%	PR_Plastics	0.00%	0.01%	0.02%	0.02%	0.00%	0.02%	0.00%	0.02%	Negative correlation with income, except MD
Plastic	Other Plastic Products	Other PVC	0.02%	NR_Plastics	0.00%	0.01%	0.03%	0.00%	0.01%	0.00%	0.04%	0.01%	Negative correlation with HD income
Plastic	Other Rigid Containers/Packaging	Rigid Polystyrene Containers and Packaging	0.27%	PR_Plastics	0.55%	0.28%	0.26%	0.40%	0.23%	0.20%	0.22%	0.19%	Positive correlation with income and density
Plastic	Other Rigid Containers/Packaging	Expanded Polystyrene Containers and Packaging	0.64%	PR_Plastics	0.51%	0.67%	0.70%	0.59%	0.70%	0.71%	0.56%	0.58%	Negative correlation with income
Plastic	Other Rigid Containers/Packaging	Other Rigid Containers/Packaging	0.79%	PR_Plastics	1.39%	0.89%	0.65%	1.16%	0.77%	0.54%	0.76%	0.71%	Positive correlation with income and density
Plastic	Film	Plastic Bags	3.22%	PR_Plastics	3.33%	3.98%	3.78%	2.99%	3.67%	3.16%	2.28%	2.52%	Positive correlation with density
Plastic	Film	Other Film	5.44%	PR_Plastics	6.35%	6.26%	5.98%	5.29%	5.70%	5.40%	4.23%	4.62%	Positive correlation with density
Plastic	Other Plastic Products	Single Use Plastic Plates, Cups, Cutlery, Etc.	0.60%	NR_Plastics	0.55%	0.61%	0.47%	0.55%	0.50%	0.68%	0.77%	0.72%	No discernible pattern
Plastic	Other Plastic Products	Other Plastics Materials	1.92%	NR_Plastics	1.44%	2.13%	1.87%	1.61%	1.80%	1.91%	2.24%	2.10%	Positive correlation with MD income
<b>Plastic Total</b>			<b>14.76%</b>		<b>16.24%</b>	<b>16.86%</b>	<b>16.20%</b>	<b>14.23%</b>	<b>14.95%</b>	<b>14.73%</b>	<b>12.46%</b>	<b>12.76%</b>	<b>Positive correlation with density</b>
Glass	Container Glass	Clear Container Glass	1.20%	R Glass	0.85%	0.97%	1.68%	1.13%	1.08%	1.79%	0.77%	0.90%	Negative correlation with income, except MD
Glass	Container Glass	Green Container Glass	0.30%	R Glass	0.58%	0.27%	0.35%	0.48%	0.30%	0.29%	0.15%	0.15%	Positive correlation with MD income
Glass	Container Glass	Brown Container Glass	0.29%	R Glass	0.18%	0.21%	0.51%	0.32%	0.30%	0.36%	0.11%	0.20%	Negative correlation with income, except MD
Glass	Mixed Cullet	Mixed Cullet	0.60%	R Glass	0.84%	0.69%	0.76%	0.53%	0.54%	0.79%	0.28%	0.33%	Positive correlation with density, except LI
Glass	Container Glass	Other Container Glass	0.02%	R Glass	0.02%	0.02%	0.01%	0.02%	0.02%	0.04%	0.02%	0.01%	No discernible pattern
Glass	Other Glass	Other Glass	0.20%	PR_Glass	0.14%	0.20%	0.18%	0.19%	0.22%	0.23%	0.19%	0.22%	Negative correlation with income, except HD
<b>Glass Total</b>			<b>2.60%</b>		<b>2.60%</b>	<b>2.36%</b>	<b>3.48%</b>	<b>2.67%</b>	<b>2.47%</b>	<b>3.50%</b>	<b>1.51%</b>	<b>1.81%</b>	<b>No discernible pattern</b>
Metal	Aluminum	Aluminum Cans	0.20%	R Metal	0.24%	0.23%	0.27%	0.16%	0.17%	0.21%	0.15%	0.13%	Positive correlation with density
Metal	Aluminum	Aluminum Foil/Containers	0.57%	R Metal	0.63%	0.53%	0.57%	0.63%	0.58%	0.59%	0.53%	0.51%	No discernible pattern
Metal	Aluminum	Other Aluminum	0.04%	R Metal	0.02%	0.02%	0.05%	0.04%	0.02%	0.05%	0.04%	0.08%	No discernible pattern
Metal	Non-Ferrous	Other Non-Ferrous	0.13%	R Metal	0.12%	0.17%	0.12%	0.23%	0.11%	0.10%	0.15%	0.16%	Positive correlation with MD income
Metal	Ferrous	Tin Food Cans	0.83%	R Metal	0.53%	0.96%	1.46%	0.53%	0.71%	1.03%	0.44%	0.52%	Negative correlation with income
Metal	Ferrous	Empty Aerosol Cans	0.13%	R Metal	0.13%	0.10%	0.15%	0.12%	0.14%	0.12%	0.13%	0.12%	No discernible pattern
Metal	Ferrous	Other Ferrous	1.25%	R Metal	1.12%	1.07%	1.10%	1.26%	1.13%	1.21%	1.33%	2.14%	Negative correlation with density
Metal	Other Metal	Mixed Metals	0.50%	R Metal	0.68%	0.35%	0.45%	0.46%	0.39%	0.72%	0.44%	0.53%	Positive correlation with HI density
<b>Metal Total</b>			<b>3.65%</b>		<b>3.48%</b>	<b>3.42%</b>	<b>4.17%</b>	<b>3.43%</b>	<b>3.25%</b>	<b>4.04%</b>	<b>3.20%</b>	<b>4.19%</b>	<b>Positive correlation with density, except MI</b>

**Table 1-17**  
**Housing Density and Income Details, Annual Waste Characterization Study, Refuse (continued)**

Material Group	Material Subgroup	Material Category: Subcategory	% of Citywide Refuse Stream	Recycling Subindicator	High Density/	High Density/	High Density/	Medium Density/	Medium Density/	Medium Density/	Low Density/	Low Density/	Possible Correlations with Housing Density and Income
					High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	
Organics	Yard	Leaves and Grass	4.01%	NR_Other	1.37%	2.53%	0.82%	2.86%	2.90%	2.43%	10.36%	7.34%	Negative correlation with density
Organics	Yard	Prunings	0.94%	NR_Other	0.63%	0.34%	0.13%	1.10%	0.61%	0.43%	2.60%	1.42%	Positive correlation with income
Organics	Wood	Stumps/Limbs	0.19%	NR_Other	0.01%	0.15%	0.03%	0.21%	0.15%	0.07%	0.45%	0.56%	Positive correlation with MD income
Organics	Food	Food	21.40%	NR_Other	15.30%	22.67%	25.26%	20.11%	25.10%	22.30%	17.47%	19.46%	Negative correlation with income, except MD
Organics	Wood	Wood Furniture/Furniture Pieces	1.42%	NR_Other	1.17%	1.07%	1.06%	1.19%	1.18%	2.07%	1.69%	1.78%	Negative correlation with density
Organics	Wood	Non-C&D Untreated Wood	0.22%	NR_Other	0.15%	0.15%	0.22%	0.39%	0.28%	0.29%	0.18%	0.12%	No discernible pattern
Organics	Textiles	Non-Clothing Textiles	1.64%	NR_Other	1.40%	1.70%	1.77%	1.47%	1.90%	1.54%	1.47%	1.70%	Negative correlation with income, except MD
Organics	Textiles	Clothing Textiles	3.03%	NR_Other	1.79%	3.38%	4.15%	1.69%	3.08%	3.42%	2.45%	2.95%	Negative correlation with income
Organics	Textiles	Carpet/Upholstery	1.49%	NR_Other	1.78%	0.97%	1.05%	1.18%	1.33%	1.50%	2.16%	1.54%	Negative correlation with MD income
Organics	Diapers/Hygiene	Disposable Diapers and Sanitary Products	3.89%	NR_Other	3.26%	3.55%	4.35%	4.10%	4.18%	3.99%	3.39%	4.27%	Negative correlation with income, except MD
Organics	Misc. Organic	Animal By-Products	1.34%	NR_Other	1.59%	1.11%	0.69%	3.82%	1.62%	0.98%	1.36%	1.61%	Positive correlation with income, except LD
Organics	Misc. Organic	Rubber Products	0.33%	NR_Other	0.24%	0.28%	0.39%	0.27%	0.33%	0.34%	0.37%	0.26%	Negative correlation with income, except LD
Organics	Textiles	Shoes	0.72%	NR_Other	0.46%	0.75%	0.89%	0.58%	0.79%	0.89%	0.53%	0.71%	Negative correlation with income
Organics	Textiles	Other Leather Products	0.12%	NR_Other	0.04%	0.13%	0.12%	0.05%	0.19%	0.12%	0.10%	0.14%	Negative correlation with HI density
Organics	Misc. Organic	Fines	4.34%	NR_Other	3.94%	4.24%	4.77%	4.44%	4.21%	5.06%	3.68%	4.47%	Negative correlation with income, except MD
Organics	Textiles	Upholstered or Other Organic-Type Furniture	1.09%	NR_Other	0.61%	1.03%	1.37%	0.90%	1.24%	1.10%	1.09%	0.88%	Negative correlation with HD income
Organics	Misc. Organic	Miscellaneous Organics	0.87%	NR_Other	0.88%	0.60%	0.53%	1.46%	0.63%	1.01%	1.16%	1.21%	Positive correlation with HD income
<b>Organics Total</b>			<b>47.05%</b>		<b>34.62%</b>	<b>44.64%</b>	<b>47.58%</b>	<b>45.81%</b>	<b>49.73%</b>	<b>47.53%</b>	<b>50.50%</b>	<b>50.39%</b>	<b>Negative correlation with density, except LI</b>
Appliance/Electronic	Ferrous	Appliances: Ferrous	0.39%	R Metal	0.33%	0.16%	0.23%	0.21%	0.23%	0.72%	0.55%	0.46%	Negative correlation with MD income
Appliance/Electronic	Non-Ferrous	Appliances: Non-Ferrous	0.03%	R Metal	0.02%	0.04%	0.01%	0.05%	0.06%	0.03%	0.02%	0.03%	No discernible pattern
Appliance/Electronic	Household Appliance - Plastic	Appliances: Plastic	0.24%	NR_Other	0.29%	0.29%	0.19%	0.19%	0.22%	0.24%	0.32%	0.18%	Negative correlation with MD income
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Cell Phones	0.01%	NR_Other	0.00%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.01%	No discernible pattern
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Other	0.27%	NR_Other	0.16%	0.18%	0.22%	0.19%	0.26%	0.47%	0.32%	0.24%	Negative correlation with income, except LD
Appliance/Electronic	Electronic/AV/Computer	Computer Monitors	0.08%	NR_Other	0.00%	0.02%	0.00%	0.21%	0.17%	0.16%	0.03%	0.08%	Positive correlation with MD income
Appliance/Electronic	Electronic/AV/Computer	Televisions	0.14%	NR_Other	0.00%	0.04%	0.06%	0.13%	0.27%	0.20%	0.17%	0.18%	Negative correlation with income, except MD
Appliance/Electronic	Electronic/AV/Computer	Other Computer Equipment	0.20%	NR_Other	0.15%	0.30%	0.22%	0.31%	0.30%	0.18%	0.10%	0.13%	Positive correlation with MD income
<b>Appliance/Electronic Total</b>			<b>1.36%</b>		<b>0.95%</b>	<b>1.03%</b>	<b>0.95%</b>	<b>1.30%</b>	<b>1.50%</b>	<b>2.00%</b>	<b>1.52%</b>	<b>1.29%</b>	<b>Negative correlation with density, except MI</b>
C & D Debris	Wood	Untreated Dimension Lumber, Pallets, Crates	0.75%	NR_Other	0.41%	0.55%	0.54%	0.65%	0.49%	0.49%	1.47%	1.38%	Negative correlation with HI density
C & D Debris	Wood	Treated/Contaminated Wood	1.96%	NR_Other	1.20%	1.82%	1.41%	1.82%	1.96%	2.09%	2.53%	2.93%	Negative correlation with density
C & D Debris	Inorganic C&D	Gypsum Scrap	1.09%	NR_Other	0.56%	1.02%	0.75%	0.50%	1.54%	1.35%	1.11%	1.53%	No discernible pattern
C & D Debris	Inorganic C&D	Rock/Concrete/Bricks	0.80%	NR_Other	0.21%	0.29%	0.90%	0.63%	0.99%	1.04%	0.87%	0.87%	Negative correlation with income, except LD
C & D Debris	Inorganic C&D	Other Construction Debris	1.68%	NR_Other	1.14%	1.54%	1.10%	1.84%	1.62%	1.66%	2.55%	1.89%	Negative correlation with density
<b>C &amp; D Debris Total</b>			<b>6.28%</b>		<b>3.52%</b>	<b>5.22%</b>	<b>4.70%</b>	<b>5.45%</b>	<b>6.60%</b>	<b>6.62%</b>	<b>8.52%</b>	<b>8.59%</b>	<b>Negative correlation with density</b>
Miscellaneous Inorganics	Misc. Inorganic	Miscellaneous Inorganics	0.25%	NR_Other	0.28%	0.21%	0.10%	0.25%	0.23%	0.19%	0.43%	0.29%	Positive correlation with income
Miscellaneous Inorganics	Misc. Inorganic	Ceramics	0.46%	NR_Other	0.25%	0.37%	0.39%	0.67%	0.44%	0.44%	0.68%	0.48%	Negative correlation with density
<b>Miscellaneous Inorganics Total</b>			<b>0.71%</b>		<b>0.53%</b>	<b>0.58%</b>	<b>0.49%</b>	<b>0.92%</b>	<b>0.68%</b>	<b>0.63%</b>	<b>1.11%</b>	<b>0.78%</b>	<b>Negative correlation with density</b>
HHW	HHW	Oil Filters	0.00%	NR_Other	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Antifreeze	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Wet-Cell Batteries	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Gasoline/Kerosene/Motor Oil/Diesel Fuel	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Latex Paints/Water-Based Adhesives/Glues	0.05%	NR_Other	0.04%	0.02%	0.02%	0.05%	0.10%	0.02%	0.05%	0.11%	Negative correlation with MI density
HHW	HHW	Oil-Based Paints/Solvent-Based Adhesives/Glues	0.02%	NR_Other	0.03%	0.01%	0.01%	0.03%	0.04%	0.02%	0.02%	0.03%	No discernible pattern
HHW	HHW	Pesticides/Herbicides/Rodenticides	0.01%	NR_Other	0.00%	0.01%	0.01%	0.00%	0.01%	0.00%	0.01%	0.00%	No discernible pattern
HHW	HHW	Dry-Cell Batteries	0.08%	NR_Other	0.05%	0.11%	0.09%	0.10%	0.08%	0.11%	0.06%	0.05%	Positive correlation with MI density
HHW	HHW	Fluorescent Tubes	0.01%	NR_Other	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Mercury-Laden Wastes	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Compressed Gas Cylinders, Fire Extinguishers	0.01%	NR_Other	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.01%	0.00%	Negative correlation with HD income
HHW	HHW	Home Medical Products	0.06%	NR_Other	0.07%	0.04%	0.12%	0.05%	0.05%	0.05%	0.02%	0.02%	Positive correlation with density, except MI
HHW	HHW	Other Potentially Harmful Wastes	0.03%	NR_Other	0.02%	0.02%	0.03%	0.03%	0.03%	0.02%	0.04%	0.03%	Negative correlation with HI density
<b>HHW Total</b>			<b>0.27%</b>		<b>0.22%</b>	<b>0.31%</b>	<b>0.32%</b>	<b>0.27%</b>	<b>0.32%</b>	<b>0.23%</b>	<b>0.22%</b>	<b>0.26%</b>	<b>Negative correlation with income, except MD</b>
<b>Grand Total</b>			<b>100.00%</b>		<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	

