

ATTACHMENT VII
RATIONALE FOR AMENDING LOCAL LAW 19

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RATIONALE FOR AMENDING LOCAL LAW 19

1.0 INTRODUCTION

The success of recycling in New York City (City) is a testament to those City public officials who crafted Local Law 19 of 1989 (LL19) to help launch and advance the City's Recycling Program. Important provisions of LL19 include mandatory recycling requirements for City residents, businesses and institutions; authorization of enforcement that includes penalties for those who do not set out Recyclables in accordance with the law; and other standards that helped to establish the City's Recycling Program as one of the strongest in the nation.

However, lessons learned during the past 15 years demonstrate that changes to LL19 are needed. Specifically, the tonnage mandates in LL19 have led to years of litigation over whether the City was in compliance with the statute. In the most recent decision on this matter, the New York State Supreme Court recognized that these tonnage mandates were "simply unattainable." The City therefore believes that LL19 should be amended to reflect what DSNY is actually collecting from residents and institutions. As the tonnage diversion requirements of LL19 are not attainable, they should be replaced by laudable and aggressive percentage goals.

Furthermore, LL19 should reflect the standards and methods of calculating recycling diversion established in most other urban jurisdictions throughout the nation. This will enable city-to-city comparisons that do not put the City at a disadvantage.

2.0 IMPORTANT CONSIDERATIONS

The rationale for amending LL19 of 1989 is based on the following conclusions and considerations, and is discussed in greater detail on the pages to follow.

- **The City should apply an adaptive recycling goal that reflects fluctuations in the waste stream.** Quantities of municipal solid waste (MSW) and Recyclable materials fluctuate with demographic and economic changes. For example, as the economy grows and population changes, it can be expected that the quantity of Recyclable material in the waste stream also changes over time. Quantity of Recyclables as a percentage of DSNY-managed Waste may change over time. A flat tonnage diversion requirement does not capture these changes. However, a percentage goal –

based on the quantity of recyclable material as a percentage of total waste generation – does capture the variability. Therefore, an adaptive recycling rate that reflects actual changes in generation of waste and Recyclable material in the waste stream should replace the current static tonnage requirement.

- **The City must recognize the inherent limitations of applying a tonnage diversion requirement to DSNY.** Establishment of mandatory tonnage requirements for DSNY implies that DSNY has direct control over how much City waste ultimately is recycled. DSNY can (and does) provide frequent (i.e., weekly) Recyclables collection service, conduct massive public education campaigns and enforce the recycling law by issuing summonses. But, DSNY cannot force people to recycle through the agency’s implementation of the LL19 administrative code. Establishment of recycling percentage goals will help address the inherent limitations of achieving the current tonnage requirements.
- **The City should set realistic recycling goals.** The initial results of the 2004 Preliminary Waste Characterization Study suggest that 34% of the curbside waste stream consists of paper, metal, glass and plastic materials currently designated for recycling under the Curbside Recycling Program. There have been periods when 34% of the waste stream has been less than the current 4,250-tpd-tonnage requirement. Consequently, current LL19 tonnage mandates have required a “capture rate” (tons of DSNY-collected Recyclables divided by estimated total tons of Recyclables generated by New Yorkers) of greater than 100% -- an unattainable requirement.
- **The City should apply recycling industry norms and City waste composition data in setting realistic recycling goals.** It is not realistic to set a goal of capturing 100% of Recyclable materials in the waste stream through recycling. Given the challenges of recycling education and enforcement in the City discussed within the SWMP, goals should be ambitious but not unrealistic. Although other U.S. cities do not track actual capture rates, a rate of 70% is considered within the industry to be at the extreme end of what can be expected to be captured by curbside collection programs. This should be the target capture rate, but not a mandated achievement. This rate, combined with an estimate of 34% designated paper and MGP composition in the waste stream, and the limited short-term potential of other forms of curbside and containerized diversion, argues for a 25% diversion goal.
- **The City should consider experience in other jurisdictions.** The City should revise its diversion goals to be consistent with other U.S. cities. For example, no other U.S. city expresses diversion goals as tonnage requirements. Among those cities that do have state-legislated diversion mandates, all use percentages. Similarly, New York State does not mandate that localities recycle specific tonnage amounts. