



CHICAGO DEPARTMENT OF ENVIRONMENT



Chicago Waste Diversion Study



Prepared By

CDM

February 15, 2010

Chicago Department of Environment

Chicago Waste Diversion Study

February 15, 2010

Final Report

Contents

Executive Summary	1
Methodology	1
Findings	2
Section 1 Introduction and Objectives	1-1
Section 2 Methodology	2-1
2.1 Data Collection.....	2-1
2.1.1 Current Diversion Rate	2-1
2.1.2 Combining Results.....	2-3
2.1.3 Comparative Data	2-3
2.2 Analytical Techniques.....	2-3
2.2.1 Calculating a Capture Rate	2-3
2.2.2 Estimating Maximum Capture Rates	2-3
Section 3 Detailed Study Results.....	3-1
3.1 Survey Results.....	3-1
3.2 Diversion Estimates.....	3-3
3.2.1 DSS-Collected Residential Sector.....	3-3
3.2.1.1 Current Capture Rates	3-3
3.2.1.2 Maximum Capture Rates.....	3-4
3.2.2 Privately-Collected Sector.....	3-7
3.2.2.1 Current Diversion Rate.....	3-7
3.2.2.2 Maximum Achievable Diversion Rate.....	3-8
3.2.3 Construction and Demolition (C&D) Sector	3-10
3.2.3.1 Current Diversion Rate.....	3-10
3.2.3.2 Maximum Achievable Diversion Rate.....	3-11
Section 4 Summary of Findings and Recommendations	4-1
4.1 Recommendations	4-2

Appendices

Appendix A Surveyed Companies

Appendix B Additional Companies Recommended for DSS Semi-Annual Recycling Report

Appendix C Waste Diversion Survey Form

Tables

Table ES-1. Current and Maximum Diversion Estimates, Overall and by Sector.....2

Table 2-1. Summary of Companies Contacted and Surveys Completed 2-2

Table 3-1. Results of Re-surveying City Respondents 3-1

Table 3-2. Results of Surveying New Companies 3-2

Table 3-3. Current DSS-Collected Residential Sector Capture Rates 3-4

Table 3-4. Low Density Residential Sector Capture Rates from Other Jurisdictions 3-5

Table 3-5. Maximum Achievable DSS-Collected Residential Sector Capture Rates..... 3-6

Table 3-6. DSS-Collected Residential Sector Capture Rates If All Wards have Blue Cart Collection..... 3-7

Table 3-7. Current Privately-Collected Sector Capture Rates, 3-7

Table 3-8. Privately-Collected Sector Capture Rates from Multiple Jurisdictions, 3-9

Table 3-9. Maximum Achievable Privately-Collected Sector Capture Rates..... 3-10

Table 3-10. Current C&D Sector Capture Rates..... 3-10

Table 3-11. C&D Sector Capture Rates from Other Jurisdictions..... 3-11

Table 3-12. Maximum Achievable C&D Sector Capture Rates 3-11

Table 4-1. Current and Maximum Diversion Estimates, Overall and by Sector 4-1

Table A-1. DSS Semi-Annual Recycling Report Respondents Re-surveyed A-1

Table A-2. New Companies Identified A-4

Table B-1. Additional Companies Recommended for the DSS Semi-Annual Recycling Reports B-1

Executive Summary

The Chicago Department of the Environment commissioned a team of consultants, led by CDM and consisting of Cascadia Consulting Group (Cascadia) and R.W. Beck, to document waste quantities and composition and the current level of recycling in Chicago. This report focuses on estimating Chicago's diversion rate, defined as the quantity of waste originating from within the City of Chicago and diverted from landfills.¹ The city's diversion rate is calculated using waste, recycling, and reuse quantities from three sectors: the low density residential sector, which is collected by the Department of Streets and Sanitation (DSS) and referred to as "DSS-collected residential," the industrial/commercial/institutional (ICI) and high density residential sector, called "privately-collected," and the construction and demolition ("C&D") sector, which is also collected by privately owned hauling companies.

Because the DSS-collected residential data was readily available, the research primarily focused on the privately-collected and C&D sectors. The study had five main objectives.

1. Confirm privately-collected waste and C&D recycling data reported to the City.
2. Identify in-city recyclers that do not currently report to the City and document quantities diverted.
3. Identify recyclers outside the city limits who receive and divert material generated inside the city limits.
4. Calculate new overall diversion and material capture rates.²
5. Estimate maximum diversion.

Methodology

In order to confirm privately-collected waste and C&D recycling data, the project team identified the largest recycling companies in each material category, using data reported by permitted facilities and haulers in the DSS Semi-Annual Recycling Reports. The team contacted these companies to confirm that all reported tons originated from inside Chicago.

The project team surveyed in-city recyclers that do not report to the city and recyclers from outside city limits, as well as big box stores³, to further refine the diversion rate

¹ A **diversion rate** is calculated as the proportion of total waste generated that is diverted from disposal. It is calculated by dividing the tons of all diverted materials by the tons of all diverted materials plus the tons of all disposed materials.

² A **capture rate** is defined as the proportion of a material (e.g., newspaper) generated that is diverted from disposal. It is calculated by dividing the tons of diverted material by the total tons of that material diverted plus total tons of that material that are disposed.

³ Many large retail stores backhaul their recyclable materials to a warehouse, distribution center, end-user, or MRF, and thus their diversion rates would not necessarily be captured through the survey of recyclers.

estimate. The team compiled all survey data and DSS-collected residential recycling estimates to calculate a revised diversion estimate and material-specific capture rates. The project team then compiled data from other jurisdictions in order to estimate maximum capture rates.

Findings

Overall, these surveys informed an adjustment of the 2007 amount recycled from approximately 4,100,000 tons to 3,500,000 tons. The discrepancy resulted from the following realizations. Companies that had reported recycling quantities in the DSS Semi-Annual Recycling Reports divert about 675,000 fewer tons from inside the city than were previously reported to the DSS. In-city recyclers that are not required to report divert about 58,000 tons, while recyclers located outside the city divert approximately 36,000 tons.

The new, revised diversion estimates for the DSS-collected residential sector, the privately-collected sector, and the C&D sector are presented in Table ES-1, below. The table lists the current disposal, current recycling, and estimated diversion rates as well as the potential maximum achievable diversion amounts and rates. The potential maximum diversion rates were calculated by applying maximum capture rates from other jurisdictions to Chicago's generation estimates. Data was collected on diversion rates in Cambridge (MA), New York City (NYC), Washington (D.C.), Maryland, Columbus (OH), King County (WA), Seattle (WA), and Los Angeles (CA). If Chicago reaches the level of success seen in other leading, large jurisdictions, the city's diversion rate would potentially increase from the current 45% to 57%.

Table ES-1. Current and Maximum Diversion Estimates, Overall and by Sector⁴

	Disposal (tons)⁵	Recycling (tons)	Diversion Rate
DSS-collected residential sector			
Current	1,023,459	83,453	8%
Maximum Achievable	630,611	476,300	43%
Privately-collected sector			
Current	1,541,250	372,528	19%
Maximum Achievable	1,119,369	794,409	42%
C&D sector			
Current	1,486,234	2,792,250	65%
Maximum Achievable	1,402,872	2,875,612	67%
Overall			
Current	4,050,943	3,248,231	45%
Maximum Achievable	3,152,852	4,146,322	57%

**Disposed and recycled tons in this table include all materials, not just those listed in other report tables.*

⁴ 2007 recycling and disposal data was used for this report as it was the most recent available.

⁵ The disposal estimates for the DSS-collected residential sector and the C&D sector differ from the Waste Characterization Study because sampling was conducted on incoming material that included recycling. The quantity of materials diverted from the waste stream at the facilities sampled was subtracted from the Waste Characterization Study estimates to obtain pure disposal estimates for this analysis. Additionally, the recycling estimate for dirt was moved from C&D sector recycling to disposal because this material is not actually recovered.

Section 1

Introduction and Objectives

In order to increase the city's diversion rate, the Chicago Department of the Environment commissioned a study to better understand the amount and types of material currently diverted from the city's waste stream. The consultant team, led by CDM and consisting of Cascadia Consulting Group (Cascadia) and R.W. Beck, was hired to assess recycling activity in the city. This project consisted of three main tasks: to develop municipal solid waste generation estimates; to characterize residential, industrial/commercial/institutional (ICI), and construction and demolition (C&D) waste; and to develop and implement a methodology to produce the best possible estimate of current diversion from landfills. The study focuses on the following three sectors: the low density residential sector, which is collected by the Department of Streets and Sanitation (DSS) and referred to as "DSS-collected residential," the industrial/commercial/institutional (ICI) and high density residential sector, called "privately-collected," and the construction and demolition ("C&D") sector.

This report summarizes the methodology and results from Task 3, the diversion study. Because the DSS-collected residential data was readily available, the research primarily focused on the privately-collected and C&D sectors. The study had five main objectives.

1. Confirm privately-collected waste and C&D recycling data reported to the City.
2. Identify in-city recyclers that do not currently report to the City and document quantities diverted.
3. Identify recyclers outside the city limits who receive and divert material generated inside the city limits.
4. Calculate new overall diversion and material capture rates.⁶
5. Estimate maximum diversion.

The main body of the report is organized into three sections: a description of the methodology used, study results, and a summary of findings and recommendations. Detailed appendices follow the main report featuring lists of the companies surveyed and an example of the survey form.

⁶ A **capture rate** is defined as the proportion of a material (e.g., newspaper) generated that is diverted from disposal. It is calculated by dividing the tons of diverted material by the total tons of that material diverted plus total tons of that material that are disposed. The **diversion rate** is defined as the proportion of total waste generated that is diverted from disposal. It is calculated by dividing the tons of all diverted materials by the tons of all diverted materials plus the tons of all disposed materials.

Section 2

Methodology

This section describes the methods used to gather and analyze the necessary data to calculate the overall diversion and material capture rates and estimate maximum diversion.

2.1 Data Collection

2.1.1 Current Diversion Rate

The project team conducted surveys in April and May of 2009 to produce a comprehensive estimate of current privately-collected and C&D diversion from landfills. The survey data were gathered using two distinct methods:

1. The first survey method confirmed privately-collected and C&D recycling data reported to the city by a subset of companies required to complete the DSS Semi-Annual Recycling Report.
2. The second survey methodology identified and documented diverted quantities from in-city recyclers that do not currently report to the city and from recyclers outside the city limits who receive and divert material generated inside the city limits.

These methods are described below.

1. Survey Recyclers Currently Reporting Recycling Tonnages to the City

Using the 2007 DSS Semi-Annual Recycling Reports, the project team identified the subset of survey respondents who, together, represented approximately 80% of the tonnage recycled within each material category (e.g., aluminum cans). The project team contacted this group of companies to confirm that their reported totals represent only Chicago-originated tons, in order to exclude recycling tonnages originating from outside city limits. In all, the project team surveyed 88 companies, who were responsible for about 83% of the tonnage reported in the DSS Semi-Annual Recycling Reports. Those surveys indicated that not all the material accepted by these companies came from within Chicago city limits, thus this method reduced the 2007 recycling estimate by approximately 675,000 tons.

2. Survey Non-reporting Recyclers

The second method for gathering diversion data was designed to quantify recyclables, if any, that are delivered to facilities located outside the city limits and, identify and survey businesses and organizations not currently reporting recycling tonnages in the DSS Semi-Annual Recycling Reports. The project team searched for companies that collect and process “typical” recyclable materials (e.g., newspaper, cardboard, plastic, glass, metal), as well as the following types of companies:

- Electronics recyclers

- Paper shredding companies
- Yard waste and organics composters
- Thrift stores/re-use stores
- C&D processors

A web search generated 255 potential recycling companies within and outside the city. To pare down this list, the project team limited the search to companies within 30 miles of the city center; this resulted in 191 companies to survey. The list was further reduced to 177 after removing companies that were included in the DSS Semi-Annual Recycling Reports. A total of 121 companies were omitted after initial calls were made. (Details of why companies were omitted can be found in Appendix A.) Surveys were sent out to the remaining 56 companies via electronic mail, fax or regular postal mail. Of the 56 companies surveyed, 12 completed and returned the survey. Of these, 5 were from companies located within the city limits, and 7 were located outside the city limits.