**Table 1-17**  
**Housing Density and Income Details, Annual Waste Characterization Study, Refuse (continued)**

**SUBTOTALS BY RECYCLING DESIGNATION**

Recycling Designation	% of Citywide Refuse Stream	High Density/ High Income %	High Density/ Medium Income %	High Density/ Low Income %	Medium Density/ High Income %	Medium Density/ Medium Income %	Medium Density/ Low Income %	Low Density/ High Income %	Low Density/ Medium Income %
<b>Designated Paper</b>	<b>15.03%</b>	<b>27.22%</b>	<b>17.18%</b>	<b>14.83%</b>	<b>16.08%</b>	<b>11.92%</b>	<b>14.00%</b>	<b>12.29%</b>	<b>11.78%</b>
Designated Beverage Cartons	0.40%	0.58%	0.55%	0.43%	0.50%	0.35%	0.46%	0.27%	0.25%
Designated Plastic	1.48%	1.58%	1.58%	2.06%	1.14%	1.24%	1.80%	1.03%	0.97%
Designated Metal	4.06%	3.83%	3.62%	4.41%	3.68%	3.54%	4.79%	3.77%	4.68%
Designated Glass	2.40%	2.46%	2.16%	3.31%	2.49%	2.25%	3.26%	1.32%	1.60%
<b>Designated MGP Subtotal</b>	<b>8.34%</b>	<b>8.45%</b>	<b>7.91%</b>	<b>10.21%</b>	<b>7.81%</b>	<b>7.38%</b>	<b>10.31%</b>	<b>6.39%</b>	<b>7.49%</b>
Potentially Designated Plastic	10.74%	12.67%	12.53%	11.77%	10.93%	11.39%	10.33%	8.39%	8.96%
Potentially Designated Glass	0.20%	0.14%	0.20%	0.18%	0.19%	0.22%	0.23%	0.19%	0.22%
<b>Potentially Designated Materials Subtotal</b>	<b>10.94%</b>	<b>12.81%</b>	<b>12.73%</b>	<b>11.94%</b>	<b>11.11%</b>	<b>11.61%</b>	<b>10.56%</b>	<b>8.57%</b>	<b>9.18%</b>
Nondesigned Paper	7.90%	10.04%	7.85%	6.86%	9.36%	8.24%	6.27%	8.41%	7.90%
Nondesigned Plastic	2.54%	1.99%	2.75%	2.38%	2.16%	2.31%	2.59%	3.05%	2.83%
Other Nondesigned	55.25%	39.49%	51.58%	53.79%	53.49%	58.54%	56.27%	61.30%	60.82%
<b>Nondesigned Materials Subtotal</b>	<b>65.69%</b>	<b>51.53%</b>	<b>62.18%</b>	<b>63.02%</b>	<b>65.00%</b>	<b>69.09%</b>	<b>65.13%</b>	<b>72.75%</b>	<b>71.55%</b>
<b>Designated for Recycling Total</b>	<b>23.37%</b>	<b>35.66%</b>	<b>25.09%</b>	<b>25.04%</b>	<b>23.88%</b>	<b>19.30%</b>	<b>24.31%</b>	<b>18.68%</b>	<b>19.27%</b>
<b>Potentially or Not Designated for Recycling Total</b>	<b>76.63%</b>	<b>64.34%</b>	<b>74.91%</b>	<b>74.96%</b>	<b>76.12%</b>	<b>80.70%</b>	<b>75.69%</b>	<b>81.32%</b>	<b>80.73%</b>

**AVERAGE WEEKLY GENERATION TONNAGE<sup>(1)</sup>**

Material Group	Citywide	High Density/ High Income	High Density/ Medium Income	High Density/ Low Income	Medium Density/ High Income	Medium Density/ Medium Income	Medium Density/ Low Income	Low Density/ High Income	Low Density/ Medium Income
Paper Total <sup>(2)</sup>	12,360.75	2,144.92	988.09	2,236.96	531.24	1,888.76	1,645.63	2,161.52	763.64
Plastic Total <sup>(2)</sup>	7,823.45	920.48	651.22	1,639.39	291.52	1,376.74	1,169.66	1,285.23	489.21
Glass Total <sup>(2)</sup>	1,375.71	147.57	91.03	352.49	54.70	227.42	277.64	155.32	69.55
Metal Total <sup>(3)</sup>	1,932.65	197.28	132.21	422.00	70.22	299.41	320.98	329.80	160.74
Organics Total	24,934.08	1,962.40	1,724.12	4,813.32	938.44	4,580.68	3,775.47	5,208.14	1,931.51
Appliance/Electronic Total	720.27	53.75	39.86	95.70	26.60	138.55	159.12	157.10	49.60
C & D Debris Total	3,329.44	199.44	201.76	475.61	111.57	607.61	526.05	878.25	329.15
Miscellaneous Inorganics Total	377.17	30.01	22.35	49.10	18.79	62.19	50.42	114.52	29.79
HHW Total	142.72	12.72	11.86	32.42	5.44	29.79	18.11	22.58	9.81
<b>Grand Total</b>	<b>52,996.24</b>	<b>5,668.57</b>	<b>3,862.49</b>	<b>10,116.98</b>	<b>2,048.53</b>	<b>9,211.15</b>	<b>7,943.09</b>	<b>10,312.46</b>	<b>3,832.99</b>

(1) Tonnage values calculated using DSNY average weekly curbside refuse tonnages over the period from September 2004 through September 2005. More detail on how and why tonnages from this period were used to estimate generation can be found in Section 2.2.6 in Volume 2.

(2) The paper, plastic, and glass tonnages include the weight of materials both designated and non-designated for recycling.

(3) The metal tonnages do not include the weight of metals found within the appliance/electronic material group.

**Table 1-18  
Housing Density and Income Details, Annual Waste Characterization Study, Paper**

Material Group	Material Subgroup	Material Category: Subcategory	% of Citywide Paper Stream	Recycling Subindicator	High Density/	High Density/	High Density/	Medium Density/	Medium Density/	Medium Density/	Low Density/	Low Density/	Possible Correlations with Housing Density and Income
					High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	
Paper	ONP	Newspaper	41.55%	R Paper	48.47%	42.37%	35.11%	39.12%	34.42%	34.20%	45.45%	43.69%	Positive correlation with income
Paper	OCC	Plain OCC/Kraft Paper	13.64%	R Paper	8.84%	12.45%	27.39%	8.55%	16.68%	24.59%	10.78%	13.81%	Negative correlation with income
Paper	Mixed Paper	High Grade Paper	3.16%	R Paper	2.74%	2.15%	4.11%	4.05%	4.41%	3.49%	2.09%	3.24%	No discernible pattern
Paper	Mixed Paper	Mixed Low Grade Paper	31.28%	R Paper	32.05%	32.87%	19.98%	37.75%	30.46%	27.67%	32.72%	29.76%	Positive correlation with income, except HD
Paper	Mixed Paper	Phone Books/Paperbacks	4.90%	R Paper	4.15%	5.90%	4.52%	6.12%	7.17%	5.05%	3.06%	4.71%	No discernible pattern
Paper	Mixed Paper	Paper Bags	0.36%	R Paper	0.47%	0.31%	0.07%	0.41%	0.58%	0.09%	0.24%	0.30%	Positive correlation with HD income
Paper	Bev Cartons	Polycoated Paper Containers	0.25%	R Bev Cartons	0.13%	0.15%	0.70%	0.14%	0.23%	0.28%	0.32%	0.19%	Negative correlation with income, except LD
Paper	Compostable Paper	Compostable/Soiled Paper/Waxed OCC/Kraft	1.34%	NR_Paper	0.18%	1.32%	1.57%	1.06%	2.30%	0.28%	2.01%	0.69%	Negative correlation with HD income
Paper	Compostable Paper	Single Use Paper Plates, Cups	0.02%	NR_Paper	0.01%	0.02%	0.01%	0.02%	0.05%	0.01%	0.01%	0.02%	No discernible pattern
Paper	Other Paper	Other Nonrecyclable Paper	0.75%	NR_Paper	0.59%	0.29%	1.83%	0.61%	1.00%	0.63%	0.52%	1.26%	Negative correlation with MI density
<b>Paper Total</b>			<b>97.25%</b>		<b>97.63%</b>	<b>97.83%</b>	<b>95.29%</b>	<b>97.85%</b>	<b>97.30%</b>	<b>96.30%</b>	<b>97.22%</b>	<b>97.67%</b>	<b>Positive correlation with MD income</b>
Plastic	PET Bottles	PET Bottles	0.07%	R Plastics	0.02%	0.03%	0.02%	0.02%	0.02%	0.09%	0.20%	0.06%	No discernible pattern
Plastic	HDPE Bottles	HDPE Bottles: Natural	0.01%	R Plastics	0.00%	0.01%	0.00%	0.00%	0.01%	0.02%	0.01%	0.03%	Negative correlation with income, except HD
Plastic	HDPE Bottles	HDPE Bottles: Colored	0.01%	R Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.01%	0.02%	No discernible pattern
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #1 PET	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	No discernible pattern
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #2 HDPE	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #3 PVC	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #4 LDPE	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #5 PP	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #7 Other	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	No discernible pattern
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #3 PVC	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #4 LDPE	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #5 PP	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #7 Other	0.00%	PR_Plastics	0.01%	0.00%	0.00%	0.01%	0.00%	0.00%	0.01%	0.00%	No discernible pattern
Plastic	Other Rigid Containers/Packaging	Soda Crates and Bottle Carriers	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Plastic	Other Plastic Products	Other PVC	0.00%	NR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	No discernible pattern
Plastic	Other Rigid Containers/Packaging	Rigid Polystyrene Containers and Packaging	0.01%	PR_Plastics	0.00%	0.01%	0.02%	0.00%	0.01%	0.02%	0.03%	0.03%	Negative correlation with income, except LD
Plastic	Other Rigid Containers/Packaging	Expanded Polystyrene Containers and Packaging	0.04%	PR_Plastics	0.04%	0.04%	0.04%	0.06%	0.02%	0.07%	0.05%	0.03%	No discernible pattern
Plastic	Other Rigid Containers/Packaging	Other Rigid Containers/Packaging	0.04%	PR_Plastics	0.02%	0.04%	0.05%	0.06%	0.07%	0.02%	0.02%	0.04%	Negative correlation with income, except MD
Plastic	Film	Plastic Bags	0.23%	PR_Plastics	0.25%	0.22%	0.14%	0.09%	0.20%	0.29%	0.30%	0.22%	Positive correlation with income, except MD
Plastic	Film	Other Film	0.71%	PR_Plastics	0.96%	0.67%	1.03%	0.57%	0.78%	0.67%	0.46%	0.46%	Positive correlation with density, except MI
Plastic	Other Plastic Products	Single Use Plastic Plates, Cups, Cutlery, Etc.	0.02%	NR_Plastics	0.00%	0.00%	0.04%	0.01%	0.04%	0.00%	0.02%	0.01%	Negative correlation with HI density
Plastic	Other Plastic Products	Other Plastics Materials	0.20%	NR_Plastics	0.14%	0.18%	0.86%	0.10%	0.16%	0.34%	0.14%	0.12%	Negative correlation with income, except LD
<b>Plastic Total</b>			<b>1.36%</b>		<b>1.45%</b>	<b>1.21%</b>	<b>2.20%</b>	<b>0.94%</b>	<b>1.33%</b>	<b>1.56%</b>	<b>1.26%</b>	<b>1.03%</b>	<b>Negative correlation with MD income</b>
Glass	Container Glass	Clear Container Glass	0.05%	R Glass	0.03%	0.06%	0.03%	0.05%	0.00%	0.13%	0.07%	0.07%	Negative correlation with density, except MI
Glass	Container Glass	Green Container Glass	0.01%	R Glass	0.00%	0.02%	0.00%	0.05%	0.00%	0.01%	0.00%	0.02%	No discernible pattern
Glass	Container Glass	Brown Container Glass	0.01%	R Glass	0.01%	0.00%	0.01%	0.02%	0.01%	0.00%	0.00%	0.05%	Positive correlation with MD income
Glass	Mixed Cullet	Mixed Cullet	0.02%	R Glass	0.03%	0.00%	0.03%	0.01%	0.01%	0.05%	0.00%	0.01%	Positive correlation with HI density
Glass	Container Glass	Other Container Glass	0.00%	R Glass	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Glass	Other Glass	Other Glass	0.02%	PR_Glass	0.00%	0.01%	0.15%	0.00%	0.00%	0.00%	0.03%	0.06%	Negative correlation with income, except MD
<b>Glass Total</b>			<b>0.10%</b>		<b>0.06%</b>	<b>0.09%</b>	<b>0.22%</b>	<b>0.12%</b>	<b>0.02%</b>	<b>0.18%</b>	<b>0.11%</b>	<b>0.22%</b>	<b>Negative correlation with income, except MD</b>
Metal	Aluminum	Aluminum Cans	0.01%	R Metal	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%	No discernible pattern
Metal	Aluminum	Aluminum Foil/Containers	0.02%	R Metal	0.00%	0.01%	0.01%	0.01%	0.02%	0.01%	0.04%	0.03%	Negative correlation with density, except LI
Metal	Aluminum	Other Aluminum	0.00%	R Metal	0.00%	0.00%	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Metal	Non-Ferrous	Other Non-Ferrous	0.01%	R Metal	0.00%	0.01%	0.00%	0.00%	0.05%	0.04%	0.00%	0.00%	No discernible pattern
Metal	Ferrous	Tin Food Cans	0.03%	R Metal	0.00%	0.01%	0.02%	0.02%	0.01%	0.02%	0.08%	0.08%	Negative correlation with HD income
Metal	Ferrous	Empty Aerosol Cans	0.01%	R Metal	0.00%	0.01%	0.01%	0.00%	0.01%	0.01%	0.00%	0.02%	No discernible pattern
Metal	Ferrous	Other Ferrous	0.04%	R Metal	0.07%	0.04%	0.00%	0.05%	0.02%	0.07%	0.06%	0.00%	Positive correlation with income, except MD
Metal	Other Metal	Mixed Metals	0.01%	R Metal	0.00%	0.01%	0.01%	0.00%	0.05%	0.00%	0.01%	0.02%	No discernible pattern
<b>Metal Total</b>			<b>0.14%</b>		<b>0.08%</b>	<b>0.10%</b>	<b>0.09%</b>	<b>0.11%</b>	<b>0.17%</b>	<b>0.16%</b>	<b>0.19%</b>	<b>0.15%</b>	<b>Negative correlation with density, except MI</b>

**Table 1-18  
Housing Density and Income Details, Annual Waste Characterization Study, Paper (continued)**

Material Group	Material Subgroup	Material Category: Subcategory	% of Citywide Paper Stream	Recycling Subindicator	High Density/	High Density/	High Density/	Medium Density/	Medium Density/	Medium Density/	Low Density/	Low Density/	Possible Correlations with Housing Density and Income
					High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	
Organics	Yard	Leaves and Grass	0.01%	NR_Other	0.00%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Organics	Yard	Prunings	0.00%	NR_Other	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.01%	No discernible pattern
Organics	Wood	Stumps/Limbs	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	No discernible pattern
Organics	Food	Food	0.30%	NR_Other	0.10%	0.20%	0.11%	0.27%	0.44%	0.38%	0.46%	0.18%	Negative correlation with density, except MI
Organics	Wood	Wood Furniture/Furniture Pieces	0.01%	NR_Other	0.04%	0.01%	0.00%	0.01%	0.01%	0.02%	0.00%	0.00%	Negative correlation with HD income
Organics	Wood	Non-C&D Untreated Wood	0.02%	NR_Other	0.01%	0.00%	0.08%	0.08%	0.02%	0.03%	0.01%	0.02%	No discernible pattern
Organics	Textiles	Non-Clothing Textiles	0.07%	NR_Other	0.13%	0.04%	0.04%	0.02%	0.05%	0.04%	0.08%	0.08%	Negative correlation with MI density
Organics	Textiles	Clothing Textiles	0.07%	NR_Other	0.03%	0.01%	0.04%	0.09%	0.01%	0.32%	0.08%	0.06%	No discernible pattern
Organics	Textiles	Carpet/Upholstery	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Organics	Diapers/Hygiene	Disposable Diapers and Sanitary Products	0.04%	NR_Other	0.02%	0.11%	0.02%	0.01%	0.06%	0.08%	0.02%	0.04%	Negative correlation with income, except HD
Organics	Misc. Organic	Animal By-Products	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Organics	Misc. Organic	Rubber Products	0.03%	NR_Other	0.00%	0.01%	0.40%	0.00%	0.00%	0.01%	0.00%	0.00%	Negative correlation with HD income
Organics	Textiles	Shoes	0.04%	NR_Other	0.05%	0.00%	0.00%	0.05%	0.00%	0.08%	0.04%	0.03%	Negative correlation with MD income
Organics	Textiles	Other Leather Products	0.00%	NR_Other	0.00%	0.01%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Organics	Misc. Organic	Fines	0.34%	NR_Other	0.22%	0.22%	0.62%	0.26%	0.31%	0.42%	0.44%	0.29%	Negative correlation with MD income
Organics	Textiles	Upholstered or Other Organic-Type Furniture	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Organics	Misc. Organic	Miscellaneous Organics	0.02%	NR_Other	0.00%	0.00%	0.21%	0.02%	0.01%	0.00%	0.00%	0.00%	Positive correlation with MD income
<b>Organics Total</b>			<b>0.95%</b>		<b>0.60%</b>	<b>0.61%</b>	<b>1.54%</b>	<b>0.88%</b>	<b>0.97%</b>	<b>1.39%</b>	<b>1.11%</b>	<b>0.71%</b>	<b>Negative correlation with income, except LD</b>
Appliance/Electronic	Ferrous	Appliances: Ferrous	0.00%	R Metal	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Appliance/Electronic	Non-Ferrous	Appliances: Non-Ferrous	0.00%	R Metal	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	No discernible pattern
Appliance/Electronic	Household Appliance - Plastic	Appliances: Plastic	0.01%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.00%	0.18%	No discernible pattern
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Cell Phones	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Other	0.01%	NR_Other	0.00%	0.10%	0.01%	0.00%	0.01%	0.01%	0.00%	0.02%	No discernible pattern
Appliance/Electronic	Electronic/AV/Computer	Computer Monitors	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Appliance/Electronic	Electronic/AV/Computer	Televisions	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Appliance/Electronic	Electronic/AV/Computer	Other Computer Equipment	0.01%	NR_Other	0.05%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	Negative correlation with HI density
<b>Appliance/Electronic Total</b>			<b>0.04%</b>		<b>0.05%</b>	<b>0.10%</b>	<b>0.01%</b>	<b>0.02%</b>	<b>0.02%</b>	<b>0.04%</b>	<b>0.01%</b>	<b>0.19%</b>	<b>Negative correlation with HI density</b>
C & D Debris	Wood	Untreated Dimension Lumber, Pallets, Crates	0.01%	NR_Other	0.03%	0.01%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	Positive correlation with HD income
C & D Debris	Wood	Treated/Contaminated Wood	0.04%	NR_Other	0.00%	0.00%	0.00%	0.01%	0.09%	0.24%	0.00%	0.00%	Negative correlation with MD income
C & D Debris	Inorganic C&D	Gypsum Scrap	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	No discernible pattern
C & D Debris	Inorganic C&D	Rock/Concrete/Bricks	0.00%	NR_Other	0.00%	0.00%	0.02%	0.00%	0.00%	0.04%	0.00%	0.00%	No discernible pattern
C & D Debris	Inorganic C&D	Other Construction Debris	0.07%	NR_Other	0.09%	0.02%	0.58%	0.05%	0.02%	0.04%	0.00%	0.00%	Positive correlation with density, except MI
<b>C &amp; D Debris Total</b>			<b>0.12%</b>		<b>0.12%</b>	<b>0.03%</b>	<b>0.60%</b>	<b>0.07%</b>	<b>0.13%</b>	<b>0.32%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>Positive correlation with density, except MI</b>
Miscellaneous Inorganics	Misc. Inorganic	Miscellaneous Inorganics	0.01%	NR_Other	0.01%	0.00%	0.01%	0.00%	0.00%	0.01%	0.03%	0.00%	No discernible pattern
Miscellaneous Inorganics	Misc. Inorganic	Ceramics	0.02%	NR_Other	0.00%	0.02%	0.00%	0.01%	0.06%	0.02%	0.01%	0.01%	No discernible pattern
<b>Miscellaneous Inorganics Total</b>			<b>0.03%</b>		<b>0.01%</b>	<b>0.02%</b>	<b>0.01%</b>	<b>0.01%</b>	<b>0.07%</b>	<b>0.03%</b>	<b>0.04%</b>	<b>0.01%</b>	<b>No discernible pattern</b>
HHW	HHW	Oil Filters	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Antifreeze	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Wet-Cell Batteries	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Gasoline/Kerosene/Motor Oil/Diesel Fuel	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Latex Paints/Water-Based Adhesives/Glues	0.01%	NR_Other	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.05%	0.00%	No discernible pattern
HHW	HHW	Oil-Based Paints/Solvent-Based Adhesives/Glues	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Pesticides/Herbicides/Rodenticides	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Dry-Cell Batteries	0.00%	NR_Other	0.00%	0.01%	0.00%	0.00%	0.00%	0.01%	0.00%	0.01%	No discernible pattern
HHW	HHW	Fluorescent Tubes	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Mercury-Laden Wastes	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Compressed Gas Cylinders, Fire Extinguishers	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Home Medical Products	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Other Potentially Harmful Wastes	0.00%	NR_Other	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
<b>HHW Total</b>			<b>0.02%</b>		<b>0.00%</b>	<b>0.01%</b>	<b>0.04%</b>	<b>0.01%</b>	<b>0.01%</b>	<b>0.01%</b>	<b>0.06%</b>	<b>0.02%</b>	<b>Negative correlation with HD income</b>
<b>Grand Total</b>			<b>100.00%</b>		<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	

**Table 1-18**  
**Housing Density and Income Details, Annual Waste Characterization Study, Paper (continued)**

**SUBTOTALS BY RECYCLING DESIGNATION**

Recycling Designation	% of Citywide Paper Stream	High Density/ High Income %	High Density/ Medium Income %	High Density/ Low Income %	Medium Density/ High Income %	Medium Density/ Medium Income %	Medium Density/ Low Income %	Low Density/ High Income %	Low Density/ Medium Income %
Designated Paper	94.89%	96.72%	96.05%	91.17%	96.01%	93.72%	95.10%	94.35%	95.50%
Designated Beverage Cartons	0.25%	0.13%	0.15%	0.70%	0.14%	0.23%	0.28%	0.32%	0.19%
Designated Plastic	0.09%	0.02%	0.04%	0.03%	0.02%	0.03%	0.14%	0.21%	0.11%
Designated Metal	0.14%	0.08%	0.10%	0.09%	0.11%	0.18%	0.16%	0.19%	0.15%
Designated Glass	0.08%	0.06%	0.08%	0.07%	0.12%	0.02%	0.18%	0.08%	0.15%
Designated MGP Subtotal	0.55%	0.30%	0.37%	0.89%	0.40%	0.45%	0.77%	0.81%	0.61%
Potentially Designated Plastic	1.05%	1.28%	0.98%	1.28%	0.80%	1.09%	1.07%	0.89%	0.79%
Potentially Designated Glass	0.02%	0.00%	0.01%	0.15%	0.00%	0.00%	0.00%	0.03%	0.06%
Potentially Designated Materials Subtotal	1.07%	1.28%	0.99%	1.43%	0.80%	1.09%	1.07%	0.91%	0.86%
Nondesignated Paper	2.11%	0.78%	1.64%	3.42%	1.69%	3.36%	0.92%	2.55%	1.97%
Nondesignated Plastic	0.22%	0.15%	0.19%	0.90%	0.12%	0.20%	0.36%	0.16%	0.13%
Other Nondesignated	1.16%	0.77%	0.77%	2.20%	0.98%	1.18%	1.79%	1.23%	0.93%
Nondesignated Materials Subtotal	3.49%	1.70%	2.59%	6.51%	2.79%	4.74%	3.07%	3.93%	3.04%

**AVERAGE WEEKLY GENERATION TONNAGE <sup>(1)</sup>**

Material Group	Citywide	High Density/ High Income	High Density/ Medium Income	High Density/ Low Income	Medium Density/ High Income	Medium Density/ Medium Income	Medium Density/ Low Income	Low Density/ High Income	Low Density/ Medium Income
Paper Total <sup>(2)</sup>	6,801.33	1,481.11	448.41	426.19	616.29	1,387.55	480.11	1,689.17	272.50
Plastic Total <sup>(2)</sup>	94.79	22.02	5.53	9.85	5.93	18.93	7.79	21.85	2.89
Glass Total <sup>(2)</sup>	6.77	0.97	0.41	0.97	0.77	0.25	0.92	1.88	0.61
Metal Total <sup>(3)</sup>	9.65	1.17	0.47	0.39	0.70	2.36	0.81	3.32	0.42
Organics Total	66.39	9.06	2.79	6.91	5.52	13.88	6.91	19.36	1.97
Appliance/Electronic Total	2.46	0.69	0.45	0.06	0.10	0.26	0.21	0.15	0.54
C & D Debris Total	8.56	1.80	0.12	2.67	0.42	1.85	1.61	0.08	0.00
Miscellaneous Inorganics Total	2.17	0.14	0.10	0.04	0.09	0.93	0.16	0.68	0.03
HHW Total	1.50	0.03	0.06	0.17	0.03	0.08	0.06	1.03	0.05
Grand Total	6,993.63	1,517.00	458.34	447.24	629.85	1,426.08	498.58	1,737.51	279.02

(1) Tonnage values calculated using DSNY average weekly curbside paper tonnages over the period from September 2004 through September 2005. More detail on how and why tonnages from this period were used to estimate generation can be found in Section 2.2.6 in Volume 2.

(2) The paper, plastic, and glass tonnages include the weight of materials both designated and non-designated for recycling.

(3) The metal tonnages do not include the weight of metals found within the appliance/electronic material group.