The project team also identified 70 “big box” stores (large retail establishments, usually part of a chain of stores nationwide) located within the city limits and made phone calls to determine which stores backhaul their recyclable materials to a warehouse, distribution center, end-user, or MRF. A total of 27 stores were omitted after initial calls were made because they were either non-responsive, non-cooperative, or they arrange to have their materials collected by a local hauler, in which case they were not surveyed in an effort to avoid double-counting of tonnages already reported to the city by the haulers. Surveys were sent to 43 store locations and 11 surveys were completed. A summary of survey efforts is shown in Table 2-1 below.

Table 2-1. Summary of Companies Contacted and Surveys Completed

	30-mile Radius	Big Box Stores	Total
Phone Calls Made	177	70	247
Number of Companies Omitted	121	27	148
Number of Surveys Sent	56	43	99
Number of Surveys Completed	12	11	23

Based on this set of surveys, the project team added approximately 58,000 tons from in-city recyclers that are not required to report to the city and about 36,000 tons from recyclers located outside the city. Because the survey did not achieve a 100 percent response rate, it is likely that there are more materials recycled than are included in this report, from either in-city recyclers or from recyclers located outside the city.

2.1.2 Combining Results

The results from the two surveys were combined with DSS-collected residential sector records and privately-collected sector⁷ survey data to produce a comprehensive list of recycling quantities for all three sectors. Using disposal data from the Waste Characterization Study, the project team calculated material-specific capture rates and overall diversion estimates for Chicago.

2.1.3 Comparative Data

Chicago's recycling material capture rates can be compared to those from other jurisdictions to assess the relative success of current diversion programs. The project team collected diversion rate data from communities across the country, including Cambridge (MA), New York City (NYC), Washington (D.C.), Maryland, Columbus (OH), King County (WA), Seattle (WA), and Los Angeles (CA). Tables in Section 3 present comparative capture rate data for the DSS-collected residential sector, the privately-collected sector, and the C&D sector.

2.2 Analytical Techniques

This section describes how the survey data was analyzed to produce material capture rates and used comparable capture rate data from other jurisdictions to calculate a maximum achievable diversion rate.

2.2.1 Calculating a Capture Rate

The capture rate for a specific material compares the amount of material being recycled to the total amount of that material that is either recycled or disposed in the garbage.

- Capture rate = total pounds of material recycled / (total pounds of material recycled + total pounds of material disposed in garbage)

For example, if 8,000 tons of newspaper are recycled by single-family residents and 2,000 tons are disposed, the capture rate would be $8,000 / (2,000 + 8,000) = 80\%$.

The capture rate, which only considers the recyclable portion of the waste stream, is generally the preferred way to measure recycling behavior because it is very sensitive to changes in recycling. It isolates changes in the recycling and disposal of an individual material from changes in the recycling and disposal of all other materials.

2.2.2 Estimating Maximum Capture Rates

To estimate the maximum achievable capture rate, the project team conducted an informal survey of several experts in the solid waste and recycling industry to collect available diversion studies conducted in U.S. communities. The team reviewed these studies to compile actual capture rates from other cities, counties, and states across the United States, as well as modeled potential capture rates from a study

⁷ Includes multi-family.

commissioned by the City of Los Angeles. Los Angeles wanted to estimate the potential capture rate that it could achieve by implementing a set of diversion programs for residents and businesses. These potential capture rates were developed using modeled estimates of their current diversion rate and expert opinion regarding the improvements that could be achieved by each type of program.

The maximum achievable capture rate for the DSS-collected residential sector was based on the average of the top three actual capture rates from other jurisdictions (excluding modeled rates from Los Angeles.) The maximum achievable capture rate for the privately-collected sector was based on the average of actual capture rates from Seattle and King County (WA) and the modeled rate for Los Angeles under additional voluntary recycling programs. The maximum achievable capture rate for the C&D sector was based on data from King County.

Section 3

Detailed Study Results

3.1 Survey Results

Not all the material accepted by recyclers and reported to the city in 2007 came from within Chicago city limits. Of the 4,091,128 tons of material included in the 2007 DSS Semi-Annual Recycling Reports, 3,415,819 tons originated within the City of Chicago. The largest discrepancies, by weight, were in C&D steel (299,245 tons), concrete (92,103 tons), and glass (62,428 tons). See Table 3-1 below, for details.

Table 3-1. Results of Re-surveying City Respondents

Material	Original Tonnage Estimates	Overall % In-city Tons	Revised Tonnage Estimates
Newspaper	16,268	87.0%	14,149
Magazines	1,857	82.9%	1,540
Corrugated Cardboard	124,406	89.3%	111,131
High Grade Paper	93,397	56.3%	52,565
Mixed Paper	33,772	91.0%	30,729
Single-stream	36,551	35.4%	12,927
Glass	85,120	26.7%	22,692
Plastic Containers	1,931	76.5%	1,478
Plastic Film	1,971	54.1%	1,066
Tin/Steel Containers	9,575	56.6%	5,418
Aluminum Cans	23,955	63.1%	15,115
Yard Waste	4,773	95.1%	4,542
Wood Pallets	4,505	37.9%	1,705
Fats, Oils, Grease	65,252	97.1%	63,334
Fluorescent Bulbs	251	47.7%	120
HID Lamps	38	74.3%	28
Concrete	895,887	89.7%	803,784
C&D Wood	33,431	87.8%	29,366
C&D Steel	1,533,457	80.5%	1,234,212
Asphalt	103,133	91.5%	94,409
Dirt	368,480	93.7%	345,199 ⁸
Brick	48,669	85.3%	41,522

⁸ During the analysis, the recycling estimate for dirt was moved from C&D sector recycling to disposal because this material is not actually recovered.

Material	Original Tonnage Estimates	Overall % In-city Tons	Revised Tonnage Estimates
Scrap Aluminum	63,811	67.6%	43,144
Copper	20,490	75.1%	15,378
Brass	11,443	36.2%	4,141
Stainless Steel	52,008	36.0%	18,734
Other Scrap Metal	440,855	97.9%	431,683
Other C&D	15,840	99.2%	15,709
	4,091,128		3,415,819

A further survey of recyclers not included in the DSS Semi-Annual Recycling Reports found that they recycle an additional 94,072 tons of material from within Chicago city limits. The major material categories reported by these recyclers were other ferrous scrap metal (19,500 tons), concrete (15,360 tons), single-stream recyclables (14,461 tons), and brick (13,500 tons). Over half of the “new” tons were recycled by processors located within the city limits. Approximately 38% were recycled by companies located outside Chicago. Table 3-2, below, presents detailed findings of Chicago tonnages recycled by various company types within and outside of Chicago.

Table 3-2. Results of Surveying New Companies

	Chicago				Outside City					Overall
	Back-haulers	Recyclers - Processors	Reuse Companies	Chicago Total	Junks	Recyclers - End Users	Recyclers - Processors	Reuse Companies	Outside City Total	Total
Corrugated Cardboard (tons)	4,194	294	1,175	5,663			850		850	6,513
High-grade Paper (tons)	1	1,100		1,101			20		20	1,121
Mixed Paper (tons)		1,800	89	1,889		2,400	100		2,500	4,389
Newspaper (tons)			2,051	2,051						2,051
#1 PET (tons)	-		81	81						81
Plastic Film (tons)	6			6						6
Asphalt (tons)		30		30						30
Asphalt Shingles (tons)		1,255		1,255						1,255
Brick (tons)		13,500		13,500						13,500
Concrete (tons)		15,360		15,360						15,360
Gypsum (tons)		75		75						75
Other C&D (tons)		752		752						752
Wood (tons)		8,450		8,450						8,450
Glass Containers (tons)			998	998						998

	Chicago				Outside City					Overall
	Back-haulers	Recyclers - Processors	Reuse Companies	Chicago Total	Junks	Recyclers - End Users	Recyclers - Processors	Reuse Companies	Outside City Total	Total
Aluminum Cans (tons)	-		64	64						64
Appliances/ White Goods (tons)		15		15						15
Lead-acid Batteries (tons)	26			26						26
Other Ferrous Scrap Metal (tons)					19,500				19,500	19,500
Scrap Aluminum (tons)		44	26	70						70
Steel		1,140	36	1,176						1,176
Food Waste			600	600						600
Wood Pallets		515	61	576						576
Yard Waste		400	66	466						466
Computer Monitors & TVs (CRTs)			5	5						5
Fluorescent Bulbs	4			4						4
Other Electronics			2	2						2
Textiles			2,200	2,200				325	325	2,525
Single-stream Recyclable			1,461	1,461			13,000		13,000	14,461
Total	4,232	44,730	8,915	57,877	19,500	2,400	13,970	325	36,195	94,072

3.2 Diversion Estimates

3.2.1 DSS-Collected Residential Sector

3.2.1.1 Current Capture Rates

Current capture rates of individual materials for those homes with garbage service through DSS, which include single-family households and residential buildings with up to four units are presented in Table 3-3. Because this study uses the 2007 data, recycling estimates include both material from the Blue Cart collection program (curbside recycling) and materials collected through the MRRF facilities as the MRRFs were operating at that time. The capture rate for tin/steel containers is unusually high, at 48%. This may be due to the fact that this material is easily sorted at the MRRFs. It should be noted that with the City's transition to the Blue Cart collection program, the separating activities at the MRRFs (with the exception of large bulky items) stopped in August 2008. Capture rates for other materials are relatively low.⁹

⁹ Data provided by Department of Streets and Sanitation.

Table 3-3. Current DSS-Collected Residential Sector Capture Rates^{10,11}

Class	Material	Disposal	Recycling	Capture Rate
<i>Curbside-collected Materials¹²</i>				
Paper	Newspaper	49,623	24,154	33%
Paper	High-grade Paper	9,496	2,617	22%
Paper	Magazines	14,519	5,384	27%
Paper	Corrugated Cardboard	50,176	10,681	18%
Paper	Mixed Paper	70,673	13,882	16%
Plastic	Plastic Containers	40,679	1,894	4%
Glass	Glass Containers	67,865	3,606	5%
Metal	Aluminum Cans	5,843	866	13%
Metal	Tin/Steel Containers	7,875	7,313	48%
Organics	Yard Waste	32,666	6,926	17%
<i>Other Recyclable Materials¹³</i>				
Plastic	Plastic Film	18,399	305	2%
Metal	Scrap Aluminum	5,401	149	3%
C&D Metal	Other Ferrous Scrap Metal	6,015	31	1%
Metal	Other Batteries	-	44	0%
Metal	Other Scrap Metal	1,270	3,709	74%
C&D	Concrete	3,784	901	19%
Other	Tires	1,948	872	31%
Other	Electronics	7,964	118	1%

3.2.1.2 Maximum Capture Rates

To estimate the maximum achievable capture rate, the project team compared actual capture rates from other cities, counties, and states across the United States. The project team also considered modeled potential capture rates from a study commissioned by Los Angeles. Los Angeles wanted to estimate the potential capture rate that it could achieve by implementing a set of voluntary and/or mandatory diversion programs for residents. These potential capture rates were developed using modeled estimates of their current diversion rate and expert opinion regarding the improvements that could be achieved by each type of program. The actual and modeled capture rates can be found in Table 3-4.

¹⁰ 2007 recycling and disposal data was used for this report as it was the most recent available.

¹¹ Screened yard waste and wood are excluded from the diversion estimates because they were delivered to landfills and used on-site as landfill cover or road base.

¹² Includes materials collected through the Blue Cart collection program and the MRRFs.

¹³ These materials were collected at the MRRFs and are not included in the Blue Cart collection program. .