**Table 1-19  
Housing Density and Income Details, Annual Waste Characterization Study, MGP**

Material Group	Material Subgroup	Material Category: Subcategory	% of Citywide MGP Stream	Recycling Subindicator	High Density/ High Income	High Density/ Medium Income	High Density/ Low Income	Medium Density/ High Income	Medium Density/ Medium Income	Medium Density/ Low Income	Low Density/ High Income	Low Density/ Medium Income	Possible Correlations with Housing Density and Income
					%	%	%	%	%	%	%		
Paper	ONP	Newspaper	0.62%	R Paper	0.29%	0.59%	0.12%	0.75%	0.58%	0.92%	0.89%	0.90%	Negative correlation with density, except MI
Paper	OCC	Plain OCC/Kraft Paper	0.28%	R Paper	0.13%	0.26%	0.13%	0.12%	0.27%	0.33%	0.42%	0.52%	Negative correlation with income, except HD
Paper	Mixed Paper	High Grade Paper	0.06%	R Paper	0.04%	0.06%	0.01%	0.04%	0.07%	0.08%	0.06%	0.15%	Negative correlation with income, except HD
Paper	Mixed Paper	Mixed Low Grade Paper	1.36%	R Paper	1.22%	1.56%	0.59%	1.36%	1.35%	1.66%	1.60%	1.63%	Negative correlation with density, except MI
Paper	Mixed Paper	Phone Books/Paperbacks	0.08%	R Paper	0.03%	0.02%	0.06%	0.17%	0.13%	0.09%	0.09%	0.05%	Positive correlation with income, except HD
Paper	Mixed Paper	Paper Bags	0.05%	R Paper	0.07%	0.04%	0.02%	0.07%	0.05%	0.04%	0.06%	0.06%	Positive correlation with income, except LD
Paper	Bev Cartons	Polycoated Paper Containers	1.95%	R Bev Cartons	1.62%	2.16%	1.42%	2.82%	2.50%	2.02%	1.80%	1.52%	Positive correlation with income, except HD
Paper	Compostable Paper	Compostable/Soiled Paper/Waxed OCC/Kraft	0.33%	NR_Paper	0.29%	0.26%	0.26%	0.27%	0.32%	0.38%	0.41%	0.32%	Negative correlation with MD income
Paper	Compostable Paper	Single Use Paper Plates, Cups	0.06%	NR_Paper	0.05%	0.05%	0.03%	0.05%	0.07%	0.07%	0.06%	0.08%	Negative correlation with density, except HI
Paper	Other Paper	Other Nonrecyclable Paper	0.41%	NR_Paper	0.20%	0.41%	0.40%	0.54%	0.54%	0.56%	0.39%	0.45%	Negative correlation with income, except HD
<b>Paper Total</b>			<b>5.22%</b>		<b>3.95%</b>	<b>5.40%</b>	<b>3.03%</b>	<b>5.90%</b>	<b>5.87%</b>	<b>6.15%</b>	<b>5.77%</b>	<b>5.68%</b>	<b>No discernible pattern</b>
Plastic	PET Bottles	PET Bottles	6.46%	R Plastics	5.76%	5.08%	4.59%	5.15%	6.90%	6.89%	7.78%	7.23%	Positive correlation with income, except MD
Plastic	HDPE Bottles	HDPE Bottles: Natural	3.15%	R Plastics	1.70%	3.77%	3.57%	1.58%	4.46%	3.22%	2.72%	3.21%	No discernible pattern
Plastic	HDPE Bottles	HDPE Bottles: Colored	3.27%	R Plastics	2.43%	3.21%	3.01%	2.25%	3.53%	3.25%	3.91%	3.45%	No discernible pattern
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #1 PET	0.02%	PR_Plastics	0.01%	0.02%	0.02%	0.01%	0.03%	0.01%	0.02%	0.01%	No discernible pattern
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #2 HDPE	0.21%	PR_Plastics	0.17%	0.47%	0.24%	0.19%	0.19%	0.21%	0.18%	0.18%	Positive correlation with density, except HI
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #3 PVC	0.04%	PR_Plastics	0.06%	0.07%	0.03%	0.04%	0.03%	0.03%	0.05%	0.03%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #4 LDPE	0.01%	PR_Plastics	0.00%	0.00%	0.01%	0.00%	0.01%	0.01%	0.00%	0.03%	Negative correlation with MI density
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #5 PP	0.10%	PR_Plastics	0.04%	0.07%	0.07%	0.06%	0.11%	0.14%	0.12%	0.13%	Negative correlation with density
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #7 Other	0.20%	PR_Plastics	0.23%	0.32%	0.11%	0.19%	0.19%	0.21%	0.22%	0.21%	No discernible pattern
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #3 PVC	0.01%	PR_Plastics	0.00%	0.02%	0.01%	0.01%	0.01%	0.01%	0.00%	0.01%	No discernible pattern
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #4 LDPE	0.01%	PR_Plastics	0.00%	0.02%	0.00%	0.01%	0.00%	0.02%	0.01%	0.00%	No discernible pattern
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #5 PP	0.42%	PR_Plastics	0.57%	0.41%	0.35%	0.36%	0.42%	0.36%	0.41%	0.41%	Positive correlation with HD income
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #7 Other	0.06%	PR_Plastics	0.04%	0.05%	0.04%	0.05%	0.04%	0.07%	0.06%	0.16%	Negative correlation with density, except MI
Plastic	Other Rigid Containers/Packaging	Soda Crates and Bottle Carriers	0.07%	PR_Plastics	0.04%	0.15%	0.19%	0.01%	0.04%	0.09%	0.05%	0.06%	Negative correlation with income
Plastic	Other Plastic Products	Other PVC	0.04%	NR_Plastics	0.00%	0.01%	0.01%	0.01%	0.02%	0.17%	0.03%	0.01%	Negative correlation with density, except MI
Plastic	Other Rigid Containers/Packaging	Rigid Polystyrene Containers and Packaging	0.28%	PR_Plastics	0.29%	0.24%	0.13%	0.26%	0.33%	0.17%	0.35%	0.36%	Positive correlation with HD income
Plastic	Other Rigid Containers/Packaging	Expanded Polystyrene Containers and Packaging	0.10%	PR_Plastics	0.05%	0.11%	0.08%	0.14%	0.14%	0.10%	0.10%	0.09%	No discernible pattern
Plastic	Other Rigid Containers/Packaging	Other Rigid Containers/Packaging	1.34%	PR_Plastics	1.34%	1.34%	1.11%	1.14%	1.64%	1.18%	1.28%	1.43%	No discernible pattern
Plastic	Film	Plastic Bags	0.94%	PR_Plastics	0.84%	1.08%	0.57%	1.04%	1.05%	0.85%	1.06%	0.99%	Negative correlation with density, except MI
Plastic	Film	Other Film	3.09%	PR_Plastics	4.18%	3.48%	3.22%	2.60%	3.52%	3.29%	2.09%	2.40%	Positive correlation with HD income
Plastic	Other Plastic Products	Single Use Plastic Plates, Cups, Cutlery, Etc.	0.22%	NR_Plastics	0.16%	0.18%	0.12%	0.18%	0.27%	0.18%	0.23%	0.46%	Negative correlation with density
Plastic	Other Plastic Products	Other Plastics Materials	3.54%	NR_Plastics	2.73%	4.00%	4.87%	2.52%	3.69%	3.41%	3.43%	3.31%	Negative correlation with HD income
<b>Plastic Total</b>			<b>23.57%</b>		<b>20.64%</b>	<b>24.11%</b>	<b>22.34%</b>	<b>17.80%</b>	<b>26.65%</b>	<b>23.89%</b>	<b>24.12%</b>	<b>24.18%</b>	<b>No discernible pattern</b>
Glass	Container Glass	Clear Container Glass	8.15%	R Glass	7.36%	7.21%	4.12%	8.09%	6.98%	8.81%	11.31%	10.02%	Positive correlation with income, except MD
Glass	Container Glass	Green Container Glass	4.13%	R Glass	10.95%	4.05%	0.95%	10.00%	2.30%	2.06%	3.50%	2.73%	Positive correlation with income
Glass	Container Glass	Brown Container Glass	1.98%	R Glass	2.31%	1.49%	0.83%	3.30%	1.80%	1.93%	2.43%	1.95%	Positive correlation with income, except MD
Glass	Mixed Cullet	Mixed Cullet	18.06%	R Glass	26.52%	15.98%	16.51%	23.38%	20.76%	14.94%	13.00%	15.16%	Positive correlation with MD income
Glass	Container Glass	Other Container Glass	0.18%	R Glass	0.18%	0.15%	0.08%	0.23%	0.18%	0.21%	0.21%	0.22%	Positive correlation with HD income
Glass	Other Glass	Other Glass	0.42%	PR_Glass	0.42%	0.41%	0.20%	0.25%	0.49%	0.42%	0.42%	0.73%	Positive correlation with HD income
<b>Glass Total</b>			<b>32.93%</b>		<b>47.74%</b>	<b>29.28%</b>	<b>22.69%</b>	<b>45.26%</b>	<b>32.51%</b>	<b>28.36%</b>	<b>30.86%</b>	<b>30.81%</b>	<b>Positive correlation with income</b>
Metal	Aluminum	Aluminum Cans	0.65%	R Metal	0.39%	0.42%	0.40%	0.47%	0.56%	0.59%	1.07%	0.88%	Negative correlation with density
Metal	Aluminum	Aluminum Foil/Containers	0.97%	R Metal	0.53%	0.84%	0.61%	0.86%	1.07%	1.19%	1.22%	1.16%	Negative correlation with density
Metal	Aluminum	Other Aluminum	0.37%	R Metal	0.13%	0.48%	0.61%	0.31%	0.32%	0.25%	0.42%	0.54%	Negative correlation with income, except MD
Metal	Non-Ferrous	Other Non-Ferrous	0.78%	R Metal	0.58%	1.22%	0.92%	0.54%	0.55%	0.79%	1.06%	0.51%	Positive correlation with density, except HI
Metal	Ferrous	Tin Food Cans	7.25%	R Metal	4.10%	6.10%	7.22%	5.96%	8.60%	8.74%	7.48%	8.37%	Negative correlation with income
Metal	Ferrous	Empty Aerosol Cans	0.69%	R Metal	0.61%	0.66%	0.59%	0.39%	0.88%	0.75%	0.69%	0.62%	No discernible pattern
Metal	Ferrous	Other Ferrous	12.82%	R Metal	10.01%	11.88%	17.85%	10.20%	11.42%	13.76%	13.59%	12.56%	Negative correlation with income, except LD
Metal	Other Metal	Mixed Metals	3.35%	R Metal	2.34%	3.69%	6.59%	2.55%	2.74%	2.59%	2.89%	4.19%	Negative correlation with income, except MD
<b>Metal Total</b>			<b>26.87%</b>		<b>18.69%</b>	<b>25.30%</b>	<b>34.78%</b>	<b>21.27%</b>	<b>26.16%</b>	<b>28.66%</b>	<b>28.43%</b>	<b>28.81%</b>	<b>Negative correlation with income</b>

**Table 1-19  
Housing Density and Income Details, Annual Waste Characterization Study, MGP (continued)**

Material Group	Material Subgroup	Material Category: Subcategory	% of Citywide MGP Stream	Recycling Subindicator	High Density/	High Density/	High Density/	Medium Density/	Medium Density/	Medium Density/	Low Density/	Low Density/	Possible Correlations with Housing Density and Income
					High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	
Organics	Yard	Leaves and Grass	0.01%	NR_Other	0.01%	0.00%	0.01%	0.01%	0.02%	0.01%	0.02%	0.00%	No discernible pattern
Organics	Yard	Prunings	0.01%	NR_Other	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	No discernible pattern
Organics	Wood	Stumps/Limbs	0.00%	NR_Other	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Organics	Food	Food	1.56%	NR_Other	1.14%	1.54%	1.29%	1.02%	1.56%	1.79%	1.92%	1.78%	Negative correlation with density, except HI
Organics	Wood	Wood Furniture/Furniture Pieces	0.12%	NR_Other	0.10%	0.15%	0.21%	0.06%	0.10%	0.19%	0.10%	0.04%	Negative correlation with income, except LD
Organics	Wood	Non-C&D Untreated Wood	0.05%	NR_Other	0.02%	0.08%	0.05%	0.07%	0.08%	0.06%	0.02%	0.01%	No discernible pattern
Organics	Textiles	Non-Clothing Textiles	0.11%	NR_Other	0.07%	0.23%	0.19%	0.05%	0.10%	0.10%	0.09%	0.13%	No discernible pattern
Organics	Textiles	Clothing Textiles	0.09%	NR_Other	0.08%	0.20%	0.09%	0.08%	0.10%	0.09%	0.07%	0.04%	Positive correlation with MI density
Organics	Textiles	Carpet/Upholstery	0.01%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.00%	No discernible pattern
Organics	Diapers/Hygiene	Disposable Diapers and Sanitary Products	0.07%	NR_Other	0.01%	0.03%	0.06%	0.11%	0.05%	0.07%	0.14%	0.07%	Negative correlation with density
Organics	Misc. Organic	Animal By-Products	0.03%	NR_Other	0.05%	0.02%	0.01%	0.01%	0.03%	0.00%	0.07%	0.01%	Positive correlation with income, except MD
Organics	Misc. Organic	Rubber Products	0.10%	NR_Other	0.04%	0.20%	0.07%	0.07%	0.11%	0.07%	0.07%	0.23%	No discernible pattern
Organics	Textiles	Shoes	0.06%	NR_Other	0.02%	0.13%	0.04%	0.05%	0.10%	0.07%	0.03%	0.11%	No discernible pattern
Organics	Textiles	Other Leather Products	0.01%	NR_Other	0.01%	0.02%	0.01%	0.00%	0.02%	0.00%	0.01%	0.01%	No discernible pattern
Organics	Misc. Organic	Fines	0.23%	NR_Other	0.19%	0.36%	0.18%	0.21%	0.24%	0.22%	0.23%	0.23%	Negative correlation with density, except MI
Organics	Textiles	Upholstered or Other Organic-Type Furniture	0.11%	NR_Other	0.16%	0.04%	0.28%	0.00%	0.00%	0.28%	0.03%	0.24%	No discernible pattern
Organics	Misc. Organic	Miscellaneous Organics	0.10%	NR_Other	0.09%	0.06%	0.04%	0.06%	0.04%	0.33%	0.10%	0.09%	Positive correlation with income, except MD
<b>Organics Total</b>			<b>2.67%</b>		<b>2.01%</b>	<b>3.08%</b>	<b>2.52%</b>	<b>1.79%</b>	<b>2.57%</b>	<b>3.28%</b>	<b>2.92%</b>	<b>3.00%</b>	<b>Negative correlation with income, except HD</b>
Appliance/Electronic	Ferrous	Appliances: Ferrous	5.54%	R Metal	3.99%	8.38%	10.01%	5.94%	3.75%	5.85%	4.67%	5.30%	Negative correlation with income, except MD
Appliance/Electronic	Non-Ferrous	Appliances: Non-Ferrous	0.14%	R Metal	0.12%	0.18%	0.13%	0.16%	0.04%	0.16%	0.24%	0.10%	Negative correlation with density, except MI
Appliance/Electronic	Household Appliance - Plastic	Appliances: Plastic	0.87%	NR_Other	0.79%	1.06%	1.40%	0.73%	0.76%	1.06%	0.71%	0.62%	Positive correlation with density, except LI
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Cell Phones	0.00%	NR_Other	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Other	0.29%	NR_Other	0.19%	0.29%	0.46%	0.19%	0.25%	0.25%	0.36%	0.20%	Positive correlation with density, except HI
Appliance/Electronic	Electronic/AV/Computer	Computer Monitors	0.08%	NR_Other	0.51%	0.09%	0.02%	0.05%	0.00%	0.00%	0.00%	0.00%	Positive correlation with HD income
Appliance/Electronic	Electronic/AV/Computer	Televisions	0.00%	NR_Other	0.00%	0.03%	0.00%	0.00%	0.00%	0.01%	0.00%	0.02%	No discernible pattern
Appliance/Electronic	Electronic/AV/Computer	Other Computer Equipment	0.52%	NR_Other	0.36%	0.71%	0.93%	0.41%	0.34%	0.53%	0.65%	0.17%	Positive correlation with density, except HI
<b>Appliance/Electronic Total</b>			<b>7.45%</b>		<b>5.96%</b>	<b>10.76%</b>	<b>12.96%</b>	<b>7.47%</b>	<b>5.15%</b>	<b>7.86%</b>	<b>6.63%</b>	<b>6.40%</b>	<b>Negative correlation with HD income</b>
C & D Debris	Wood	Untreated Dimension Lumber, Pallets, Crates	0.01%	NR_Other	0.02%	0.00%	0.00%	0.02%	0.01%	0.01%	0.01%	0.05%	Negative correlation with density, except HI
C & D Debris	Wood	Treated/Contaminated Wood	0.10%	NR_Other	0.10%	0.08%	0.38%	0.02%	0.07%	0.02%	0.05%	0.03%	Positive correlation with density, except HI
C & D Debris	Inorganic C&D	Gypsum Scrap	0.02%	NR_Other	0.02%	0.05%	0.04%	0.02%	0.02%	0.01%	0.01%	0.00%	Positive correlation with density, except HI
C & D Debris	Inorganic C&D	Rock/Concrete/Bricks	0.08%	NR_Other	0.05%	0.06%	0.15%	0.00%	0.03%	0.17%	0.08%	0.05%	Negative correlation with income, except LD
C & D Debris	Inorganic C&D	Other Construction Debris	0.21%	NR_Other	0.08%	1.03%	0.41%	0.09%	0.07%	0.31%	0.08%	0.12%	No discernible pattern
<b>C &amp; D Debris Total</b>			<b>0.41%</b>		<b>0.27%</b>	<b>1.22%</b>	<b>0.98%</b>	<b>0.15%</b>	<b>0.20%</b>	<b>0.52%</b>	<b>0.22%</b>	<b>0.24%</b>	<b>Negative correlation with income, except HD</b>
Miscellaneous Inorganics	Misc. Inorganic	Miscellaneous Inorganics	0.10%	NR_Other	0.09%	0.05%	0.09%	0.04%	0.06%	0.24%	0.09%	0.14%	Negative correlation with income, except HD
Miscellaneous Inorganics	Misc. Inorganic	Ceramics	0.46%	NR_Other	0.27%	0.47%	0.44%	0.18%	0.43%	0.51%	0.65%	0.47%	Negative correlation with MD income
<b>Miscellaneous Inorganics Total</b>			<b>0.56%</b>		<b>0.37%</b>	<b>0.52%</b>	<b>0.53%</b>	<b>0.21%</b>	<b>0.50%</b>	<b>0.75%</b>	<b>0.73%</b>	<b>0.61%</b>	<b>Negative correlation with income, except LD</b>
HHW	HHW	Oil Filters	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.01%	No discernible pattern
HHW	HHW	Antifreeze	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.01%	No discernible pattern
HHW	HHW	Wet-Cell Batteries	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Gasoline/Kerosene/Motor Oil/Diesel Fuel	0.01%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.03%	No discernible pattern
HHW	HHW	Latex Paints/Water-Based Adhesives/Glues	0.11%	NR_Other	0.25%	0.18%	0.01%	0.07%	0.08%	0.19%	0.07%	0.10%	Negative correlation with income, except HD
HHW	HHW	Oil-Based Paints/Solvent-Based Adhesives/Glues	0.06%	NR_Other	0.03%	0.06%	0.02%	0.01%	0.10%	0.15%	0.03%	0.02%	Negative correlation with MD income
HHW	HHW	Pesticides/Herbicides/Rodenticides	0.01%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	No discernible pattern
HHW	HHW	Dry-Cell Batteries	0.03%	NR_Other	0.02%	0.03%	0.02%	0.02%	0.05%	0.04%	0.03%	0.02%	No discernible pattern
HHW	HHW	Fluorescent Tubes	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Mercury-Laden Wastes	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Compressed Gas Cylinders, Fire Extinguishers	0.01%	NR_Other	0.01%	0.00%	0.06%	0.02%	0.01%	0.00%	0.01%	0.01%	Positive correlation with MD income
HHW	HHW	Home Medical Products	0.02%	NR_Other	0.02%	0.02%	0.01%	0.01%	0.02%	0.01%	0.02%	0.04%	No discernible pattern
HHW	HHW	Other Potentially Harmful Wastes	0.07%	NR_Other	0.04%	0.02%	0.03%	0.01%	0.12%	0.13%	0.10%	0.02%	Negative correlation with MD income
<b>HHW Total</b>			<b>0.33%</b>		<b>0.37%</b>	<b>0.31%</b>	<b>0.16%</b>	<b>0.14%</b>	<b>0.40%</b>	<b>0.53%</b>	<b>0.30%</b>	<b>0.27%</b>	<b>Positive correlation with income, except MD</b>
<b>Grand Total</b>			<b>100.00%</b>		<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	

**Table 1-19**  
**Housing Density and Income Details, Annual Waste Characterization Study, MGP (continued)**

**SUBTOTALS BY RECYCLING DESIGNATION**

Recycling Designation	% of Citywide MGP Stream	High Density/ High Income %	High Density/ Medium Income %	High Density/ Low Income %	Medium Density/ High Income %	Medium Density/ Medium Income %	Medium Density/ Low Income %	Low Density/ High Income %	Low Density/ Medium Income %
Designated Paper	2.46%	1.78%	2.53%	0.93%	2.51%	2.45%	3.12%	3.11%	3.31%
Designated Beverage Cartons	1.95%	1.62%	2.16%	1.42%	2.82%	2.50%	2.02%	1.80%	1.52%
Designated Plastic	12.88%	9.88%	12.07%	11.16%	8.98%	14.90%	13.36%	14.42%	13.89%
Designated Metal	32.55%	22.80%	33.86%	44.92%	27.37%	29.95%	34.66%	33.35%	34.21%
Designated Glass	32.51%	47.32%	28.88%	22.49%	45.02%	32.02%	27.94%	30.44%	30.08%
Designated MGP Subtotal	79.89%	81.63%	76.96%	80.00%	84.18%	79.36%	77.99%	80.00%	79.70%
Potentially Designated Plastic	6.89%	7.86%	7.86%	6.17%	6.12%	7.76%	6.75%	6.01%	6.51%
Potentially Designated Glass	0.42%	0.42%	0.41%	0.20%	0.25%	0.49%	0.42%	0.42%	0.73%
Potentially Designated Materials Subtotal	7.31%	8.28%	8.27%	6.37%	6.36%	8.25%	7.17%	6.43%	7.24%
Nondesignated Paper	0.80%	0.55%	0.72%	0.69%	0.57%	0.92%	1.00%	0.86%	0.85%
Nondesignated Plastic	3.80%	2.90%	4.18%	5.01%	2.71%	3.99%	3.77%	3.69%	3.78%
Other Nondesignated	5.74%	4.87%	7.34%	7.01%	3.67%	5.02%	6.94%	5.90%	5.12%
Nondesignated Materials Subtotal	10.33%	8.31%	12.24%	12.70%	6.94%	9.94%	11.72%	10.46%	9.75%

**AVERAGE WEEKLY GENERATION TONNAGE <sup>(1)</sup>**

Material Group	Citywide	High Density/ High Income	High Density/ Medium Income	High Density/ Low Income	Medium Density/ High Income	Medium Density/ Medium Income	Medium Density/ Low Income	Low Density/ High Income	Low Density/ Medium Income
Paper Total <sup>(2)</sup>	240.32	25.07	15.75	17.47	15.14	56.36	31.21	58.94	20.39
Plastic Total <sup>(2)</sup>	1,085.78	130.83	70.25	128.61	45.69	255.81	121.28	246.54	86.77
Glass Total <sup>(2)</sup>	1,516.80	302.64	85.32	130.64	116.16	312.02	143.98	315.49	110.55
Metal Total <sup>(3)</sup>	1,237.63	118.46	73.71	200.24	54.58	251.13	145.49	290.60	103.41
Organics Total	122.84	12.76	8.99	14.51	4.60	24.67	16.67	29.87	10.77
Appliance/Electronic Total	342.99	37.80	31.35	74.58	19.17	49.40	39.92	67.80	22.98
C & D Debris Total	18.98	1.69	3.56	5.67	0.38	1.88	2.64	2.29	0.88
Miscellaneous Inorganics Total	25.72	2.32	1.53	3.04	0.55	4.77	3.83	7.51	2.18
HHW Total	15.16	2.36	0.90	0.93	0.36	3.85	2.70	3.12	0.96
Grand Total	4,606.23	633.92	291.35	575.68	256.64	959.89	507.73	1,022.17	358.87

(1) Tonnage values calculated using DSNY average weekly curbside MGP tonnages over the period from September 2004 through September 2005. More detail on how and why tonnages from this period were used to estimate generation can be found in Section 2.2.6 in Volume 2.

(2) The paper, plastic, and glass tonnages include the weight of materials both designated and non-designated for recycling.

(3) The metal tonnages do not include the weight of metals found within the appliance/electronic material group.

**Table 1-20  
Housing Density and Income Details, Annual Waste Characterization Study, Aggregated Recycling (Paper and MGP)**

Material Group	Material Subgroup	Material Category: Subcategory	% of Citywide		High Density/	High Density/	High Density/	Medium Density/	Medium Density/	Medium Density/	Low Density/	Low Density/	Possible Correlations with Housing Density and Income
			Recycling Stream	Recycling Subindicator	High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	
Paper	ONP	Newspaper	25.30%	R Paper	34.48%	25.97%	15.36%	28.02%	20.80%	17.39%	29.04%	19.62%	Positive correlation with income
Paper	OCC	Plain OCC/Kraft Paper	8.34%	R Paper	6.13%	7.88%	12.05%	6.10%	10.13%	12.34%	7.05%	6.37%	Negative correlation with income, except LD
Paper	Mixed Paper	High Grade Paper	1.93%	R Paper	1.97%	1.36%	1.82%	2.89%	2.68%	1.77%	1.33%	1.48%	Positive correlation with MD income
Paper	Mixed Paper	Mixed Low Grade Paper	19.40%	R Paper	22.76%	20.71%	9.09%	27.22%	18.79%	14.57%	21.12%	13.96%	Positive correlation with income
Paper	Mixed Paper	Phone Books/Paperbacks	2.99%	R Paper	2.93%	3.62%	2.00%	4.37%	4.28%	2.57%	1.92%	2.06%	Positive correlation with MD income
Paper	Mixed Paper	Paper Bags	0.24%	R Paper	0.35%	0.21%	0.04%	0.32%	0.37%	0.07%	0.18%	0.16%	Positive correlation with income, except MD
Paper	Bev Cartons	Polycoated Paper Containers	0.93%	R Bev Cartons	0.57%	0.93%	1.10%	0.92%	1.14%	1.16%	0.87%	0.94%	Negative correlation with income
Paper	Compostable Paper	Compostable/Soiled Paper/Waxed OCC/Kraft	0.94%	NR_Paper	0.22%	0.90%	0.84%	0.83%	1.49%	0.33%	1.40%	0.48%	Negative correlation with HI density
Paper	Compostable Paper	Single Use Paper Plates, Cups	0.04%	NR_Paper	0.02%	0.03%	0.02%	0.03%	0.06%	0.04%	0.03%	0.06%	No discernible pattern
Paper	Other Paper	Other Nonrecyclable Paper	0.61%	NR_Paper	0.52%	0.34%	1.03%	0.51%	0.81%	0.59%	0.47%	0.80%	Positive correlation with density, except MI
<b>Paper Total</b>			<b>60.70%</b>		<b>69.96%</b>	<b>61.95%</b>	<b>43.35%</b>	<b>71.22%</b>	<b>60.54%</b>	<b>50.83%</b>	<b>63.40%</b>	<b>45.94%</b>	<b>Positive correlation with income</b>
Plastic	PET Bottles	PET Bottles	2.61%	R Plastics	1.72%	1.98%	2.60%	1.51%	2.78%	3.53%	2.99%	4.08%	Negative correlation with income
Plastic	HDPE Bottles	HDPE Bottles: Natural	1.25%	R Plastics	0.51%	1.47%	2.01%	0.46%	1.80%	1.64%	1.01%	1.82%	Negative correlation with income, except MD
Plastic	HDPE Bottles	HDPE Bottles: Colored	1.30%	R Plastics	0.72%	1.25%	1.69%	0.65%	1.42%	1.65%	1.45%	1.95%	Negative correlation with income
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #1 PET	0.01%	PR_Plastics	0.00%	0.01%	0.01%	0.00%	0.02%	0.01%	0.01%	0.01%	No discernible pattern
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #2 HDPE	0.08%	PR_Plastics	0.05%	0.19%	0.14%	0.06%	0.08%	0.11%	0.07%	0.10%	Negative correlation with income, except HD
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #3 PVC	0.02%	PR_Plastics	0.02%	0.03%	0.01%	0.01%	0.01%	0.02%	0.02%	0.02%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #4 LDPE	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.02%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #5 PP	0.04%	PR_Plastics	0.01%	0.03%	0.04%	0.02%	0.04%	0.07%	0.04%	0.07%	Negative correlation with income and density
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #7 Other	0.08%	PR_Plastics	0.07%	0.13%	0.07%	0.05%	0.08%	0.11%	0.08%	0.12%	Negative correlation with income, except HD
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #3 PVC	0.00%	PR_Plastics	0.00%	0.01%	0.00%	0.00%	0.01%	0.01%	0.00%	0.01%	No discernible pattern
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #4 LDPE	0.00%	PR_Plastics	0.00%	0.01%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	No discernible pattern
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #5 PP	0.17%	PR_Plastics	0.17%	0.16%	0.20%	0.11%	0.17%	0.18%	0.15%	0.23%	Negative correlation with income, except HD
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #7 Other	0.03%	PR_Plastics	0.02%	0.02%	0.02%	0.02%	0.02%	0.04%	0.03%	0.09%	No discernible pattern
Plastic	Other Rigid Containers/Packaging	Soda Crates and Bottle Carriers	0.03%	PR_Plastics	0.01%	0.06%	0.11%	0.00%	0.02%	0.04%	0.02%	0.03%	Negative correlation with income
Plastic	Other Plastic Products	Other PVC	0.01%	NR_Plastics	0.00%	0.00%	0.01%	0.00%	0.01%	0.09%	0.01%	0.01%	Negative correlation with MD income
Plastic	Other Rigid Containers/Packaging	Rigid Polystyrene Containers and Packaging	0.12%	PR_Plastics	0.09%	0.10%	0.08%	0.08%	0.14%	0.10%	0.15%	0.21%	Negative correlation with density, except HI
Plastic	Other Rigid Containers/Packaging	Expanded Polystyrene Containers and Packaging	0.06%	PR_Plastics	0.04%	0.07%	0.06%	0.09%	0.07%	0.09%	0.07%	0.06%	No discernible pattern
Plastic	Other Rigid Containers/Packaging	Other Rigid Containers/Packaging	0.55%	PR_Plastics	0.41%	0.55%	0.65%	0.37%	0.70%	0.60%	0.48%	0.82%	Negative correlation with income, except MD
Plastic	Film	Plastic Bags	0.51%	PR_Plastics	0.43%	0.55%	0.38%	0.36%	0.54%	0.58%	0.58%	0.65%	Negative correlation with income, except HD
Plastic	Film	Other Film	1.66%	PR_Plastics	1.92%	1.77%	2.26%	1.16%	1.88%	1.99%	1.07%	1.56%	Positive correlation with density, except MI
Plastic	Other Plastic Products	Single Use Plastic Plates, Cups, Cutlery, Etc.	0.10%	NR_Plastics	0.05%	0.07%	0.08%	0.06%	0.13%	0.10%	0.10%	0.26%	Negative correlation with density
Plastic	Other Plastic Products	Other Plastics Materials	1.53%	NR_Plastics	0.91%	1.65%	3.12%	0.80%	1.58%	1.89%	1.36%	1.92%	Negative correlation with income
<b>Plastic Total</b>			<b>10.18%</b>		<b>7.15%</b>	<b>10.08%</b>	<b>13.55%</b>	<b>5.83%</b>	<b>11.50%</b>	<b>12.85%</b>	<b>9.70%</b>	<b>14.05%</b>	<b>Negative correlation with income</b>
Glass	Container Glass	Clear Container Glass	3.26%	R Glass	2.20%	2.84%	2.33%	2.38%	2.81%	4.51%	4.21%	5.67%	Negative correlation with income, except HD
Glass	Container Glass	Green Container Glass	1.65%	R Glass	3.21%	1.58%	0.54%	2.92%	0.92%	1.04%	1.29%	1.54%	Positive correlation with HD income
Glass	Container Glass	Brown Container Glass	0.79%	R Glass	0.70%	0.58%	0.47%	0.97%	0.73%	0.97%	0.90%	1.12%	Positive correlation with HD income
Glass	Mixed Cullet	Mixed Cullet	7.18%	R Glass	7.84%	6.16%	9.33%	6.79%	8.34%	7.57%	4.80%	8.47%	Positive correlation with density, except MI
Glass	Container Glass	Other Container Glass	0.07%	R Glass	0.05%	0.06%	0.04%	0.07%	0.07%	0.10%	0.08%	0.12%	Negative correlation with density
Glass	Other Glass	Other Glass	0.18%	PR_Glass	0.13%	0.17%	0.18%	0.07%	0.20%	0.21%	0.17%	0.44%	Negative correlation with income
<b>Glass Total</b>			<b>13.13%</b>		<b>14.13%</b>	<b>11.39%</b>	<b>12.89%</b>	<b>13.20%</b>	<b>13.07%</b>	<b>14.42%</b>	<b>11.46%</b>	<b>17.36%</b>	<b>Negative correlation with density, except HI</b>
Metal	Aluminum	Aluminum Cans	0.26%	R Metal	0.12%	0.16%	0.23%	0.14%	0.23%	0.30%	0.40%	0.50%	Negative correlation with income and density
Metal	Aluminum	Aluminum Foil/Containers	0.40%	R Metal	0.16%	0.34%	0.35%	0.26%	0.44%	0.61%	0.48%	0.66%	Negative correlation with income and density
Metal	Aluminum	Other Aluminum	0.15%	R Metal	0.04%	0.18%	0.35%	0.10%	0.13%	0.13%	0.16%	0.30%	Negative correlation with income, except MD
Metal	Non-Ferrous	Other Non-Ferrous	0.32%	R Metal	0.18%	0.48%	0.52%	0.16%	0.25%	0.42%	0.39%	0.28%	Negative correlation with income, except LD
Metal	Ferrous	Tin Food Cans	2.90%	R Metal	1.21%	2.38%	4.07%	1.74%	3.47%	4.42%	2.82%	4.76%	Negative correlation with income and density
Metal	Ferrous	Empty Aerosol Cans	0.28%	R Metal	0.18%	0.27%	0.34%	0.12%	0.36%	0.38%	0.25%	0.36%	Negative correlation with income
Metal	Ferrous	Other Ferrous	5.12%	R Metal	2.99%	4.64%	10.02%	2.98%	4.62%	6.95%	5.07%	7.09%	Negative correlation with income
Metal	Other Metal	Mixed Metals	1.34%	R Metal	0.68%	1.45%	3.73%	0.74%	1.13%	1.30%	1.08%	2.36%	Negative correlation with income
<b>Metal Total</b>			<b>10.75%</b>		<b>5.55%</b>	<b>9.90%</b>	<b>19.61%</b>	<b>6.23%</b>	<b>10.64%</b>	<b>14.52%</b>	<b>10.64%</b>	<b>16.30%</b>	<b>Negative correlation with income</b>

**Table 1-20  
Housing Density and Income Details, Annual Waste Characterization Study, Aggregated Recycling (Paper and MGP) (continued)**