The maximum reasonable capture rate for each material is calculated as the average of the top three capture rates by recycling system for that material. For example, the maximum reasonable rate for mixed paper is estimated to be 68%--the average of the actual capture rates for Seattle (75%), King County (73%), and Cambridge (56%). Because actual residential diversion rates were available for so many jurisdictions, the modeled rates from the City of Los Angeles were excluded from the averaging process. The maximum capture rate for mixed paper (61%) was also used for high grade paper because few actual diversion rates were available for high-grade paper.

Table 3-4. Low Density Residential Sector Capture Rates from Other Jurisdictions^{14,15}

Material	Chicago DSS	Range of Capture Rates for Non-Chicago Jurisdictions	Cambridge	NYC	Wash D.C.	Maryland	Columbus - Dual	Columbus - Split	King County	Seattle	LA SWIRP (voluntary)	LA SWIRP (mandatory)
Newspaper	33%	51%-94%	91%	60%	73%	51%	86%	91%	91%	94%	71%	87%
High-grade Paper	22%	7%-51%				51%			7%			
Magazines	27%	34%-67%	56%	34%	42%	51%	60%	67%				
Corrugated Cardboard	18%	51%-86%	53%	60%	52%	51%	79%	83%	76%	86%	72%	87%
Mixed Paper	16%	34%-75%	56%	34%	42%	51%	51%	53%	73%	75%	63%	83%
#1 PET	4%	22%-75%	75%	38%	40%	52%	58%	68%	22%	54%	85%	93%
#2 HDPE	4%	45%-75%	75%	49%	47%	52%	58%	68%	45%	54%	67%	85%
Other Plastic Containers	4%	43%-52%	43%			52%					36%	71%
Plastic Film	2%										35%	71%
Other Plastics	N/A										90%	96%
Glass Containers	5%	52%-84%	80%	54%	65%	52%	53%	62%	82%	84%		
Other Glass	N/A	54%		54%							89%	95%

¹⁴ **Chicago:** Capture rate for plastic containers used for #1 PET, #2 HDPE, and other plastic containers.

Cambridge: City of Cambridge, Analysis of Curbside and Drop-Off Recycling Programs, April 2004. Capture rate for plastic bottles used for #1 PET and #2 HDPE. Capture rate for metal containers & foil used for aluminum cans and tin/steel containers obtained.

NYC: 2004-05 NYC Residential and Street Basket Waste Characterization Study. Note: Capture rate for other mixed paper used for magazines and mixed paper. An average of the capture rates for HDPE Bottles: Natural and HDPE Bottles: Colored were used for #2 HDPE. Capture rate for glass total used for glass containers and other glass.

Washington DC: District of Columbia Department of Public Works, Residential Waste Sort, October - November 2007. Note: Capture rate for other recyclable paper was used for magazines and mixed paper. Capture rate for glass containers obtained from an average of clear bottles, green bottles, and brown bottles.

Maryland: Anne Arundel County, Maryland, Waste Composition Study, 2005. Note: Capture rate for paper used for all paper material types. Capture rate commingled containers was used for #1 PET, #2 HDPE, other plastic containers, glass containers, aluminum cans, and tin/steel containers.

Columbus, OH: Columbus, OH: May 2002 Final Report for SWACO. Note: Capture rate for all other recyclable paper was used for mixed paper. Capture rate for plastic bottles was used for #1 PET and #2 HDPE. Capture rate analyses were calculated during a pilot study in which some households were given a single split cart while others were given two carts, one for refuse and one for recyclables.

King County: Cascadia Consulting Group, Waste & Recycling databases.

Seattle: Cascadia Consulting Group, Waste & Recycling databases. Capture rate for yard waste includes food waste; capture rate for yard waste also includes a limited quantity of waste from multi-family households.

L.A. SWIRP: County of Los Angeles, Solid Waste Integrated Resource Planning Project, 2006. Note: Capture rate for mixed paper used for high-grade paper, magazines, and mixed paper.

¹⁵ The modeled rates from the City of Los Angeles were excluded from the ranges of capture rates since actual residential diversion rates were available for so many jurisdictions.

Material	Chicago DSS	Range of Capture Rates for Non-Chicago Jurisdictions	Cambridge	NYC	Wash D.C.	Maryland	Columbus - Dual	Columbus - Split	King County	Seattle	LA SWIRP (voluntary)	LA SWIRP (mandatory)
Aluminum Cans	13%	22%-73%	61%	22%	51%	52%	60%	73%	56%	56%	34%	70%
Tin/Steel Containers	48%	41%-61%	61%	43%	41%	52%	47%	60%	45%	47%	35%	71%
Food	N/A	28%								69%*	28%	49%
Yard Waste	17%	75%				75%					92%	98%

**It should be noted that the Seattle capture rate is for a combined food and yard waste category; therefore, it was excluded from the range of the yard waste and the food waste capture rates for non-Chicago jurisdictions.*

The maximum achievable capture rates for the DSS-collected residential sector are presented in Table 3-5. These capture rates range from 92% for newspaper to 58% for tin/steel containers. Chicago’s current capture rate for tin/steel containers is already nearly the maximum achievable. The largest recycling potential by ton is in glass containers and paper fibers, namely newspaper, mixed paper, and cardboard.

Table 3-5. Maximum Achievable DSS-Collected Residential Sector Capture Rates

Class	Material	Disposal	Recycling	Capture Rate
Paper	Newspaper	5,902	67,875	92%
Paper	High-grade Paper	4,724	7,389	61%
Paper	Magazines	7,762	12,141	61%
Paper	Corrugated Cardboard	10,549	50,308	83%
Paper	Mixed Paper	27,058	57,498	68%
Plastic	Plastic Containers	16,816	25,756	61%
Plastic	Plastic Film			N/A
Glass	Glass Containers	12,865	58,606	82%
Metal	Aluminum Cans	2,371	4,339	65%
Metal	Tin/Steel Containers	6,430	8,759	58%
Organics*	Yard and Food Waste	79,746	177,500	69%

**The Seattle capture rate was used to determine the maximum capture rate for Organics because it is the only one that includes both food and yard waste.*

Currently, roughly one-third of Chicago DSS-collected residences have curbside recycling through the Blue Cart collection program.¹⁶ An alternate way to estimate a reasonable (but not necessarily maximum achievable) capture rate is to model diversion for when the Blue Cart collection program is available in all wards. The assumption is that these new subscribers would recycle at the same rate as existing subscribers. Capture rates under this scenario are presented in Table 3-6. Potential capture rates for all of the listed commodities are lower than the estimated maximum

¹⁶ Data provided by DSS.

achievable capture rates shown in Table 3-5. In other words, if the new program customers have similar recycling behaviors to current program customers and the current diversion estimates are correct, it is likely that further steps will be needed to achieve the maximum capture rates.

Table 3-6. DSS-Collected Residential Sector Capture Rates If All Wards have Blue Cart Collection¹⁷

Class	Material	Capture Rate
Paper	Newspaper	45%
Paper	High-grade Paper	39%
Paper	Magazines	31%
Paper	Corrugated Cardboard	33%
Paper	Mixed Paper	29%
Plastic	Plastic Containers	21%
Glass	Glass Containers	26%
Metal	Aluminum Cans	22%
Metal	Tin/Steel Containers	17%

3.2.2 Privately-Collected Sector

3.2.2.1 Current Diversion Rate

Current capture rates of individual materials in the privately-collected sector are presented in Table 3-7. Current capture rates are high for aluminum cans (74%) and high-grade paper (64%). The lowest capture rates among standard recyclables are for food waste (0%), plastic film (3%), plastic containers (4%), and magazines (5%). Among other recyclables, fluorescent bulbs have the highest capture rate (41%). Although the capture rates for single-stream recyclables and fats, oils, and greases are unknown, the ICI sector recycles measurable quantities of these materials.

Table 3-7. Current Privately-Collected Sector Capture Rates^{18, 19}

Class	Material	Disposal	Recycling	Capture Rate
<i>Standard Recyclables</i>				
Paper	Newspaper	61,581	16,200	21%
Paper	High-grade Paper	30,345	53,686	64%
Paper	Magazines	26,463	1,540	5%
Paper	Corrugated Cardboard	209,129	117,644	36%

¹⁷ The 2008 Blue Cart collection data was used for this table because there was not sufficient data from 2007 to develop an accurate estimate of the Blue Cart Collection capture rates.

¹⁸ 2007 recycling and disposal data was used for this report as it was the most recent available.

¹⁹ It should be noted that recycling quantities do not include Waste to Profit Network numbers.

Class	Material	Disposal	Recycling	Capture Rate
Paper	Mixed Paper	89,265	35,118	28%
Plastic	Plastic Containers	34,819	1,559	4%
Plastic	Plastic Film	32,375	1,072	3%
Glass	Glass Containers	54,530	23,690	30%
Metal	Aluminum Cans	5,232	15,179	74%
Metal	Tin/Steel Containers	10,367	5,418	34%
Organics	Food Waste	327,474	600	<1%
Organics	Yard Waste	20,773	5,008	19%
Organics	Wood Pallets	18,839	2,281	11%
<i>Other Recyclables</i>				
Metal	Appliances/White Goods	-	15	N/A*
Metal	Lead-acid Batteries	-	26	N/A*
Metal	Other Batteries	-	0	N/A*
Other	Electronics	10,084	94	1%
Other	Fluorescent Bulbs	175	124	41%
Other	HID Lamps	-	28	N/A*
Other	Textiles	72,607	2,525	3%
Other	Fats, Oils, Grease	-	63,334	N/A*
Other	Single-stream Recyclables	-	27,388	N/A*

*A capture rate could not be calculated for several materials because their disposal tonnage is unknown.

3.2.2.2 Maximum Achievable Diversion Rate

The maximum reasonable diversion rate for each material is calculated as the average of the actual capture rates for that material in Seattle and King County and the projected capture rates for the City of Los Angeles if it were to implement an extensive set of voluntary recycling programs. The modeled rates from the City of Los Angeles (voluntary program) are included in the averaging process because actual diversion rates were available for so few jurisdictions. Privately-collected sector capture rates from Chicago, Seattle, and King County and projected capture rates for Los Angeles are presented in Table 3-8 below. Information available from Seattle, King County, and Los Angeles did not separate mixed paper from magazines and did not include capture rates for wood pallets.

Table 3-8. Privately-Collected Sector Capture Rates from Multiple Jurisdictions^{20, 21}

	Material	Chicago	Range of Capture Rates for Non-Chicago Jurisdictions	Seattle	King County	L.A. SWIRP (voluntary)	L.A. SWIRP (mandatory)
Paper	Newspaper	21%	72%-89%	91%	91%	72%	89%
	High-grade Paper	63%	67%-81%	67%	81%		
	Corrugated Cardboard	34%	76%-95%	76%	84%	86%	95%
	Mixed Paper & Magazines	24%	70%-91%	70%	74%	74%	91%
Plastic	#1 PET	4%	0%-82%	2%	0%	61%	82%
	#2 HDPE	4%	3%-81%	3%	40%	58%	81%
	Other Plastic Containers	4%	55%-79%			55%	79%
	Plastic Film	3%	72%-86%			72%	86%
Glass	Glass Containers	30%	2%-85%	2%	49%	56%	85%
Metal	Aluminum Cans	74%	20%-89%	22%	20%	75%	89%
	Tin/Steel Containers	34%	0%-80%	1%	0%	51%	80%
Organics	Food	0%	25%-53%			25%	53%
	Yard Waste	19%	93%-97%			93%	97%

The maximum achievable capture rates for the privately-collected sector are presented in Table 3-9. These capture rates range from 85% for newspaper to 17% for tin/steel containers. Chicago's current capture rate is over the maximum achievable for aluminum cans and tin/steel containers. Tons of mixed paper and magazines generated in Chicago were combined in this table. Existing data did not include a maximum achievable capture rate for wood pallets; however, the rate is assumed to be above Chicago's current capture rate of 11%. The largest recycling potential by ton is in fibers, namely corrugated cardboard (150,310 tons), food waste (82,019 tons), mixed paper (55,267 tons), and newspaper (49,655 tons).