Material Group	Material Subgroup	Material Category: Subcategory	% of Citywide		High Density/	High Density/	High Density/	Medium Density/	Medium Density/	Medium Density/	Low Density/	Low Density/	Possible Correlations with Housing Density and Income
			Recycling Stream	Recycling Subindicator	High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	
Organics	Yard	Leaves and Grass	0.01%	NR_Other	0.00%	0.00%	0.01%	0.09%	0.01%	0.01%	0.01%	0.00%	No discernible pattern
Organics	Yard	Prunings	0.00%	NR_Other	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.02%	No discernible pattern
Organics	Wood	Stumps/Limbs	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Organics	Food	Food	0.80%	NR_Other	0.42%	0.71%	0.77%	0.49%	0.89%	1.09%	0.99%	1.08%	Negative correlation with income and density
Organics	Wood	Wood Furniture/Furniture Pieces	0.06%	NR_Other	0.06%	0.07%	0.12%	0.02%	0.05%	0.11%	0.04%	0.02%	Negative correlation with income, except LD
Organics	Wood	Non-C&D Untreated Wood	0.03%	NR_Other	0.01%	0.03%	0.06%	0.08%	0.04%	0.04%	0.01%	0.01%	Negative correlation with HD income
Organics	Textiles	Non-Clothing Textiles	0.09%	NR_Other	0.11%	0.11%	0.12%	0.02%	0.07%	0.07%	0.08%	0.11%	No discernible pattern
Organics	Textiles	Clothing Textiles	0.07%	NR_Other	0.05%	0.09%	0.07%	0.09%	0.05%	0.20%	0.08%	0.04%	Positive correlation with MI density
Organics	Textiles	Carpet/Upholstery	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Organics	Diapers/Hygiene	Disposable Diapers and Sanitary Products	0.05%	NR_Other	0.01%	0.08%	0.04%	0.04%	0.06%	0.08%	0.06%	0.06%	Negative correlation with density, except MI
Organics	Misc. Organic	Animal By-Products	0.01%	NR_Other	0.02%	0.01%	0.01%	0.01%	0.01%	0.00%	0.02%	0.00%	No discernible pattern
Organics	Misc. Organic	Rubber Products	0.06%	NR_Other	0.01%	0.08%	0.22%	0.02%	0.05%	0.04%	0.03%	0.13%	Negative correlation with income, except MD
Organics	Textiles	Shoes	0.05%	NR_Other	0.05%	0.05%	0.03%	0.01%	0.07%	0.07%	0.03%	0.07%	No discernible pattern
Organics	Textiles	Other Leather Products	0.00%	NR_Other	0.00%	0.01%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	No discernible pattern
Organics	Misc. Organic	Fines	0.29%	NR_Other	0.21%	0.27%	0.38%	0.24%	0.28%	0.32%	0.36%	0.25%	Negative correlation with income, except LD
Organics	Textiles	Upholstered or Other Organic-Type Furniture	0.04%	NR_Other	0.05%	0.01%	0.14%	0.00%	0.00%	0.14%	0.01%	0.13%	No discernible pattern
Organics	Misc. Organic	Miscellaneous Organics	0.05%	NR_Other	0.03%	0.03%	0.12%	0.03%	0.03%	0.17%	0.04%	0.05%	No discernible pattern
<b>Organics Total</b>			<b>1.63%</b>		<b>1.03%</b>	<b>1.56%</b>	<b>2.10%</b>	<b>1.15%</b>	<b>1.62%</b>	<b>2.35%</b>	<b>1.78%</b>	<b>1.99%</b>	<b>Negative correlation with income and density</b>
Appliance/Electronic	Ferrous	Appliances: Ferrous	2.20%	R Metal	1.19%	3.29%	5.61%	1.72%	1.50%	2.93%	1.76%	3.01%	Negative correlation with income, except MD
Appliance/Electronic	Non-Ferrous	Appliances: Non-Ferrous	0.06%	R Metal	0.04%	0.07%	0.07%	0.05%	0.02%	0.08%	0.09%	0.05%	Negative correlation with density, except MI
Appliance/Electronic	Household Appliance - Plastic	Appliances: Plastic	0.35%	NR_Other	0.23%	0.42%	0.79%	0.21%	0.31%	0.55%	0.26%	0.43%	Negative correlation with income
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Cell Phones	0.00%	NR_Other	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Other	0.12%	NR_Other	0.05%	0.17%	0.26%	0.06%	0.11%	0.13%	0.13%	0.12%	Negative correlation with income, except LD
Appliance/Electronic	Electronic/AV/Computer	Computer Monitors	0.03%	NR_Other	0.15%	0.03%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	Positive correlation with HD income
Appliance/Electronic	Electronic/AV/Computer	Televisions	0.00%	NR_Other	0.00%	0.01%	0.00%	0.00%	0.00%	0.01%	0.00%	0.01%	No discernible pattern
Appliance/Electronic	Electronic/AV/Computer	Other Computer Equipment	0.21%	NR_Other	0.14%	0.28%	0.53%	0.13%	0.14%	0.27%	0.24%	0.10%	Negative correlation with income, except LD
<b>Appliance/Electronic Total</b>			<b>2.98%</b>		<b>1.79%</b>	<b>4.28%</b>	<b>7.28%</b>	<b>2.18%</b>	<b>2.08%</b>	<b>3.96%</b>	<b>2.49%</b>	<b>3.71%</b>	<b>Negative correlation with income, except MD</b>
C & D Debris	Wood	Untreated Dimension Lumber, Pallets, Crates	0.01%	NR_Other	0.03%	0.01%	0.00%	0.00%	0.01%	0.01%	0.00%	0.03%	Positive correlation with HD income
C & D Debris	Wood	Treated/Contaminated Wood	0.06%	NR_Other	0.03%	0.03%	0.22%	0.02%	0.08%	0.13%	0.02%	0.01%	Negative correlation with MD income
C & D Debris	Inorganic C&D	Gypsum Scrap	0.01%	NR_Other	0.00%	0.02%	0.02%	0.00%	0.01%	0.00%	0.00%	0.00%	Negative correlation with density, except HI
C & D Debris	Inorganic C&D	Rock/Concrete/Bricks	0.03%	NR_Other	0.01%	0.02%	0.09%	0.00%	0.01%	0.10%	0.03%	0.03%	Negative correlation with income, except LD
C & D Debris	Inorganic C&D	Other Construction Debris	0.12%	NR_Other	0.08%	0.43%	0.48%	0.06%	0.04%	0.18%	0.03%	0.07%	Positive correlation with density, except MI
<b>C &amp; D Debris Total</b>			<b>0.24%</b>		<b>0.16%</b>	<b>0.51%</b>	<b>0.81%</b>	<b>0.09%</b>	<b>0.16%</b>	<b>0.42%</b>	<b>0.09%</b>	<b>0.14%</b>	<b>Negative correlation with income</b>
Miscellaneous Inorganics	Misc. Inorganic	Miscellaneous Inorganics	0.05%	NR_Other	0.04%	0.02%	0.05%	0.01%	0.03%	0.13%	0.05%	0.08%	Negative correlation with income, except HD
Miscellaneous Inorganics	Misc. Inorganic	Ceramics	0.19%	NR_Other	0.08%	0.19%	0.25%	0.06%	0.21%	0.27%	0.24%	0.26%	Negative correlation with income
<b>Miscellaneous Inorganics Total</b>			<b>0.24%</b>		<b>0.12%</b>	<b>0.22%</b>	<b>0.30%</b>	<b>0.07%</b>	<b>0.24%</b>	<b>0.40%</b>	<b>0.30%</b>	<b>0.34%</b>	<b>Negative correlation with income</b>
HHW	HHW	Oil Filters	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.01%	No discernible pattern
HHW	HHW	Antifreeze	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Wet-Cell Batteries	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Gasoline/Kerosene/Motor Oil/Diesel Fuel	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.02%	No discernible pattern
HHW	HHW	Latex Paints/Water-Based Adhesives/Glues	0.05%	NR_Other	0.07%	0.07%	0.01%	0.02%	0.03%	0.10%	0.06%	0.05%	Negative correlation with MD income
HHW	HHW	Oil-Based Paints/Solvent-Based Adhesives/Glues	0.02%	NR_Other	0.01%	0.02%	0.01%	0.00%	0.04%	0.08%	0.01%	0.01%	Negative correlation with MD income
HHW	HHW	Pesticides/Herbicides/Rodenticides	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	No discernible pattern
HHW	HHW	Dry-Cell Batteries	0.02%	NR_Other	0.01%	0.02%	0.01%	0.01%	0.02%	0.02%	0.01%	0.02%	No discernible pattern
HHW	HHW	Fluorescent Tubes	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Mercury-Laden Wastes	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Compressed Gas Cylinders, Fire Extinguishers	0.01%	NR_Other	0.00%	0.00%	0.04%	0.01%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Home Medical Products	0.01%	NR_Other	0.01%	0.01%	0.01%	0.00%	0.01%	0.00%	0.01%	0.03%	No discernible pattern
HHW	HHW	Other Potentially Harmful Wastes	0.03%	NR_Other	0.01%	0.01%	0.02%	0.00%	0.05%	0.06%	0.04%	0.01%	Negative correlation with MD income
<b>HHW Total</b>			<b>0.14%</b>		<b>0.11%</b>	<b>0.13%</b>	<b>0.11%</b>	<b>0.05%</b>	<b>0.16%</b>	<b>0.27%</b>	<b>0.15%</b>	<b>0.16%</b>	<b>Negative correlation with income, except HD</b>
<b>Grand Total</b>			<b>100.00%</b>		<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	

Table 1-20

Housing Density and Income Details, Annual Waste Characterization Study, Aggregated Recycling (Paper and MGP) (continued)

SUBTOTALS BY RECYCLING DESIGNATION

Recycling Designation	% of Citywide Recycling Stream	High Density/ High Income %	High Density/ Medium Income %	High Density/ Low Income %	Medium Density/ High Income %	Medium Density/ Medium Income %	Medium Density/ Low Income %	Low Density/ High Income %	Low Density/ Medium Income %
Designated Paper	58.19%	68.62%	59.74%	40.36%	68.93%	57.04%	48.70%	60.64%	43.66%
Designated Beverage Cartons	0.93%	0.57%	0.93%	1.10%	0.92%	1.14%	1.16%	0.87%	0.94%
Designated Plastic	5.17%	2.95%	4.69%	6.30%	2.62%	6.00%	6.83%	5.45%	7.85%
Designated Metal	13.01%	6.78%	13.26%	25.29%	7.99%	12.16%	17.52%	12.49%	19.37%
Designated Glass	12.96%	14.00%	11.22%	12.72%	13.13%	12.87%	14.21%	11.28%	16.92%
Designated MGP Subtotal	32.06%	24.30%	30.11%	45.42%	24.66%	32.18%	39.72%	30.09%	45.08%
Potentially Designated Plastic	3.37%	3.24%	3.65%	4.04%	2.34%	3.78%	3.95%	2.78%	4.01%
Potentially Designated Glass	0.18%	0.13%	0.17%	0.18%	0.07%	0.20%	0.21%	0.17%	0.44%
Potentially Designated Materials Subtotal	3.55%	3.37%	3.82%	4.21%	2.41%	3.97%	4.15%	2.95%	4.45%
Nondesignated Paper	1.59%	0.76%	1.27%	1.89%	1.37%	2.36%	0.96%	1.90%	1.34%
Nondesignated Plastic	1.64%	0.97%	1.73%	3.22%	0.87%	1.72%	2.07%	1.47%	2.18%
Other Nondesignated	2.98%	1.98%	3.33%	4.91%	1.76%	2.73%	4.38%	2.95%	3.29%
Nondesignated Materials Subtotal	6.21%	3.71%	6.33%	10.01%	4.00%	6.81%	7.42%	6.32%	6.81%
Designated for Recycling Total	90.25%	92.92%	89.85%	85.77%	93.59%	89.21%	88.43%	90.73%	88.74%
Potentially or Not Designated for Recycling Total	9.75%	7.08%	10.15%	14.23%	6.41%	10.79%	11.57%	9.27%	11.26%

AVERAGE WEEKLY GENERATION TONNAGE <sup>(1)</sup>

Material Group	Citywide	High Density/ High Income	High Density/ Medium Income	High Density/ Low Income	Medium Density/ High Income	Medium Density/ Medium Income	Medium Density/ Low Income	Low Density/ High Income	Low Density/ Medium Income
Paper Total <sup>(4)</sup>	7,041.65	1,504.73	464.43	443.41	631.32	1,444.36	511.48	1,749.68	293.03
Plastic Total <sup>(2)</sup>	1,180.58	153.90	75.54	138.62	51.66	274.49	129.28	267.65	89.61
Glass Total <sup>(2)</sup>	1,523.57	303.92	85.38	131.89	117.02	311.77	145.09	316.19	110.75
Metal Total <sup>(3)</sup>	1,247.28	119.44	74.22	200.57	55.20	253.76	146.10	293.70	104.00
Organics Total	189.23	22.05	11.70	21.48	10.15	38.61	23.62	49.01	12.71
Appliance/Electronic Total	345.45	38.60	32.06	74.43	19.29	49.59	39.80	68.68	23.69
C & D Debris Total	27.54	3.42	3.81	8.33	0.80	3.76	4.21	2.36	0.88
Miscellaneous Inorganics Total	27.89	2.48	1.61	3.09	0.64	5.70	3.99	8.18	2.20
HHW Total	16.66	2.38	0.94	1.10	0.40	3.93	2.75	4.23	1.01
Grand Total	11,599.86	2,150.92	749.69	1,022.92	886.49	2,385.97	1,006.31	2,759.68	637.88

(1) Tonnage values calculated using DSNY average weekly curbside recycling tonnages over the period from September 2004 through September 2005. More detail on how and why tonnages from this period were used to estimate generation can be found in Section 2.2.6 in Volume 2.

(2) The paper, plastic, and glass tonnages include the weight of materials both designated and non-designated for recycling.

(3) The metal tonnages do not include the weight of metals found within the appliance/electronic material group.