²⁰ **Chicago:** Capture rates for #1 PET, #2 HDPE, and Other Plastic Containers are based on the capture rate for plastic containers.

King County: Cascadia Consulting Group, Waste & Recycling databases.

Seattle: Cascadia Consulting Group, Waste & Recycling databases.

L.A. SWIRP: County of Los Angeles, Solid Waste Integrated Resource Planning Project, 2006. Note: Capture rate for mixed paper used for high-grade paper, magazines, and mixed paper.

²¹ It should be noted that capture rates do not include Waste to Profit Network numbers.

Table 3-9. Maximum Achievable Privately-Collected Sector Capture Rates

Class	Material	Disposal	Recycling	Capture Rate
Paper	Newspaper	11,926	65,854	85%
Paper	High-grade Paper	21,848	62,182	74%
Paper	Corrugated Cardboard	58,819	267,954	82%
Paper	Mixed Paper and Magazines	41,652	110,734	73%
Plastic	Plastic Containers	23,079	13,298	37%
Plastic	Plastic Film	9,365	24,082	72%
Glass	Glass Containers	50,322	27,899	36%
Metal	Aluminum Cans	5,232	15,179	74%*
Metal	Tin/Steel Containers	10,367	5,418	34%*
Organics	Food Waste	246,056	82,019	25%
Organics	Yard Waste	1,805	23,976	93%

*The current capture rate for Chicago was higher than the maximum capture rates from comparable jurisdictions; therefore, the Chicago rate is used.

3.2.3 Construction and Demolition (C&D) Sector

3.2.3.1 Current Diversion Rate

Current capture rates of individual materials in waste generated by the C&D sector are presented in Table 3-10. Nearly all scrap aluminum and other scrap metal are currently recycled by the C&D sector.

Table 3-10. Current C&D Sector Capture Rates²²

Class	Material	Disposal	Recycling	Capture Rate
C&D Metal	Scrap Aluminum	71	43,213	>99%**
C&D Metal	Copper	N/A*	15,378	N/A*
C&D Metal	Brass	N/A*	4,141	N/A*
C&D Metal	Ferrous Scrap Metal	81,587	1,273,622	94%
C&D Metal	Other Scrap Metal	239	431,683	>99%**
C&D	Concrete	--**	819,144	>99%**
C&D	Wood	230,898	37,816	14%
C&D	Asphalt	--**	94,439	>99%**
C&D	Asphalt Shingles	47,500	1,255	3%

²² 2007 recycling and disposal data was used for this report as it was the most recent available.

Class	Material	Disposal	Recycling	Capture Rate
C&D	Brick	73,249	55,022	43%
C&D	Gypsum	171,335	75	<1%
C&D	Other C&D	21,218	16,461	44%

N/A: Data is not available

* A diversion rate could not be calculated for several materials because their disposal tonnage is unknown

**Due to the mean percentage rate and associated error ranges in the waste composition quantities, the project team was not able to calculate a more exact measurement.

3.2.3.2 Maximum Achievable Diversion Rate

Capture rates for waste from the C&D sector were available from only one other jurisdiction: King County (WA). As show in Table 3-11, Chicago’s capture rates are similar to King County’s rates for certain metals as well as concrete and asphalt.

Table 3-11. C&D Sector Capture Rates from Other Jurisdictions

Class	Material	Chicago	King County
C&D Metal	Scrap Aluminum	>99%	95%
C&D Metal	Ferrous Scrap Metal	94%	92%
C&D Metal	Other Scrap Metal	>99%	92%
C&D	Concrete and Asphalt	>99%	99%
C&D	Wood	14%	31%

The maximum achievable capture rates for the C&D sector are presented in Table 3-12. The maximum diversion rate for each material is based on the actual capture rate for that material in King County, except in the cases where Chicago’s current capture rate was higher.

Table 3-12. Maximum Achievable C&D Sector Capture Rates

Class	Material	Disposal	Recycling	Capture Rate
C&D Metal	Scrap Aluminum	71	43,213	>99%*
C&D Metal	Other Ferrous Scrap Metal	81,587	1,273,622	94%*
C&D Metal	Other Scrap Metal	239	431,683	>99%*
C&D	Concrete and Asphalt	9,623	952,715	>99%*
C&D	Wood	185,413	83,301	31%

*The current capture rate for Chicago was higher than the maximum capture rates from comparable jurisdictions; therefore, the Chicago rate is used.

Section 4

Summary of Findings and Recommendations

If Chicago were to achieve the maximum capture rates for the DSS-collected residential sector, the privately-collected sector, and the C&D sector, as described in the previous section, the city could increase its overall diversion rate to 57%. The majority of the increase would occur through changes in the DSS-collected residential sector (392,848 tons) and the privately-collected sector (421,881 tons). Based on estimates of capture rates that would result from expanding the Blue Cart collection program to all wards, it is likely that the city will need to do more to achieve the maximum capture rates than only expanding the current program. Diversion in the C&D sector is already near the estimated maximum achievable rate. Estimated current and maximum diversion rates are shown for each sector in Table 4-1.

Table 4-1. Current and Maximum Diversion Estimates, Overall and by Sector²³

	Disposal (tons)^{*24}	Recycling (tons)	Diversion Rate^{**}
DSS-collected residential sector			
Current	1,023,459	83,453	8%
Maximum Achievable	630,611	476,300	43%
Privately-collected sector			
Current	1,541,250	372,528	19%
Maximum Achievable	1,119,369	794,409	42%
C&D sector			
Current	1,486,234	2,792,250	65%
Maximum Achievable	1,402,872	2,875,612	67%
Overall			
Current	4,050,943	3,248,231	45%
Maximum Achievable	3,152,852	4,146,322	57%

**Disposed and recycled tons in this table include all materials, not just those listed in prior tables.*

***Materials without available maximum capture rates used current Chicago capture rates.*

²³ 2007 recycling and disposal data was used for this report as it was the most recent available.

²⁴ The disposal estimates for the DSS-collected residential sector and the C&D sector differ from the Waste Characterization Study because sampling was conducted on incoming material that included recycling. The quantity of materials diverted from the waste stream at the facilities sampled was subtracted from the Waste Characterization Study estimates to obtain pure disposal estimates for this analysis. Additionally, the recycling estimate for dirt was moved from C&D sector recycling to disposal because this material is not actually recovered.

4.1 Recommendations

In order to obtain a more comprehensive estimate of Chicago's diversion rate, the project team recommends the following changes to the DSS Semi-Annual Recycling Report.

- Ensure that out-of-city tons are not included in DSS Semi-Annual Recycling Reports by conducting follow-up calls to a subset of the respondents. Contact those respondents who, together, represent approximately 80% of the tonnage recycled within each material category (e.g., aluminum cans) to ask if their reported totals originated from inside Chicago.
- Consider changing the DSS Semi-Annual Recycling Report to an annual survey in an effort to increase participation by companies and organizations by requiring data be provided once per year instead of twice per year. This may also reduce DSS staff time by having to collect data and make follow-up phone calls to confirm and clarify data once per year instead of twice per year.
- Compare quantities reported across years to identify potential errors in reporting.
- Include surveys of Waste to Profit Network programs and incorporate the quantities into the diversion estimates.
- Expand the DSS Semi-Annual Recycling Report to include organizations that are not currently required to respond, such as electronics recyclers, paper shredding companies, yard waste and organics composters, thrift stores and reuse stores, C&D processors, and big box stores. Please refer to Table B-1 in Appendix B for a list of companies the project team recommends the city include in its future reporting efforts.
- Continue trying to contact companies in Table A-2 that have the survey status "Did Not Reach" to determine whether they should be included in the DSS Semi-Annual Recycling Report.
- Expand the DSS Semi-Annual Recycling Report to include recyclers within 30 miles of the city center who are likely to receive material from Chicago (Table B-1).

To increase Chicago's diversion rate, the project team would recommend taking the following steps.

DSS-collected Residential Sector Recommendations

- Expand the Blue Cart collection program to all wards.
- Provide carts for food and yard waste collection from residents throughout city.
- Conduct regular (e.g., monthly) bulky item collections.

- Target glass containers, newspaper, mixed paper, and cardboard in the DSS-collected residential sector.
- Research end markets and consider adding textiles to the curbside recycling program.
- Consider offering incentive programs to reward residents for recycling.

Privately-collected Sector Recommendations

- Target corrugated cardboard, food waste, mixed paper, and newspaper in the privately-collected sector.
- Increase recycling education, outreach, and technical assistance to businesses.
- Consider disposal bans and/or additional mandatory recycling requirements.
- Influence the cost of disposal through taxes, fines, fees, etc.
- Strengthen and enforce the following ordinances from Chapter 11-5 of the Chicago Municipal Code:
 - Section 021 - Establishment of an effective recycling program in high density, condominium and cooperative residential buildings;
 - Section 022 - Establishment of an effective recycling program in office establishments; and
 - Section 023 - Establishment of an effective recycling program in commercial establishments.

Each section has specific minimum criteria that must be met for the programs to be considered effective.

- Enforce recycling mandates as outlined in the Commercial Recycling section of the Streets & Sanitation webpage with pages specific to C&D, Office, Restaurants, and Retail.²⁵
- Research the possibility of coordinating a food-to-livestock program for industrial, commercial, and institutional facilities (schools, restaurants, grocery stores, etc.) that generate large amounts of pre or post-consumer food waste.
- Enforce the Plastic Bag and Film Plastic Recycling Ordinance (Chapter 7-30 of the Chicago Municipal Code) which requires most retail or wholesale stores²⁶

²⁵ http://egov.cityofchicago.org/city/webportal/portalDeptCategoryAction.do?BV_SessionID=@@@2021366590.1252622368@@@&BV_EngineID=cccdadeifilekicefe celldffhdffif.0&deptCategoryOID=-536891855&contentType=COC_EDITORIAL&topChannelName=SubAgency&entityName=Recycling+Chicago&deptMainCategoryOID=-536891855

operating within the City of Chicago to provide in-store recycling bins and manufacturers who supply bags to these stores to make arrangements for collection, transport, and recycling of plastic bags and film plastic. This ordinance is a new tool for the City to use to track diversion as it requires stores and manufacturers to report an estimate of the amount of plastic bags and other film plastic weight that is collected and transported for recycling. It was adopted in 2008 so the first calendar year to be reported will be 2009.

C&D Sector Recommendations

- For new building permits, require that space be allocated for recycling containers.
- Focus on clean wood to expand C&D sector diversion.
- Continue to monitor and enforce the city's comprehensive Construction or Demolition Site Waste Recycling ordinance (Section 11-4-1905 of the city's Municipal Code).²⁷ The ordinance requires that 50 percent of the C&D debris generated at a job site be recycled.
- Update current list of C&D recycling service providers on the Department of Environment's website to include all C&D debris recyclers that report to the city's Department of Streets and Sanitation via the Semi-Annual Recycling Report.

²⁶ Per the Code, "Store" shall mean a retail or wholesale establishment, other than a food service establishment, where twenty-five percent (25%) or more of gross sales include prescription or non-prescription medicines and/or any cooked or uncooked article of food, drink, confection or condiment used for or intended to be used for human consumption off the premises, is stored, sold, prepared, cooked or offered for sale at retail such as candy manufacturers, confectioneries, fish markets, fruit and vegetable markets, grocery stores, convenience stores, meat markets, nut stores, dressed poultry markets or retail bakeries, bakery outlets or any similar place and provides plastic carryout bags to consumers in which to place these products.

²⁷ http://egov.cityofchicago.org/city/webportal/portalContentItemAction.do?contentOID=536932617&contentType=COC_EDITORIAL&topChannelName=HomePage

Appendix A

Surveyed Companies

This appendix presents the lists of companies surveyed for the two data collection efforts. The first group (Table A-1) lists the companies surveyed in order to confirm tons reported in the DSS Semi-Annual Recycling Reports.

Table A-1. DSS Semi-Annual Recycling Report Respondents Re-surveyed

Company	Material
WASTE MANAGEMENT-HOOKER ST.	Newspaper
LOOP PAPER RECYCLING*	Newspaper
MID-AMERICA PAPER RECYCLING*	Newspaper
RECYCLING SERVICES*	Newspaper
ALLIED WASTE - LOOP TRANSFER	Newspaper
RECYCLING SERVICES*	Magazines
WASTE MANAGEMT-HOOKER ST.	Magazines
LOOP PAPER RECYCLING*	Magazines
MID-AMERICA PAPER RECYCLING*	Magazines
RECYCLING SERVICES*	Corrugated Cardboard
LOOP PAPER RECYCLING*	Corrugated Cardboard
WASTE MANAGEMT-HOOKER ST.	Corrugated Cardboard
JEWEL-OSCO STORES	Corrugated Cardboard
MID-AMERICA PAPER RECYCLING*	Corrugated Cardboard
HURON PAPER STOCK	Corrugated Cardboard
DOMINICK'S FOOD STORES	Corrugated Cardboard
ALLIED WASTE - SHRED ALL	Corrugated Cardboard
RECYCLING SERVICES*	High Grade Paper
CONTINENTAL PAPER GRADING CO*	High Grade Paper
MID-AMERICA PAPER RECYCLING*	High Grade Paper
ALLIED WASTE - SHRED ALL	Mixed Paper
HURON PAPER STOCK*	Mixed Paper
RECYCLING SERVICES*	Mixed Paper
WASTE MANAGEMT-HOOKER ST.	Mixed Paper
LOOP PAPER RECYCLING*	Mixed Paper
CONTAINER RECYCLING ALLIANCE*	Single-stream
GROOT/CROWN RECYCLING*	Single-stream
ARC/HILLSIDE DISPOSAL*	Single-stream
CONTAINER RECYCLING ALLIANCE*	Glass
ANTEK MADISON PLASTICS USA*	Plastic Containers
RECYCLING SERVICES*	Plastic Containers

Company	Material
WASTE MANAGEMENT-HOOKER ST.	Plastic Containers
LOOP PAPER RECYCLING*	Plastic Containers
ANTEK MADISON PLASTICS USA*	Plastic Film
N & H GROUP, LTD. *	Plastic Film
JEWEL-OSCO STORES*	Plastic Film
ACME REFINING*	Tin/Steel Containers
UNIVERSAL SCRAP METALS, INC*	Aluminum
J & R METALS*	Aluminum
ACME REFINING*	Aluminum
SERLIN IRON & METAL*	Aluminum
MAHZEL METALS*	Aluminum
CITY SCRAP METALS*	Aluminum
E-Z TREE RECYCLING*	Yard Waste
HEARTLAND RECYCLING CO.	Yard Waste
SEATON TRUCKING (Francisco) *	Wood Pallets
SEATON TRUCKING (Hoyne) *	Wood Pallets
KALUZNY BROTHERS	Fats, Oils, Grease
MAHONEY ENVIRONMENTAL*	Fats, Oils, Grease
EVERLIGHTS*	Fluorescent Bulbs
REVERE ELECTRIC	HID Lamps
EVERLIGHTS*	HID Lamps
VULCAN MATERIALS COMPANY*	Concrete
RELIABLE MATERIALS*	Concrete
LINDAHL BROTHERS*	Concrete
BRANDENBERG IND.	Concrete
RAVENSWOOD DISPOSAL*	C&D Wood
ALLIED WASTE - LOOP TRANSFER	C&D Wood
RECYCLING SYSTEMS*	C&D Wood
ALLIED WASTE - 64TH*	C&D Wood
GENERAL IRON INDUSTRIES (Clifton)*	C&D Steel
ACME REFINING*	C&D Steel
METAL MANAGEMENT MIDWEST (2500 S. PAULINA)*	C&D Steel
METAL MANAGEMENT MIDWEST (9331 S. EWING)*	C&D Steel
METAL MANAGEMENT MIDWEST (12701 S. DOTY AVE) *	C&D Steel
RELIABLE MATERIALS*	Asphalt
RELIABLE MATERIALS*	Dirt
ALLIED WASTE - LOOP TRANSFER	Dirt
ALLIED WASTE - 64 TH	Dirt

Company	Material
ALLIED WASTE - PLANET	Dirt
RAVENSWOOD DISPOSAL*	Brick
RECYCLING SYSTEMS*	Brick
WINDY CITY RECYCLING (D & P)	Brick
ROBINETTE DEMOLITION INC. *	Brick
MAHZEL METALS*	Scrap Aluminum
J. CRUZ CORE BUY	Scrap Aluminum
MIDWEST INDUSTRIAL METALS	Copper
SERLIN IRON & METAL*	Copper
UNITED SCRAP METAL	Copper
SERLIN IRON & METAL*	Brass
CRONIMET CORP.*	Stainless Steel
METAL MANAGEMENT MIDWEST (2500 S. PAULINA)*	Other Scrap Metal
J. CRUZ CORE BUY	Other Scrap Metal
ACTION IRON & METAL, INC.	Other Scrap Metal
ALLIED WASTE - LOOP TRANSFER	Other C&D
ALLIED WASTE – PLANET	Other C&D
ALLIED WASTE - CALUMET*	Other C&D
ALLIED WASTE - 64 TH	Other C&D

*Contacting these companies to confirm that all reported tons originated from inside Chicago resulted in revised recycling

Table A-2 presents the list of 247 companies identified for the recycling survey. Big Box stores are highlighted.²⁸

Based on the responses from the initial phone calls, companies were excluded from the survey list for the following reasons:

- Materials they receive are not generated within the city limits;
- The company does not track where the materials come from;
- The company was not interested in cooperating with the study;
- The company was not a recycler, processor, composter, or end-user;
- The company was contacted at least three times, with no response;
- The company was no longer in business or phone number was disconnected;

²⁸ Due to a low number of reporting big box stores, the big box stores that completed the survey are not identified in order to protect individual tonnage information.

- The company was a duplicate with another listing in the database; and
- The company only handles liquids.

Table A-2. New Companies Identified

Company Name	Address	City	Zip	Phone	Survey Status
<i>Companies Located Inside Chicago</i>					
59th Street Salvage & Scrap	351 W 59th St	Chicago	60621	773-288-5900	Phone Number Disconnected/Incorrect
A&R Recycling	333 S Iron St	Chicago	60608	773-254-3706	Sent Survey
A.M. Cozzi Metals	4015 S Ashland Ave	Chicago	60609	773-254-1490	Sent Survey
AA Pallet Inc.	900 W 49th St	Chicago	60609	773-536-3699	Sent Survey
AAA Alloys Scrap Iron & Metal	4630 W Armitage	Chicago	60639	773-237-6070	Phone Number Disconnected/Incorrect
Aargus Recycling	4848 S Hoyne Ave	Chicago	60609	773-376-2637	Did Not Reach
AK Metals	7807 W Bryn Mawr Ave	Chicago	60631	773-594-1201	Sent Survey
Albany Family and Thrift Store	3055 W 63rd St	Chicago	60629	773-476-8718	Sent Survey
Alco Salvage & Recycling	1012 S Fairfield Ave	Chicago	60612	773-638-5070	Phone Number Disconnected/Incorrect
Alfred Metals	2100 N Southport Ave	Chicago	60614	773-929-2223	Sent Survey
American Metals Company	5580 N Lynch Ave	Chicago	60630	773-594-7777	Already reports to the city
Appliance Recycle	1854 N Besly Ct	Chicago	60622	773-348-1471	Did Not Reach
Ashland Family and Thrift Store	5112 S Ashland Ave	Chicago	60609	773-737-3335	Sent Survey
Barnes and Noble	1130 N State St	Chicago	60610	312-280-8155	Hauler collects recyclables
Barnes and Noble	1441 W Webster Ave	Chicago	60614	773-871-3610	Hauler collects recyclables
Bed, Bath and Beyond	530 N State St	Chicago	60654	312-755-9890	Hauler collects recyclables
Bed, Bath and Beyond	555 W Roosevelt Rd	Chicago	60607	312-850-4657	Hauler collects recyclables
Bed, Bath and Beyond	1800 N Clybourn Ave	Chicago	60614	312-642-6596	Hauler collects recyclables
Bed, Bath and Beyond	2838 N Broadway	Chicago	60657	773-528-5055	Hauler collects recyclables
Best Buy	555 W Roosevelt Rd	Chicago	60607	312-733-6635	Did Not Reach
Best Buy	1000 W North Ave	Chicago	60622	312-988-4067	Did Not Reach
Best Buy	2100 N Elston Ave	Chicago	60614	773-486-0142	Did Not Reach
Best Buy	2650 N Clark St	Chicago	60614	773-388-2920	Did Not Reach
Best Buy	3262 W Belmont Ave	Chicago	60618	773-279-3799	Did Not Reach

Company Name	Address	City	Zip	Phone	Survey Status
Better Methods Paper LLC	118 N Clinton St	Chicago	60661	312-993-7520	Did Not Reach
Blackstone Bicycle Works	6100 S Blackstone	Chicago	60637	773-821-1351	Sent Survey
Borders	150 N State St	Chicago	60601	312-606-0750	Building takes care of recycling
Borders	500 W Madison St	Chicago	60661	312-627-8334	Building takes care of recycling
Borders	830 N Michigan Ave	Chicago	60611	312-573-0564	Building takes care of recycling
Borders	755 W North Ave	Chicago	60610	312-266-8060	Building takes care of recycling
Borders	2817 N Clark St	Chicago	60657	773-935-3909	Building takes care of recycling
Borders	4718 N Broadway Ave	Chicago	60640	773-334-7338	Building takes care of recycling
Borders	1539 E 53rd St	Chicago	60615	773-752-8663	Building takes care of recycling
Borders	6103 N Lincoln Ave	Chicago	60659	773-267-4822	Building takes care of recycling
Borders	2210 W 95th St	Chicago	60643	773-445-5471	Building takes care of recycling
Broadway Family and Thrift Store	4315 N Broadway Ave	Chicago	60613	773-348-1401	Sent Survey
Brown Elephant	1459 N Milwaukee	Chicago		773-252-8801	Phone Number Disconnected/Incorrect
Brown Elephant	3939 N Ashland	Chicago		773-244-2930	Phone Number Disconnected/Incorrect
Brown Elephant	5228 N Clark	Chicago		773-271-9382	Sent Survey
Brown Elephant	3641 N Halsted	Chicago		773-549-5943	Sent Survey
Brunt Brothers Transfer Inc	1220 E 75th St	Chicago	60619	773-955-3700	Sent Survey
B's Tire Hauling		Chicago	60617	773-734-4090	Did Not Reach
Business Essentials Service Team	5000 W Roosevelt Blvd, #1000	Chicago	60644	708-366-7398	Phone Number Disconnected/Incorrect
C&S Recycling	4009 W Taylor St	Chicago	60624	773-638-4700	Did Not Reach
Cartridge World	40 W Lake St	Chicago	60601	888-997-3345	Sent Survey
CellMark Recycling	300 S Wacker, Suite 2300	Chicago	60606	312-235-3143	Excluded
Central Ave Family and Thrift Store	2941 N Central Ave	Chicago	60634	773-283-1315	Sent Survey
Change Way	4726 N Beacon St	Chicago	60640	773-271-7665	Did Not Reach
Chicago Ave Family and Thrift Store	5713 W Chicago	Chicago	60651	773-287-9774	Sent Survey
Chicago Cartridge World	2634 N Clark	Chicago	60614	773-2RE-FILL	Sent Survey
Chicago Central Main Family and Thrift Store	509 North Union St	Chicago	60610	312-738-4360	Sent Survey