**Table 1-21  
Housing Density and Income Details, Annual Waste Characterization Study, Waste (Refuse and Recycling)**

Material Group	Material Subgroup	Material Category: Subcategory	% of Citywide Waste Stream	Recycling Subindicator	High Density/	High Density/	High Density/	Medium Density/	Medium Density/	Medium Density/	Low Density/	Low Density/	Possible Correlations with Housing Density and Income
					High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	
Paper	ONP	Newspaper	7.54%	R Paper	13.43%	8.52%	5.28%	10.74%	6.67%	5.20%	8.08%	5.10%	Positive correlation with income and density
Paper	OCC	Plain OCC/Kraft Paper	2.44%	R Paper	2.97%	2.28%	2.22%	2.49%	2.71%	2.60%	2.24%	1.83%	Positive correlation with income, except MD
Paper	Mixed Paper	High Grade Paper	0.90%	R Paper	1.65%	0.94%	0.72%	1.59%	0.88%	0.72%	0.70%	0.59%	Positive correlation with income
Paper	Mixed Paper	Mixed Low Grade Paper	10.33%	R Paper	17.95%	10.62%	7.78%	14.86%	9.22%	8.03%	10.29%	7.73%	Positive correlation with income
Paper	Mixed Paper	Phone Books/Paperbacks	0.94%	R Paper	1.42%	1.16%	0.57%	1.59%	1.13%	0.85%	0.73%	0.65%	Positive correlation with income
Paper	Mixed Paper	Paper Bags	0.62%	R Paper	1.22%	0.57%	0.61%	0.78%	0.58%	0.51%	0.43%	0.43%	Positive correlation with density, except MI
Paper	Bev Cartons	Polycoated Paper Containers	0.50%	R Bev Cartons	0.58%	0.61%	0.49%	0.63%	0.51%	0.53%	0.39%	0.35%	Positive correlation with MI density
Paper	Compostable Paper	Compostable/Soiled Paper/Waxed OCC/Kraft	5.64%	NR_Paper	6.28%	5.76%	5.37%	5.62%	5.98%	4.84%	5.69%	5.69%	Positive correlation with HD income
Paper	Compostable Paper	Single Use Paper Plates, Cups	0.43%	NR_Paper	0.51%	0.36%	0.26%	0.51%	0.34%	0.24%	0.68%	0.63%	Positive correlation with income
Paper	Other Paper	Other Nonrecyclable Paper	0.63%	NR_Paper	0.69%	0.67%	0.76%	0.81%	0.71%	0.58%	0.67%	0.64%	Positive correlation with income, except HD
<b>Paper Total</b>			<b>30.04%</b>		<b>46.69%</b>	<b>31.49%</b>	<b>24.06%</b>	<b>39.61%</b>	<b>28.74%</b>	<b>24.10%</b>	<b>29.91%</b>	<b>23.63%</b>	<b>Positive correlation with income</b>
Plastic	PET Bottles	PET Bottles	1.21%	R Plastics	1.22%	1.13%	1.34%	0.97%	1.19%	1.42%	1.07%	1.13%	Negative correlation with income, except HD
Plastic	HDPE Bottles	HDPE Bottles: Natural	0.46%	R Plastics	0.30%	0.48%	0.58%	0.23%	0.55%	0.47%	0.41%	0.38%	Negative correlation with HD income
Plastic	HDPE Bottles	HDPE Bottles: Colored	0.48%	R Plastics	0.44%	0.48%	0.53%	0.39%	0.48%	0.48%	0.49%	0.44%	Negative correlation with HD income
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #1 PET	0.01%	PR_Plastics	0.00%	0.01%	0.00%	0.00%	0.01%	0.00%	0.01%	0.00%	No discernible pattern
Plastic	Injection Molded Tubs	#1-#2 Tubs/Trays/Other Containers: #2 HDPE	0.05%	PR_Plastics	0.06%	0.10%	0.05%	0.04%	0.05%	0.06%	0.03%	0.04%	Positive correlation with density, except LI
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #3 PVC	0.01%	PR_Plastics	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #4 LDPE	0.01%	PR_Plastics	0.00%	0.00%	0.01%	0.00%	0.00%	0.01%	0.00%	0.01%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #5 PP	0.02%	PR_Plastics	0.01%	0.02%	0.02%	0.01%	0.02%	0.02%	0.02%	0.02%	No discernible pattern
Plastic	#3-#7 Bottles	#3 Through #7 Bottles: #7 Other	0.07%	PR_Plastics	0.06%	0.08%	0.07%	0.05%	0.06%	0.07%	0.09%	0.06%	Negative correlation with MD income
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #3 PVC	0.00%	PR_Plastics	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #4 LDPE	0.00%	PR_Plastics	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	Positive correlation with HD income
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #5 PP	0.17%	PR_Plastics	0.23%	0.19%	0.18%	0.23%	0.16%	0.13%	0.15%	0.17%	Positive correlation with income, except LD
Plastic	Injection Molded Tubs	#3 Through #7 Tubs: #7 Other	0.04%	PR_Plastics	0.06%	0.05%	0.04%	0.06%	0.03%	0.03%	0.03%	0.05%	Positive correlation with HD income
Plastic	Other Rigid Containers/Packaging	Soda Crates and Bottle Carriers	0.01%	PR_Plastics	0.00%	0.02%	0.03%	0.02%	0.01%	0.02%	0.00%	0.02%	Negative correlation with income, except MD
Plastic	Other Plastic Products	Other PVC	0.02%	NR_Plastics	0.00%	0.01%	0.03%	0.00%	0.01%	0.01%	0.03%	0.01%	Negative correlation with HD income
Plastic	Other Rigid Containers/Packaging	Rigid Polystyrene Containers and Packaging	0.24%	PR_Plastics	0.42%	0.25%	0.24%	0.30%	0.21%	0.18%	0.21%	0.20%	Positive correlation with income and density
Plastic	Other Rigid Containers/Packaging	Expanded Polystyrene Containers and Packaging	0.54%	PR_Plastics	0.38%	0.57%	0.64%	0.44%	0.57%	0.64%	0.46%	0.51%	Negative correlation with income
Plastic	Other Rigid Containers/Packaging	Other Rigid Containers/Packaging	0.75%	PR_Plastics	1.12%	0.83%	0.65%	0.92%	0.76%	0.55%	0.70%	0.72%	Positive correlation with density
Plastic	Film	Plastic Bags	2.73%	PR_Plastics	2.53%	3.42%	3.47%	2.19%	3.02%	2.87%	1.92%	2.25%	Positive correlation with density
Plastic	Film	Other Film	4.76%	PR_Plastics	5.13%	5.53%	5.64%	4.04%	4.91%	5.01%	3.57%	4.18%	Positive correlation with density
Plastic	Other Plastic Products	Single Use Plastic Plates, Cups, Cutlery, Etc.	0.51%	NR_Plastics	0.41%	0.52%	0.44%	0.40%	0.43%	0.61%	0.62%	0.66%	Negative correlation with income, except HD
Plastic	Other Plastic Products	Other Plastics Materials	1.85%	NR_Plastics	1.29%	2.05%	1.98%	1.37%	1.76%	1.91%	2.06%	2.07%	Negative correlation with income, except HD
<b>Plastic Total</b>			<b>13.94%</b>		<b>13.73%</b>	<b>15.76%</b>	<b>15.96%</b>	<b>11.69%</b>	<b>14.24%</b>	<b>14.51%</b>	<b>11.88%</b>	<b>12.95%</b>	<b>Positive correlation with density</b>
Glass	Container Glass	Clear Container Glass	1.57%	R Glass	1.22%	1.27%	1.74%	1.51%	1.43%	2.09%	1.50%	1.58%	Negative correlation with income, except MD
Glass	Container Glass	Green Container Glass	0.54%	R Glass	1.31%	0.48%	0.36%	1.22%	0.43%	0.37%	0.39%	0.35%	Positive correlation with income
Glass	Container Glass	Brown Container Glass	0.38%	R Glass	0.32%	0.27%	0.50%	0.52%	0.39%	0.43%	0.27%	0.33%	No discernible pattern
Glass	Mixed Cullet		1.78%	R Glass	2.76%	1.59%	1.55%	2.42%	2.15%	1.55%	1.23%	1.50%	Positive correlation with income, except LD
Glass	Container Glass	Other Container Glass	0.03%	R Glass	0.03%	0.02%	0.02%	0.04%	0.03%	0.04%	0.03%	0.03%	No discernible pattern
Glass	Other Glass	Other Glass	0.19%	PR_Glass	0.14%	0.19%	0.18%	0.15%	0.22%	0.23%	0.18%	0.25%	Negative correlation with density
<b>Glass Total</b>			<b>4.49%</b>		<b>5.77%</b>	<b>3.83%</b>	<b>4.35%</b>	<b>5.85%</b>	<b>4.65%</b>	<b>4.72%</b>	<b>3.62%</b>	<b>4.04%</b>	<b>No discernible pattern</b>
Metal	Aluminum	Aluminum Cans	0.21%	R Metal	0.21%	0.22%	0.27%	0.15%	0.18%	0.22%	0.20%	0.18%	Negative correlation with income, except LD
Metal	Aluminum	Aluminum Foil/Containers	0.54%	R Metal	0.50%	0.49%	0.55%	0.52%	0.55%	0.59%	0.52%	0.54%	Negative correlation with income, except HD
Metal	Aluminum	Other Aluminum	0.06%	R Metal	0.02%	0.05%	0.07%	0.06%	0.04%	0.06%	0.06%	0.11%	Negative correlation with income, except MD
Metal	Non-Ferrous	Other Non-Ferrous	0.17%	R Metal	0.13%	0.22%	0.16%	0.20%	0.14%	0.13%	0.20%	0.18%	Positive correlation with income, except HD
Metal	Ferrous	Tin Food Cans	1.20%	R Metal	0.72%	1.19%	1.70%	0.90%	1.28%	1.41%	0.94%	1.12%	Negative correlation with income
Metal	Ferrous	Empty Aerosol Cans	0.16%	R Metal	0.15%	0.12%	0.16%	0.12%	0.19%	0.15%	0.16%	0.16%	No discernible pattern
Metal	Ferrous	Other Ferrous	1.94%	R Metal	1.64%	1.65%	1.92%	1.78%	1.84%	1.85%	2.12%	2.85%	Negative correlation with income
Metal	Other Metal	Mixed Metals	0.65%	R Metal	0.68%	0.53%	0.75%	0.55%	0.55%	0.79%	0.57%	0.79%	Negative correlation with density, except HI
<b>Metal Total</b>			<b>4.92%</b>		<b>4.05%</b>	<b>4.48%</b>	<b>5.59%</b>	<b>4.28%</b>	<b>4.77%</b>	<b>5.22%</b>	<b>4.77%</b>	<b>5.92%</b>	<b>Negative correlation with income</b>

**Table 1-21  
Housing Density and Income Details, Annual Waste Characterization Study, Waste (Refuse and Recycling) (continued)**

Material Group	Material Subgroup	Material Category: Subcategory	% of Citywide Waste Stream	Recycling Subindicator	High Density/	High Density/	High Density/	Medium Density/	Medium Density/	Medium Density/	Low Density/	Low Density/	Possible Correlations with Housing Density and Income
					High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	Low Income %	High Income %	Medium Income %	
Organics	Yard	Leaves and Grass	3.29%	NR_Other	0.99%	2.12%	0.75%	2.02%	2.31%	2.15%	8.17%	6.29%	Negative correlation with density
Organics	Yard	Prunings	0.77%	NR_Other	0.46%	0.29%	0.12%	0.77%	0.48%	0.38%	2.05%	1.22%	Positive correlation with income
Organics	Wood	Stumps/Limbs	0.16%	NR_Other	0.01%	0.13%	0.02%	0.15%	0.12%	0.06%	0.35%	0.48%	Positive correlation with MD income
Organics	Food	Food	17.70%	NR_Other	11.20%	19.10%	23.01%	14.18%	20.12%	19.92%	14.00%	16.83%	Negative correlation with income, except MD
Organics	Wood	Wood Furniture/Furniture Pieces	1.18%	NR_Other	0.86%	0.91%	0.97%	0.84%	0.95%	1.85%	1.34%	1.53%	Negative correlation with income
Organics	Wood	Non-C&D Untreated Wood	0.19%	NR_Other	0.11%	0.13%	0.20%	0.29%	0.23%	0.26%	0.14%	0.11%	Negative correlation with HD income
Organics	Textiles	Non-Clothing Textiles	1.36%	NR_Other	1.04%	1.45%	1.61%	1.03%	1.52%	1.38%	1.17%	1.47%	Negative correlation with income, except MD
Organics	Textiles	Clothing Textiles	2.50%	NR_Other	1.31%	2.84%	3.78%	1.20%	2.46%	3.06%	1.95%	2.54%	Negative correlation with income
Organics	Textiles	Carpet/Upholstery	1.23%	NR_Other	1.29%	0.82%	0.95%	0.82%	1.06%	1.33%	1.70%	1.32%	Negative correlation with density, except HI
Organics	Diapers/Hygiene	Disposable Diapers and Sanitary Products	3.20%	NR_Other	2.37%	2.99%	3.95%	2.87%	3.33%	3.55%	2.69%	3.66%	Negative correlation with income
Organics	Misc. Organic	Animal By-Products	1.10%	NR_Other	1.15%	0.93%	0.63%	2.66%	1.29%	0.87%	1.08%	1.38%	Positive correlation with income, except LD
Organics	Misc. Organic	Rubber Products	0.28%	NR_Other	0.18%	0.24%	0.37%	0.20%	0.27%	0.31%	0.30%	0.24%	Negative correlation with income, except LD
Organics	Textiles	Shoes	0.60%	NR_Other	0.35%	0.64%	0.81%	0.41%	0.64%	0.80%	0.42%	0.62%	Negative correlation with income
Organics	Textiles	Other Leather Products	0.10%	NR_Other	0.03%	0.11%	0.11%	0.04%	0.15%	0.11%	0.08%	0.12%	Negative correlation with HI density
Organics	Misc. Organic	Fines	3.61%	NR_Other	2.91%	3.59%	4.36%	3.17%	3.40%	4.52%	2.98%	3.87%	Negative correlation with income
Organics	Textiles	Upholstered or Other Organic-Type Furniture	0.90%	NR_Other	0.46%	0.87%	1.26%	0.63%	0.98%	0.99%	0.86%	0.77%	Negative correlation with income, except LD
Organics	Misc. Organic	Miscellaneous Organics	0.72%	NR_Other	0.64%	0.50%	0.49%	1.03%	0.51%	0.92%	0.92%	1.05%	Positive correlation with HD income
<b>Organics Total</b>			<b>38.89%</b>		<b>25.38%</b>	<b>37.64%</b>	<b>43.40%</b>	<b>32.32%</b>	<b>39.83%</b>	<b>42.45%</b>	<b>40.22%</b>	<b>43.49%</b>	<b>Negative correlation with income</b>
Appliance/Electronic	Ferrous	Appliances: Ferrous	0.71%	R Metal	0.56%	0.67%	0.72%	0.66%	0.49%	0.97%	0.80%	0.82%	Negative correlation with income, except MD
Appliance/Electronic	Non-Ferrous	Appliances: Non-Ferrous	0.03%	R Metal	0.02%	0.04%	0.02%	0.05%	0.05%	0.04%	0.04%	0.03%	No discernible pattern
Appliance/Electronic	Household Appliance - Plastic	Appliances: Plastic	0.26%	NR_Other	0.28%	0.31%	0.25%	0.20%	0.23%	0.27%	0.31%	0.21%	Negative correlation with MD income
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Cell Phones	0.00%	NR_Other	0.00%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.01%	No discernible pattern
Appliance/Electronic	Electronic/AV/Computer	Audio/Visual Equipment: Other	0.25%	NR_Other	0.13%	0.18%	0.22%	0.15%	0.23%	0.43%	0.28%	0.22%	Negative correlation with income, except LD
Appliance/Electronic	Electronic/AV/Computer	Computer Monitors	0.07%	NR_Other	0.04%	0.02%	0.00%	0.15%	0.13%	0.14%	0.03%	0.07%	Positive correlation with HD income
Appliance/Electronic	Electronic/AV/Computer	Televisions	0.12%	NR_Other	0.00%	0.03%	0.06%	0.09%	0.21%	0.18%	0.14%	0.15%	Negative correlation with income, except MD
Appliance/Electronic	Electronic/AV/Computer	Other Computer Equipment	0.20%	NR_Other	0.14%	0.30%	0.25%	0.26%	0.27%	0.19%	0.13%	0.12%	Positive correlation with density, except HI
<b>Appliance/Electronic Total</b>			<b>1.65%</b>		<b>1.18%</b>	<b>1.55%</b>	<b>1.53%</b>	<b>1.56%</b>	<b>1.62%</b>	<b>2.23%</b>	<b>1.72%</b>	<b>1.64%</b>	<b>Negative correlation with density</b>
C & D Debris	Wood	Untreated Dimension Lumber, Pallets, Crates	0.62%	NR_Other	0.30%	0.46%	0.49%	0.46%	0.39%	0.43%	1.16%	1.18%	Negative correlation with income, except MD
C & D Debris	Wood	Treated/Contaminated Wood	1.62%	NR_Other	0.88%	1.53%	1.30%	1.28%	1.58%	1.87%	2.00%	2.51%	Negative correlation with density
C & D Debris	Inorganic C&D	Gypsum Scrap	0.90%	NR_Other	0.41%	0.86%	0.68%	0.35%	1.22%	1.20%	0.88%	1.31%	Negative correlation with density, except HI
C & D Debris	Inorganic C&D	Rock/Concrete/Bricks	0.66%	NR_Other	0.15%	0.24%	0.82%	0.44%	0.79%	0.94%	0.69%	0.75%	Negative correlation with income
C & D Debris	Inorganic C&D	Other Construction Debris	1.40%	NR_Other	0.85%	1.36%	1.05%	1.31%	1.30%	1.49%	2.02%	1.63%	Negative correlation with density, except MI
<b>C &amp; D Debris Total</b>			<b>5.20%</b>		<b>2.60%</b>	<b>4.45%</b>	<b>4.34%</b>	<b>3.83%</b>	<b>5.27%</b>	<b>5.93%</b>	<b>6.74%</b>	<b>7.38%</b>	<b>Negative correlation with density</b>
Miscellaneous Inorganics	Misc. Inorganic	Miscellaneous Inorganics	0.21%	NR_Other	0.21%	0.18%	0.09%	0.18%	0.19%	0.18%	0.35%	0.26%	Positive correlation with income, except MD
Miscellaneous Inorganics	Misc. Inorganic	Ceramics	0.42%	NR_Other	0.20%	0.34%	0.37%	0.49%	0.39%	0.42%	0.59%	0.45%	Negative correlation with density
<b>Miscellaneous Inorganics Total</b>			<b>0.63%</b>		<b>0.42%</b>	<b>0.52%</b>	<b>0.47%</b>	<b>0.66%</b>	<b>0.59%</b>	<b>0.61%</b>	<b>0.94%</b>	<b>0.72%</b>	<b>Negative correlation with density</b>
HHW	HHW	Oil Filters	0.00%	NR_Other	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Antifreeze	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Wet-Cell Batteries	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Gasoline/Kerosene/Motor Oil/Diesel Fuel	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	No discernible pattern
HHW	HHW	Latex Paints/Water-Based Adhesives/Glues	0.05%	NR_Other	0.05%	0.03%	0.02%	0.04%	0.09%	0.03%	0.05%	0.10%	Negative correlation with density, except HI
HHW	HHW	Oil-Based Paints/Solvent-Based Adhesives/Glues	0.02%	NR_Other	0.02%	0.01%	0.01%	0.03%	0.04%	0.03%	0.02%	0.03%	No discernible pattern
HHW	HHW	Pesticides/Herbicides/Rodenticides	0.01%	NR_Other	0.00%	0.01%	0.01%	0.00%	0.01%	0.00%	0.01%	0.00%	No discernible pattern
HHW	HHW	Dry-Cell Batteries	0.07%	NR_Other	0.04%	0.09%	0.08%	0.07%	0.07%	0.10%	0.05%	0.05%	Positive correlation with MI density
HHW	HHW	Fluorescent Tubes	0.01%	NR_Other	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Mercury-Laden Wastes	0.00%	NR_Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	No discernible pattern
HHW	HHW	Compressed Gas Cylinders, Fire Extinguishers	0.01%	NR_Other	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.01%	0.00%	Negative correlation with HD income
HHW	HHW	Home Medical Products	0.05%	NR_Other	0.05%	0.04%	0.11%	0.03%	0.05%	0.04%	0.02%	0.02%	Positive correlation with density, except MI
HHW	HHW	Other Potentially Harmful Wastes	0.03%	NR_Other	0.02%	0.02%	0.03%	0.02%	0.03%	0.03%	0.04%	0.03%	No discernible pattern
<b>HHW Total</b>			<b>0.25%</b>		<b>0.19%</b>	<b>0.28%</b>	<b>0.30%</b>	<b>0.20%</b>	<b>0.29%</b>	<b>0.23%</b>	<b>0.20%</b>	<b>0.24%</b>	<b>Negative correlation with income, except MD</b>
<b>Grand Total</b>			<b>100.00%</b>		<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	