Company Name	Address	City	Zip	Phone	Survey Status
Chicago North Side Family and Thrift Store	2270 N Clyborun	Chicago	60614	773-477-1771	Sent Survey
Chicago Shred Authority	2416 S Archer Ave	Chicago	60616	312-842-2900	Survey Completed
Chicago Surplus Computer	3053 N Knox Ave	Chicago	60641	847-545-7357	Phone Number Disconnected/Incorrect
Costco	2746 N Clybourn Ave	Chicago	60614	773-360-2053	Hauler collects recyclables
Crate and Barrel	646 N Michigan Ave	Chicago	60611	312-787-5900	Did Not Reach
Crate and Barrel	1864 N Clybourn Ave	Chicago	60614	312-787-4775	Backhaul to distribution center, but don't track tons
Crate and Barrel	850 W North Ave	Chicago	60642	312-573-9800	Backhaul to distribution center, but don't track tons
Creative Reuse Warehouse	222 E 135th Pl	Chicago	60827	312-421-3640	Survey Completed
CRMS	3139 N Lincoln Ave	Chicago	60657	773-224-8340	Sent Survey
Devon Family and Thrift Store	2151 West Devon	Chicago	60659	773-764-0364	Sent Survey
Digital Workforce Education Society	2801 S Western	Chicago	60608	630-886-3808	Sent Survey
Free Geek	3411 W Diversey Ave	Chicago	60647	773-451-7130	Did Not Reach
Fullerton Family and Thrift Store	3837 W Fullerton Ave	Chicago	60647	773-276-1955	Sent Survey
GAIA Movement	8918 S Green	Chicago	60620	773-651-7870	Survey Completed
Great Lakes Electronics Corporation	5950 W 66th St	Chicago	60638	888-392-7831	Sent Survey
Home Depot	1300 S Clinton St	Chicago	60607	312-850-4836	Backhaul to distribution center, but don't track tons
Home Depot	1232 W North Ave	Chicago	60642	773-486-9200	Backhaul to distribution center, but don't track tons
Home Depot	2665 N Halsted St	Chicago	60642	773-486-9200	Backhaul to distribution center, but don't track tons
Home Depot	2570 N Elston Ave	Chicago	60647	773-289-4615	Backhaul to distribution center, but don't track tons
Home Depot	4555 S Western Blvd	Chicago	60609	773-247-4766	Backhaul to distribution center, but don't track tons
Home Depot	3500 N Kimball	Chicago	60618	773-463-6306	Backhaul to distribution center, but don't track tons

Company Name	Address	City	Zip	Phone	Survey Status
Home Depot	1919 N Cicero Ave	Chicago	60639	773-622-8860	Backhaul to distribution center, but don't track tons
Home Depot	6211 N Lincoln Ave	Chicago	60659	773-588-5828	Backhaul to distribution center, but don't track tons
Home Depot	200-232 W 87th St	Chicago	60620	773-602-1301	Backhaul to distribution center, but don't track tons
International Technology Corp	444 N Wells St	Chicago	60610	312-499-3500	Not a recycler
Kmart	1360 Ashland Ave North	Chicago	60622	773-292-9400	Backhaul to distribution center, but don't track tons
Kmart	7050 S Pulaski	Chicago	60629	773-767-2800	Backhaul to distribution center, but don't track tons
Kmart	3443 W Addison	Chicago	60618	773-478-1334	Backhaul to distribution center, but don't track tons
Kmart	5033 North Elston	Chicago	60630	773-685-1121	Backhaul to distribution center, but don't track tons
Kmart	5050 S Kedzie Ave	Chicago	60632	773-476-7887	Backhaul to distribution center, but don't track tons
Kohls	2140 N Elston Ave	Chicago	60614	773-342-9032	Backhaul to distribution center, but don't track tons
Lake Street Pallet & Recycling Inc	4600 W Armitage Ave	Chicago	60639	773-889-2266	Sent Survey
Liberty Tire Service	1323 W Cortland	Chicago	60614	773-871-6360	Did Not Reach
Lowe's	2630 N Narragansett Ave	Chicago	60639	773-413-5120	Hauler collects recyclables
Lowe's	8411 South Holland Rd	Chicago	60620	773-952-5000	Hauler collects recyclables
Lowe's	7971 S Cicero	Chicago	60652	773-306-7100	Hauler collects recyclables
Menards	2601 N Clybourn St	Chicago	60614	773-880-5954	Backhaul to distribution center, but don't track tons
Menards	4626 W Diversey	Chicago	60639	773-685-8677	Backhaul to distribution center, but don't track tons
Midwest Recycling Co	5851 W Dickens Ave	Chicago	60639	773-804-1444	Sent Survey
Montrose Family and Thrift Store	3301 W Montrose Ave	Chicago	60618	773-588-7343	Sent Survey
Nagle Family and Thrift Store	6434 W 63rd St	Chicago	60638	773-586-0178	Sent Survey
North Ave Super Family and Thrift Store	4141 W North Ave	Chicago	60641	773-342-2068	Sent Survey

Company Name	Address	City	Zip	Phone	Survey Status
R&M Recycling	2146 W Chicago Ave	Chicago	60622	773-354-4947	Phone Number Disconnected/Incorrect
Riverview Recycling Inc	2300 S Archer Ave	Chicago	60616	312-842-8414	Sent Survey
Sears	2 N State St	Chicago	60602	312-373-6000	Did Not Reach
Sears	1900 W Lawrence Ave	Chicago	60640	773-769-8030	Did Not Reach
Sears	6153 S Western Ave	Chicago	60636	773-918-1400	Did Not Reach
Sears	4730 W Irving Park Rd	Chicago	60641	773-202-2000	Did Not Reach
Sears	1334 E 79th St	Chicago	60619	773-933-1600	Did Not Reach
Sears	1601 N Harlem Ave	Chicago	60707	773-836-4100	Did Not Reach
Sears	7601 S Cicero Ave	Chicago	60652	773-284-4211	Did Not Reach
Secure Eco Shred	2742 W Montrose Ave	Chicago	60618	773-539-3819	Survey Completed
Stay Kleen Waste & Recycling	3838 W Madison St	Chicago	60624	773-533-2400	Phone Number Disconnected/Incorrect
Sustain Print Cartridges	1300 S Kostner Ave	Chicago	60623	773-277-3800	Sent Survey
Target	1154 S Clark St	Chicago	60605	312-212-6300	Sent Survey
Target	1940 W 33rd St	Chicago	60608	773-843-3250	Sent Survey
Target	2656 N Elston Ave	Chicago	60647	773-252-1994	Sent Survey
Target	2112 W Peterson Ave	Chicago	60659	773-761-3001	Sent Survey
Target	2939 W Addison St	Chicago	60618	773-604-7680	Sent Survey
Target	7100 S Cicero Ave	Chicago	60629	708-563-9050	Sent Survey
Target	11840 S Marshfield Ave	Chicago	60643	773-396-5506	Sent Survey
Target	6525 W Diversey Ave	Chicago	60707	773-804-3610	Sent Survey
Target	8560 S Cottage Grove Ave	Chicago	60619	773-371-8555	Sent Survey
Target	4433 S Pulaski Rd	Chicago	60632	773-579-2120	Sent Survey
Toys R Us	3300 N Western Ave	Chicago	60618	773-525-1690	Backhaul to distribution center, but don't track tons
Unique Recycling USA	1039 N la Salle Dr	Chicago	60620	312-951-5300	Sent Survey
Uptown Bikes	4653 N Broadway St	Chicago	60640	773-728-5212	Sent Survey
US Motor Recycling	4027 S Wells St	Chicago	60609	773-373-6868	Sent Survey
Walmart	4650 W North Ave	Chicago	60639	773-252-7465	Sent Survey
Walmart	7050 S Cicero Ave	Chicago	60638	708-496-0230	Sent Survey

Company Name	Address	City	Zip	Phone	Survey Status
Western Family and Thrift Store	2024 S Western	Chicago	60608	773-254-1127	Sent Survey
Whole Foods Market	30 W Huron St	Chicago	60654	312-932-9600	Backhaul to distribution center, but don't track tons
Whole Foods Market	3640 N Halsted St	Chicago	60613	773-472-0400	Backhaul to distribution center, but don't track tons
Whole Foods Market	3300 N Ashland Ave	Chicago	60657	773-244-4200	Backhaul to distribution center, but don't track tons
Whole Foods Market	1000 W North Ave	Chicago	60622	312-587-0648	Backhaul to distribution center, but don't track tons
Whole Foods Market	6020 N Cicero Ave	Chicago	60646	773-205-1100	Backhaul to distribution center, but don't track tons
Whole Foods Market	1101 S Canal St	Chicago	60607	312-435-4600	Backhaul to distribution center, but don't track tons
Wood Recycling Ltd	201 N Talman Ave	Chicago	60612	773-638-7676	Survey Completed
Working Bikes Cooperative	927 S Western Ave	Chicago	60612	312-421-5048	Sent Survey
<i>Companies Located Outside Chicago</i>					
1 800 Got Junk	9S412 S Frontage Rd	Willowbrook	60527	630-323-2238	Did Not Reach
Addison Recycling	607 W Winthrop Ave	Addison	60101	630-543-9868	Excluded
A+ North Ave Auto Parts and Wreckers	17 W 773 North Ave	Villa Park	60181	630-832-1936	Excluded
Able Iron & Metal		Naperville	60563	630-768-5829	Phone Number Disconnected/Incorrect
Ace Scrap	1010 67th St	Downers Grove	60516	630-719-1721	Phone Number Disconnected/Incorrect
Aci Enterprises Inc	2872 Vermont St	Blue Island	60406	708-388-1099	Excluded
Advanced Ground Care Products LLC	665 W Armory Dr	South Holland	60473	708-331-6100	Sent Survey
Advanced Scrap Metals	3602 S Harlem Ave	Riverside	60546	708-715-7663	Excluded
AE Computers, LLC	6221 W Roosevelt Rd	Berwyn	60402	708-775-7500	Excluded
Air Cycle Corp	2000 S 25th Ave	Broadview	60155	708-344-7860	Sent Survey
Ajax Recycling	466 Central Ave	Northfield	60093	847-501-4631	Phone Number Disconnected/Incorrect
All Metal Recycling	1925 Rose St	Franklin Park	60131	847-455-1925	Excluded
All Source Recycling	4092 Black Stone Dr	Naperville	60504	312-506-7883	Phone Number Disconnected/Incorrect
Amber Solvent Recycling, Inc.	200 W Laura Dr	Addison	60101	630-543-9000	Excluded

Company Name	Address	City	Zip	Phone	Survey Status
American Asphalt Surface Recycling Inc.	13301 Southwest Hwy	Orland Park	60462	708-448-9540	Excluded
American Recycling	1104 W Watling St	Arlington Heights	60004	847-726-1900	Excluded
American Scrap Metal Services, Inc.	3837 W 127th St	Alsip	60803	708-239-0101	Excluded
ARC International Corp	880 Mark St	Elk Grove Village	60007	630-412-8002	Excluded
Armor Recycling & Company	3333 E Lincoln Hwy	Lynwood	60411	708-753-100	Did Not Reach
Astor Recycling Co	724 Enterprise Dr	Oak Brook	60523	630-575-0675	Did Not Reach
Avalos Metal	9206 S Keating Ave	Oak Lawn	60453	708-229-1480	Did Not Reach
Beaver Oil Inc	6031 Lenzi Ave	Hodgkins	60525	708-354-2371	Did Not Reach
Beaver Shredding Inc.	7139 S 86th Ave	Justice	60458	708-458-8525	Survey Completed
Belmont Technology Remarketing	1401 Mark Street	Elk Grove Village	60007	847-750-9354	Excluded
Brafc0-Wheeling Recycling	200 Sumac Rd	Wheeling	60090	847-229-7700	Phone Number Disconnected/Incorrect
C&D Recycling	2300 Carlson Dr	Northbrook	60062	847-291-1222	Excluded
C&K Disposal	953 Naples Ln	Woodridge	60517	630-972-1885	Did Not Reach
Champion Recycling Corporation	1525 Chase Ave	Elk Grove Village	60007	847-290-0050	Already reports to the city
Chicago Botanic Garden	1000 Lake Cook Rd	Glencoe	60022	847-835-5440	Excluded
Cicero Iron Metal & Paper Inc	5901 W Ogden Ave	Cicero	60804	708-863-8601	Excluded
Cintas Document Management	2600 S 25th Ave #3	Broadview	60155	708-345-8392	Sent Survey
City Wide Disposal	5001 W 40th St	Cicero	60804	312-326-3920	Did Not Reach
Computer Recycling Services Inc	10349 Franklin Ave	Franklin Park	60131	847-678-4234	Excluded
Cook County Waste & Recycling	12807 Homan Ave	Blue Island	60406	708-489-5050	Excluded
Davin Industries	1881 Commerce Dr	Elk Grove Village	60007	847-593-8100	Excluded
Divine Owens Electronic Recycling	2230 Indianapolis Blvd	Whiting	46394	219-473-9247	Excluded
Docu-Shred Inc	125 Prairie Dr #2	Westmont	60559	630-986-5411	Survey Completed
Duffy Box and Recycling	2838 Vermont St	Blue Island	60406	708-239-0707	Survey Completed
E Recycling Solutions Inc	7320 S Madison St #800	Willowbrook	60527	630-655-5944	Excluded
Envirite of Illinois Inc	16435 Center Ave	Harvey	60426	708-596-7040	Sent Survey
Evanston Recycling	Oakton Ave	Evanston	60201	847-866-2940	Excluded
Excel Oil Service	400 Ashland Ave	River Forest	60305	708-366-0440	Sent Survey
EZ Recycling Corporation	8924 S Octavia Ave	Bridgeview	60455	708-430-4850	Phone Number Disconnected/Incorrect