Table 1-21

Housing Density and Income Details, Annual Waste Characterization Study, Waste (Refuse and Recycling) (continued)

SUBTOTALS BY RECYCLING DESIGNATION

Recycling Designation	% of Citywide Waste Stream	High Density/ High Income %	High Density/ Medium Income %	High Density/ Low Income %	Medium Density/ High Income %	Medium Density/ Medium Income %	Medium Density/ Low Income %	Low Density/ High Income %	Low Density/ Medium Income %
Designated Paper	22.78%	38.64%	24.09%	17.18%	32.04%	21.19%	17.90%	22.48%	16.32%
Designated Beverage Cartons	0.50%	0.58%	0.61%	0.49%	0.63%	0.51%	0.53%	0.39%	0.35%
Designated Plastic	2.14%	1.95%	2.09%	2.45%	1.59%	2.23%	2.36%	1.97%	1.95%
Designated Metal	5.67%	4.64%	5.18%	6.33%	4.99%	5.31%	6.23%	5.61%	6.77%
Designated Glass	4.30%	5.63%	3.64%	4.17%	5.70%	4.44%	4.49%	3.43%	3.79%
Designated MGP Subtotal	12.60%	12.80%	11.52%	13.44%	12.89%	12.48%	13.62%	11.40%	12.86%
Potentially Designated Plastic	9.42%	10.07%	11.09%	11.06%	8.33%	9.82%	9.61%	7.20%	8.26%
Potentially Designated Glass	0.19%	0.14%	0.19%	0.18%	0.15%	0.22%	0.23%	0.18%	0.25%
Potentially Designated Materials Subtotal	9.61%	10.20%	11.28%	11.23%	8.49%	10.04%	9.84%	7.39%	8.50%
Nondesignated Paper	6.76%	7.48%	6.78%	6.40%	6.94%	7.03%	5.67%	7.04%	6.96%
Nondesignated Plastic	2.38%	1.71%	2.58%	2.45%	1.77%	2.19%	2.54%	2.71%	2.74%
Other Nondesignated	45.87%	29.17%	43.73%	49.30%	37.86%	47.06%	50.43%	48.98%	52.61%
Nondesignated Materials Subtotal	55.01%	38.36%	53.10%	58.15%	46.58%	56.28%	58.64%	58.73%	62.32%
Designated for Recycling Total	35.38%	51.44%	35.61%	30.62%	44.94%	33.68%	31.52%	33.88%	29.18%
Potentially or Not Designated for Recycling Total	64.62%	48.56%	64.39%	69.38%	55.06%	66.32%	68.48%	66.12%	70.82%

AVERAGE WEEKLY GENERATION TONNAGE <sup>(1)</sup>

Material Group	Citywide	High Density/ High Income	High Density/ Medium Income	High Density/ Low Income	Medium Density/ High Income	Medium Density/ Medium Income	Medium Density/ Low Income	Low Density/ High Income	Low Density/ Medium Income
Paper Total <sup>(4)</sup>	19,402.41	3,651.10	1,452.25	2,680.61	1,162.67	3,332.66	2,156.95	3,909.63	1,056.53
Plastic Total <sup>(2)</sup>	9,004.02	1,073.33	727.00	1,777.85	343.15	1,651.49	1,298.73	1,553.62	578.86
Glass Total <sup>(2)</sup>	2,899.28	451.17	176.76	484.09	171.63	539.69	422.55	472.69	180.71
Metal Total <sup>(3)</sup>	3,179.93	316.92	206.40	622.62	125.50	552.91	467.29	623.73	264.56
Organics Total	25,123.31	1,984.22	1,735.89	4,834.74	948.56	4,619.23	3,799.05	5,257.37	1,944.25
Appliance/Electronic Total	1,065.72	92.23	71.65	170.34	45.87	188.21	199.24	225.06	73.12
C & D Debris Total	3,356.98	202.93	205.44	483.95	112.37	611.33	530.31	880.63	330.03
Miscellaneous Inorganics Total	405.06	32.48	23.98	52.18	19.43	67.89	54.40	122.70	32.00
HHW Total	159.38	15.11	12.82	33.51	5.83	33.71	20.87	26.72	10.82
Grand Total	64,596.10	7,819.49	4,612.18	11,139.89	2,935.02	11,597.12	8,949.40	13,072.14	4,470.87

(1) Tonnage values calculated using DSNY average weekly curbside waste tonnages over the period from September 2004 through September 2005. More detail on how and why tonnages from this period were used to estimate generation can be found in Section 2.2.6 in Volume 2.

(2) The paper, plastic, and glass tonnages include the weight of materials both designated and non-designated for recycling.

(3) The metal tonnages do not include the weight of metals found within the appliance/electronic material group.

### **1.8.3 Diversion Rates and Capture Rates**

The results of the PWCS and WCS also provide data on the amount of Waste that was diverted from disposal and how much of the material designated for Recycling was collected for Recycling.

The Diversion Rate indicates what portion of the total Waste stream is source-separated and collected for Recycling. Diversion Rates are calculated by dividing the amount of material collected for Recycling, both Paper and MGP, by the total amount of Waste.

Table 1-22 shows the estimate of the percentage of Waste diverted from disposal during the PWCS and WCS by Borough and by Density/Income Strata annually and by season.

**Table 1-22  
Curbside Diversion Rates, PWCS and WCS**

Borough	PWCS			WCS Annual		
	Paper	MGP	Total	Paper	MGP	Total
			Recycling			Recycling
Manhattan	13.95%	6.78%	20.74%	14.14%	7.11%	21.24%
Bronx	6.36%	6.64%	13.00%	6.60%	6.60%	13.19%
Brooklyn	9.18%	6.64%	15.81%	9.67%	6.91%	16.58%
Queens	10.33%	7.18%	17.50%	11.36%	7.54%	18.90%
Staten Island	11.47%	6.54%	18.01%	13.39%	7.52%	20.91%
<b>Total</b>	<b>10.30%</b>	<b>6.77%</b>	<b>17.08%</b>	<b>10.83%</b>	<b>7.13%</b>	<b>17.96%</b>

Density/Income Strata	WCS Annual		
	Paper	MGP	Total
			Recycling
High Density/High Income	19.40%	8.11%	27.51%
High Density/Medium Income	9.94%	6.32%	16.25%
High Density/Low Income	4.01%	5.17%	9.18%
Medium Density/High Income	21.46%	8.74%	30.20%
Medium Density/Medium Income	12.30%	8.28%	20.57%
Medium Density/Low Income	5.57%	5.67%	11.24%
Low Density/High Income	13.29%	7.82%	21.11%
Low Density/Medium Income	6.24%	8.03%	14.27%
<b>Total</b>	<b>10.83%</b>	<b>7.13%</b>	<b>17.96%</b>

Density/Income Strata	Fall 2004			Winter 2005			Spring 2005			Summer 2005		
	Paper	MGP	Total	Paper	MGP	Total	Paper	MGP	Total	Paper	MGP	Total
			Recycling			Recycling			Recycling			Recycling
High Density/High Income	20.82%	7.63%	28.46%	19.11%	8.31%	27.42%	19.13%	8.16%	27.29%	18.42%	8.36%	26.78%
High Density/Medium Income	10.28%	6.28%	16.55%	10.52%	6.48%	16.99%	9.60%	6.30%	15.90%	9.43%	6.22%	15.65%
High Density/Low Income	4.36%	5.32%	9.68%	3.95%	5.00%	8.95%	4.05%	5.08%	9.12%	3.71%	5.27%	8.98%
Medium Density/High Income	22.27%	8.47%	30.74%	22.47%	8.93%	31.39%	20.46%	8.87%	29.34%	20.69%	8.73%	29.42%
Medium Density/Medium Income	12.64%	7.94%	20.59%	13.00%	8.17%	21.17%	11.94%	8.38%	20.32%	11.64%	8.62%	20.27%
Medium Density/Low Income	5.80%	5.67%	11.46%	5.90%	5.37%	11.27%	5.44%	5.64%	11.08%	5.15%	6.00%	11.16%
Low Density/High Income	13.87%	7.39%	21.26%	15.64%	8.31%	23.95%	12.03%	7.66%	19.69%	12.23%	8.01%	20.25%
Low Density/Medium Income	6.40%	7.64%	14.04%	6.92%	8.59%	15.51%	6.02%	8.17%	14.19%	5.79%	7.80%	13.59%
<b>Total</b>	<b>11.38%</b>	<b>6.92%</b>	<b>18.30%</b>	<b>11.50%</b>	<b>7.18%</b>	<b>18.68%</b>	<b>10.40%</b>	<b>7.13%</b>	<b>17.53%</b>	<b>10.09%</b>	<b>7.30%</b>	<b>17.39%</b>

Table 1-23 shows the estimate of the percentage of material designated for Recycling that was collected for Recycling.

The **Capture Rate** measures the tonnages of Recycling setouts, as a fraction of all designated recyclables in the Waste stream. Capture Rates are calculated by dividing the amount of material collected for Recycling, both Paper and MGP, by the total amount of material designated for Recycling in the Waste stream.

Table 1-23 shows the estimate of the percentage of Recycling captured in the City's curbside Recycling program during the PWCS and WCS by Borough, and by Density/Income Strata annually and by season.

**Table 1-23  
Curbside Capture Rates, PWCS and WCS**

Borough	PWCS			WCS Annual		
	Paper	MGP	Total	Paper	MGP	Total
			Recycling			Recycling
Manhattan	53.51%	50.91%	52.63%	46.34%	54.96%	48.91%
Bronx	30.73%	50.08%	38.29%	34.70%	50.05%	40.98%
Brooklyn	41.96%	51.98%	45.65%	46.86%	53.64%	49.46%
Queens	53.62%	65.28%	57.86%	51.97%	62.40%	55.69%
Staten Island	61.84%	58.07%	60.42%	58.94%	65.52%	61.15%
<b>Total</b>	<b>47.99%</b>	<b>54.69%</b>	<b>50.44%</b>	<b>47.53%</b>	<b>56.58%</b>	<b>50.76%</b>

Density/Income Strata	WCS Annual		
	Paper	MGP	Total
			Recycling
High Density/High Income	50.21%	63.34%	53.48%
High Density/Medium Income	41.25%	54.83%	45.64%
High Density/Low Income	23.37%	38.45%	29.99%
Medium Density/High Income	66.97%	67.81%	67.21%
Medium Density/Medium Income	58.02%	66.30%	61.09%
Medium Density/Low Income	31.13%	41.65%	35.67%
Low Density/High Income	59.14%	68.56%	62.31%
Low Density/Medium Income	38.23%	62.44%	48.90%
<b>Total</b>	<b>47.53%</b>	<b>56.58%</b>	<b>50.76%</b>

Density/Income Strata	Fall 2004			Winter 2005			Spring 2005			Summer 2005		
	Paper	MGP	Total	Paper	MGP	Total	Paper	MGP	Total	Paper	MGP	Total
			Recycling			Recycling			Recycling			Recycling
High Density/High Income	52.42%	64.54%	55.20%	49.16%	61.76%	52.40%	50.00%	67.03%	54.11%	49.01%	60.35%	52.06%
High Density/Medium Income	43.24%	56.99%	47.59%	39.74%	53.70%	44.11%	43.93%	56.04%	48.04%	38.46%	52.78%	43.11%
High Density/Low Income	25.38%	40.10%	31.80%	23.10%	35.77%	28.80%	24.36%	38.72%	30.70%	20.80%	39.28%	28.73%
Medium Density/High Income	68.18%	68.24%	68.20%	68.62%	68.72%	68.65%	67.15%	69.91%	67.96%	63.91%	64.48%	64.08%
Medium Density/Medium Income	59.73%	72.49%	64.08%	57.21%	62.80%	59.25%	58.70%	67.45%	62.02%	56.35%	63.16%	59.06%
Medium Density/Low Income	35.37%	41.61%	38.20%	31.60%	41.50%	35.66%	28.91%	43.40%	34.83%	28.95%	40.20%	34.08%
Low Density/High Income	58.64%	68.10%	61.62%	59.49%	67.27%	61.98%	63.67%	73.16%	67.06%	55.13%	65.74%	58.90%
Low Density/Medium Income	37.66%	68.30%	49.83%	38.47%	66.27%	50.11%	40.34%	65.39%	51.76%	36.65%	53.24%	44.64%
<b>Total</b>	<b>49.43%</b>	<b>58.13%</b>	<b>52.39%</b>	<b>47.28%</b>	<b>55.04%</b>	<b>49.99%</b>	<b>48.41%</b>	<b>58.96%</b>	<b>52.21%</b>	<b>44.92%</b>	<b>54.35%</b>	<b>48.45%</b>

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