Company Name	Address	City	Zip	Phone	Survey Status
Fortune Metal Midwest LLC	1650 Quincy Ave	Naperville	60540	630-778-7776	Excluded
FP International	17031 S Canal	Thornton	60476	708-877-1020	Phone Number Disconnected/Incorrect
G&M Metal	313 Beinoris Dr	Wood Dale	60191	630-616-1126	Excluded
Goodwill	1900 S Harlem Ave	North Riverside	60546	708-442-3606	Excluded
Goodwill	7400 W 159th St	Orland Park	60462	708-429-9030	Excluded
Greencycle Inc	400 Central Ave	Northfield	60093	847-441-6606	Excluded
Hughes Waste & Recycling	3921 Monroe St	Bellwood	60104	708-547-5543	Phone Number Disconnected/Incorrect
Independent Recycling Services	8S335 S Madison	Hinsdale	60521	630-230-0405	Did Not Reach
Industrial Metals Recycling Corporation	3810 Rose St	Schiller Park	60176	847-678-1400	Excluded
Junk Master Inc	62 Orland Square Dr	Orland Park	60462	708-873-1806	Phone Number Disconnected/Incorrect
Kormet Enterprises	5421 Howard St	Skokie	60077	847-675-3992	Not a recycler
Krinsky L & Sons Inc	407 Meadow Ridge Lane	Prospect Heights	60070	773-637-4547	Did Not Reach
KT Advancetec Inc	4851 W 115th St	Alsip	60803	708-388-8200	Excluded
Lake Iron and Metal	741 Hoffman St	Hammond	46327	219-931-5065	Excluded
Lenz Disposal & Recycling Inc	2327 Wayland Lane	Naperville	60565	630-753-0300	Did Not Reach
Leonard Levine Metals Corporation	1910 1st St	Highland Park	60035	847-681-0100	Not a recycler
Liberty Tire Recycling	1705 Cottage Grove Ave	Ford Heights	60411	708-757-6260	Did Not Reach
M&L Recycling		Wheeling	60090	847-967-9933	Excluded
M&R Construction and Related Services	3811 Lindenwood Ln	Glenview	60025	847-998-9278	Did Not Reach
Madison Paper Co.	13101 S. Pulaski Rd	Alsip	60803	708-389-8520	Survey Completed
Maine Scrap Metal LLC	1274 Rand Rd	Des Plaines	60016	847-824-3175	Excluded
Marble Metal Recycling	127 Marble St	Hammond	46327	219-931-7975	Excluded
Marr Recyclers	8650 Thomas Ave	Bridgeview	60455	708-430-4628	Excluded
Metal Recycling Systems Inc	3000 139th St	Blue Island	60406	708-389-9737	Excluded
Metro Recycling	13546 Western Ave	Blue Island	60406	708-388-1551	Sent Survey
Metro Waste Paper Recovery, Inc.	2515 Wild Timothy Rd	Naperville	60564	630-369-8882	Excluded
MICOMP Computer Recycling	2700 Carl Blvd	Elk Grove	60007	630-860-4607	Excluded
Mikes Metals	1412 W Chicago Ave	East Chicago	46312	219-397-9040	Excluded
MURCO Recycling Enterprises, Inc.	347 N Kensington	La Grange Park	60526	708-352-4111	Excluded

Company Name	Address	City	Zip	Phone	Survey Status
MVP Technologies	2201 W Crescent Ave	Park Ridge	60068	847-292-1440	Did Not Reach
Nandorf Inc.	4301 Midlothian Turnpike	Crestwood	60445	708-752-8162	Sent Survey
Nextend, LLC	1351 E Irving Park Rd	Itasca	60143	630-250-7200	Sent Survey
Norm Gordon & Associates	3911 Kiess Drive	Glenview	60025	847-564-7022	Did Not Reach
North Branch Environmental	7N458 Garden Ave	Roselle	60172	630-529-0240	Excluded
North Shore Ecology Center	964 Green Bay Rd	Winnetka	60093	847-501-3750	Excluded
Northern Heights Recycling Inc	417 W Wing St	Arlington Heights	60005	847-590-1102	Did Not Reach
Northwest Metals LLC	4606 Tod Ave	East Chicago	46312	219-398-5510	Excluded
O'Briend Recycling Corp	10062 Franklin Ave	Franklin Park	60131	847-233-0300	Survey Completed
Omnisource Chicago Division	425 W 152nd St	East Chicago	46312	219-398-4430	Already reports to the city
Pallet Management Logistics	800 W 5th Ave #110A	Naperville	60563	630-305-9360	Not a recycler
Perfect Mulch	13655 Main St	Lemont	60439	630-257-3640	Sent Survey
Phoenix Paper	115 W Lake Dr	Glendale Heights	60139	630-315-3830	Sent Survey
Pinnacle Waste Services Inc	5859 W Ogden Ave	Cicero	60804	708-863-1650	Phone Number Disconnected/Incorrect
Plastic Advanced Recycling Corp	7884 S Quincy St	Willowbrook	60527	630-655-6976	Excluded
Proshred Security	15557 S 70th Ct	Orland Park	60462	877-767-4733	Did Not Reach
Quincy Recycle Inc	12313 S Lombard Ln	Alsip	60803	708-388-2362	Excluded
Recovery Options Inc	1132 Waukegan Rd Ste 205	Glenview	60025	847-724-1500	Did Not Reach
Recycle Processes Inc	710 E Ogden Ave	Naperville	60563	630-527-9715	Not a recycler
Recycling Depot	905 N Ridge Ave #9	Lombard	60148	630-629-8760	Excluded
Recycling Solutions Inc	1850 Estes Ave	Elk Grove Village	60007	847-593-7150	Excluded
Reliable Document Solutions	743 N Edgewood Ave	Wood Dale	60191	630-350-8885	Did Not Reach
Resource Management	9999 Andersen Ave	Chicago Ridge	60415	708-425-8565	Survey Completed
Resource Transport Paper Recycling	287 N Baynard Rd	Addison	60101	630-458-0279	Did Not Reach
S&S Scrap Metal	912 E St Charles Rd #2	Lombard	60148	630-317-7831	Excluded
Share Your Soles	11701 S Central	Alsip	60803	708-448-4469	Excluded
Shred A Doc	4243 167th St	Country Club Hills	60478	708-922-3554	Excluded
Shred Co	478 Diens Dr	Wheeling	60090	847-229-1088	Excluded

Company Name	Address	City	Zip	Phone	Survey Status
Shred First Inc	530 E Algonquin Rd	Des Plaines	60016	847-390-9133	Excluded
Solid Waste Agency of Northern Cook County	2700 Patriot Blvd	Glenview	60026	847-724-0810	Sent Survey
Stag Iron and Metal Corporation	7820 W 60th Pl	Summit Argo	60501	708-563-2300	Excluded
Supply-Chain Services Inc	250 W North Ave	Lombard	60148	630-629-9344	Sent Survey
T&J Metals	4602 W 120th St	Alsip	60803	708-388-6191	Excluded
T&T Scrap Metals	2376 Overlook Ct	Naperville	60563	630-527-9178	Phone Number Disconnected/Incorrect
Thrift Recycling	430 Russell St	Hammond	46320	219-933-8040	Did Not Reach
Tough Recycling	21540 E Lincoln Hwy	Lynwood	60411	708-757-9007	Did Not Reach
Trash Can Recycling	2S134 Beaumont Ln	Lombard	60148	630-627-6798	Not a recycler
Unitec Recycling Corp Inc	320 S Cornell Ave	Villa Park	60181	630-279-5750	Sent Survey
U'S Again	1555 W Hawthorne Ln, Suite 4W	West Chicago	60185	630-293-1239	Survey Completed
Vim Recyclers Inc LP	465 Sunset Ct	Glen Ellyn	60137	630-858-3422	Sent Survey
Wallace Recycling Inc	1202 E Chicago Ave	East Chicago	46312	219-397-7650	Not a recycler
Waveland Recycling Inc	10525 Waveland Ave	Franklin Park	60131	947-233-0791	Phone Number Disconnected/Incorrect
West Melrose Metal Recycling	4719 W Lake St	Melrose Park	60160	708-344-8926	Did Not Reach
West Side Recycling	3316 W North Ave	Stone Park	60165	708-343-8885	Excluded
Wood Recyclers	17900 Harper St	Lansing	60438	708-889-9663	Excluded

Appendix B

Additional Companies Recommended for DSS Semi-Annual Recycling Report

Table B-1 presents the recommended additional companies to include in future DSS Semi-Annual Recycling Reports. Big box stores are highlighted.

Table B-1. Additional Companies Recommended for the DSS Semi-Annual Recycling Reports

Company Name	Location Address	City	Zip	Material
<i>Companies Located Inside Chicago</i>				
A&R Recycling	333 S Iron St	Chicago	60608	Paper, Metals, Plastic
AA Pallet Inc.	900 W 49th St	Chicago	60609	Pallets
AK Metals	7807 W Bryn Mawr Ave	Chicago	60631	Scrap Metal
Albany Family and Thrift Store	3055 W 63rd St	Chicago	60629	Textiles
Alfred Metals	2100 N Southport Ave	Chicago	60614	Scrap Metal
Ashland Family and Thrift Store	5112 S Ashland Ave	Chicago	60609	Textiles
Best Buy	555 W Roosevelt Rd	Chicago	60607	Electronics, OCC/Paper
Best Buy	1000 W North Ave	Chicago	60622	Electronics, OCC/Paper
Best Buy	2100 N Elston Ave	Chicago	60614	Electronics, OCC/Paper
Best Buy	2650 N Clark St	Chicago	60614	Electronics, OCC/Paper
Broadway Family and Thrift Store	4315 N Broadway Ave	Chicago	60613	Textiles
Brown Elephant	5228 N Clark	Chicago	60640	Textiles
Brown Elephant	3641 N Halsted	Chicago	60657	Textiles
Cartridge World	40 W Lake St	Chicago	60601	Printer Cartridges
Central Ave Family and Thrift Store	2941 N Central Ave	Chicago	60634	Textiles
Chicago Ave Family and Thrift Store	5713 W Chicago	Chicago	60651	Textiles
Chicago Cartridge World	2634 N Clark	Chicago	60614	Printer Cartridges

Company Name	Location Address	City	Zip	Material
Chicago Central Main Family and Thrift Store	509 North Union St	Chicago	60610	Textiles
Chicago North Side Family and Thrift Store	2270 N Clybourn	Chicago	60614	Textiles
Chicago Shred Authority	2416 S Archer Ave	Chicago	60616	Paper
Crate and Barrel	646 N Michigan Ave	Chicago	60611	OCC/Paper
Crate and Barrel	1864 N Clybourn Ave	Chicago	60614	OCC/Paper
Crate and Barrel	850 W North Ave	Chicago	60642	OCC/Paper
Creative Reuse Warehouse	222 E 135th Pl	Chicago	60827	Paper, Plastic, Glass, Metal, Organics, Scrap Metal
CRMS	3139 N Lincoln Ave	Chicago	60657	Scrap Metal
Devon Family and Thrift Store	2151 West Devon	Chicago	60659	Textiles
Digital Workforce Education Society	2801 S Western	Chicago	60608	Electronics
Fullerton Family and Thrift Store	3837 W Fullerton Ave	Chicago	60647	Textiles
GAIA Movement	8918 S Green	Chicago	60620	Textiles
Great Lakes Electronics Corporation	5950 W 66th St	Chicago	60638	Electronics
Home Depot	1300 S Clinton St	Chicago	60607	OCC, Plastic Film
Home Depot	1232 W North Ave	Chicago	60642	OCC, Plastic Film
Home Depot	2665 N Halsted St	Chicago	60642	OCC, Plastic Film
Home Depot	2570 N Elston Ave	Chicago	60647	OCC, Plastic Film
Home Depot	4555 S Western Blvd	Chicago	60609	OCC, Plastic Film
Home Depot	3500 N Kimball	Chicago	60618	OCC, Plastic Film
Home Depot	1919 N Cicero Ave	Chicago	60639	OCC, Plastic Film
Home Depot	6211 N Lincoln Ave	Chicago	60659	OCC, Plastic Film
Home Depot	200-232 W 87th St	Chicago	60620	OCC, Plastic Film

Company Name	Location Address	City	Zip	Material
Kmart	1360 Ashland Ave North	Chicago	60622	OCC, Plastics
Kmart	7050 S Pulaski	Chicago	60629	OCC, Plastics
Kmart	3443 W Addison	Chicago	60618	OCC, Plastics
Kmart	5033 North Elston	Chicago	60630	OCC, Plastics
Kmart	5050 S Kedzie Ave	Chicago	60632	OCC, Plastics
Kohls	2140 N Elston Ave	Chicago	60614	Plastics
Lake Street Pallet & Recycling Inc	4600 W Armitage Ave	Chicago	60639	Pallets
Menards	2601 N Clybourn St	Chicago	60614	OCC, plastic film, wood
Menards	4626 W Diversey	Chicago	60639	OCC, plastic film, wood
Midwest Recycling Co	5851 W Dickens Ave	Chicago	60639	Plastics
Montrose Family and Thrift Store	3301 W Montrose Ave	Chicago	60618	Textiles
Nagle Family and Thrift Store	6434 W 63rd St	Chicago	60638	Textiles
North Ave Super Family and Thrift Store	4141 W North Ave	Chicago	60641	Textiles
Recycle Tech Solutions - NEW	11235 South Cottage Grove Ave	Chicago	60628	Electronics, Printer Cartridges
Riverview Recycling Inc	2300 S Archer Ave	Chicago	60616	Scrap Metal
Secure Eco Shred	2742 W Montrose Ave	Chicago	60618	Paper
Target	1154 S Clark St	Chicago	60605	OCC, Paper, Plastics
Target	1940 W 33rd St	Chicago	60608	OCC, Paper, Plastics
Target	2656 N Elston Ave	Chicago	60647	OCC, Paper, Plastics
Target	2112 W Peterson Ave	Chicago	60659	OCC, Paper, Plastics
Target	2939 W Addison St	Chicago	60618	OCC, Paper, Plastics
Target	7100 S Cicero Ave	Chicago	60629	OCC, Paper, Plastics
Target	11840 S Marshfield Ave	Chicago	60643	OCC, Paper, Plastics
Target	6525 W Diversey Ave	Chicago	60707	OCC, Paper, Plastics

Company Name	Location Address	City	Zip	Material
Target	8560 S Cottage Grove Ave	Chicago	60619	OCC, Paper, Plastics
Target	4433 S Pulaski Rd	Chicago	60632	OCC, Paper, Plastics
Toys R Us	3300 N Western Ave	Chicago	60618	OCC
Unique Recycling USA	1039 N La Salle Dr	Chicago	60620	Paper, Plastic, Metal
Uptown Bikes	4653 N Broadway St	Chicago	60640	Bicycles
US Motor Recycling	4027 S Wells St	Chicago	60609	Scrap Metal
Walmart	4650 W North Ave	Chicago	60639	OCC/Paper, PET, HDPE, Plastic Film, Alum
Walmart	7050 S Cicero Ave	Chicago	60638	OCC/Paper, PET, HDPE, Plastic Film, Alum
Western Family and Thrift Store	2024 S Western	Chicago	60608	Textiles
Whole Foods Market	30 W Huron St	Chicago	60654	OCC, Plastic Film
Whole Foods Market	3640 N Halsted St	Chicago	60613	OCC, Plastic Film
Whole Foods Market	3300 N Ashland Ave	Chicago	60657	OCC, Plastic Film
Whole Foods Market	1000 W North Ave	Chicago	60622	OCC, Plastic Film
Whole Foods Market	6020 N Cicero Ave	Chicago	60646	OCC, Plastic Film
Whole Foods Market	1101 S Canal St	Chicago	60607	OCC, Plastic Film
Wood Recycling Ltd	201 N Talman Ave	Chicago	60612	Wood
Working Bikes Cooperative	927 S Western Ave	Chicago	60612	Bicycles
<i>Companies Located Outside Chicago</i>				
Advanced Ground Care Products LLC	665 W Armory Dr	South Holland	60473	Organics
Beaver Shredding Inc.	7139 S 86th Ave	Justice	60458	Paper
Cintas Document Management	2600 S 25th Ave #3	Broadview	60155	Paper
Docu-Shred Inc	125 Prairie Dr #2	Westmont	60559	Paper
Duffy Box and Recycling	2838 Vermont St	Blue Island	60406	OCC

Company Name	Location Address	City	Zip	Material
Envirite of Illinois Inc	16435 Center Ave	Harvey	60426	Scrap Metal
Madison Paper Co.	13101 S. Pulaski Rd	Alsip	60803	Paper
Nandorf Inc.	4301 Midlothian Turnpike	Crestwood	60445	Textiles
Nextend, LLC	1351 E Irving Park Rd	Itasca	60143	Electronics
O'Briend Recycling Corp	10062 Franklin Ave	Franklin Park	60131	Scrap Metal
Perfect Mulch	13655 Main St	Lemont	60439	Organics
Phoenix Paper	115 W Lake Dr	Glendale Heights	60139	Paper, Plastics, Metal
Resource Management	9999 Andersen Ave	Chicago Ridge	60415	Paper, Plastic, Alum, Glass
Supply-Chain Services Inc	250 W North Ave	Lombard	60148	Electronics
Unitec Recycling Corp Inc	320 S Cornell Ave	Villa Park	60181	Electronics
U'S Again	1555 W Hawthorne Ln, Suite 4W	West Chicago	60185	Textiles
Vim Recyclers Inc LP	465 Sunset Ct	Glen Ellyn	60137	OCC/Paper, Plastic, Glass

Appendix C

Waste Diversion Survey Form

R. W. Beck, Inc., an independent consulting firm, has been retained by the City of Chicago to assist in estimating the current waste diversion from landfills and other disposal facilities. We are gathering data to estimate quantities of materials generated **within the City of Chicago** that are being recycled or reused.

Because you are an important member of Chicago's recycling industry, we are asking you and others in the recycling business to help us determine how much waste generated within the City of Chicago is diverted from disposal by completing the enclosed survey.

For each material type your firm handled, please list the quantities for 2007 as well as the major supplier(s) and major customer(s). Note that your suppliers and customers may also report the quantities you list here; therefore we ask you to identify suppliers and customers **only to help us avoid counting the same materials more than once**. All information will be kept strictly confidential.

The recyclable materials data will be used for analyses only. Data from individual companies will not be published; site-specific information will be aggregated with data from other sites and remain confidential.

When complete, please forward this survey to:

R. W. Beck, Inc.
Attn: Mary Chamberlain
1380 Corporate Center Curve, Suite 305
St. Paul, MN 55121
Email: mchamberlain@rwbeck.com
Fax: (651) 994-8396, attention Mary
Phone: (651) 994-8415

Please indicate on the survey what type of recycling business best represents your company (i.e., are materials processed, composted, recycled, remanufactured or reused?). Definitions are provided below:

1. **PROCESSED** refers to baling, crushing, pelletizing, de-manufacturing, or otherwise changing the form of the recyclable material for sale to an intermediate market or end manufacturer.
2. **COMPOSTED** refers to the biological decomposition of organic materials such as leaves, grass clippings, brush, and food waste into a soil amendment.

3. **RECYCLED** refers to end-users who use recyclable materials as feedstock in the production of a new product. Recycling involves altering the physical form of an object or material and making a new object from the altered material.
4. **REMANUFACTURED** refers to remanufacturing products to be returned to the stream of commerce in their original form or function. This includes establishments that remanufacture computer and electronic appliances, used motor vehicle parts, tires (e.g., retreaders), wood (e.g., pallet rebuilders), and other materials such as toner cartridges.
5. **REUSED** refers to using an object or material again, for its original or similar purpose (e.g., retailers or thrift stores that sell used merchandise).

CITY OF CHICAGO WASTE DIVERSION SURVEY 2007 DATA				
Company Name:				
Address:				
Contact Name:			Phone Number:	
Email Address:				
Residential and Commercial Municipal Solid Waste (MSW) Material Recycled <i>Generated in Chicago Only</i>	Total Materials Handled (generated in Chicago*) in Tons	Please indicate if materials are Processed, Composted, Recycled (end- use), Remanufactured or Reused	Major Suppliers of Materials	Major Customers of Materials
Paper				
Newspaper				
High Grade Paper				
Magazines				
Corrugated Cardboard				
Mixed Paper				
Plastic				
#1 PET				
#2 HDPE				
Other Plastic Containers				
Plastic Film				
Other Plastics				
Glass				
Glass Containers				
Other Glass				
Metal				
Aluminum Cans				
Tin/Steel Containers				

CITY OF CHICAGO WASTE DIVERSION SURVEY 2007 DATA				
Organics				
Yard Waste				
Wood Pallets				
Stumps and Logs				
Food Waste				
Single-Stream Recyclables				
TOTAL TONS:				

We understand that you may not separately track the tonnage that comes exclusively from within the City of Chicago. Feel free to provide an estimate, by applying a percentage to your total material stream that you believe represents tons generated within the city.

C&D and Other/Special Waste Recycled <i>Generated in Chicago Only</i>	Total Materials Handled (generated in Chicago*) in Tons	Please indicate if materials are Processed, Composted, Recycled (end-use), Remanufactured or Reused	Major Suppliers of Materials	Major Customers of Materials
Metal				
Steel				
Scrap Aluminum				
Copper				
Brass				
Stainless Steel				
Other Ferrous Scrap Metal				
Other Non-Ferrous Scrap Metal				
Appliances/White Goods				
Lead-Acid Batteries				
Other Batteries				
Oil Filters				
C&D				
Concrete				
Wood				
Asphalt				
Asphalt Shingles				
Brick				
Gypsum				
Other C&D				
Other				
Computer Monitors and TVs (CRTs)				
Other Electronics				
Carpet				
Carpet Padding				
Fluorescent Bulbs				

CITY OF CHICAGO WASTE DIVERSION SURVEY 2007 DATA				
High Intensity Discharge (HID) Lamps				
Tires				
Textiles				
Other				
TOTAL TONS:				

We understand that you may not separately track the tonnage that comes exclusively from within the City of Chicago. Feel free to provide an estimate, by applying a percentage to your total material stream that you believe represents tons generated within the city.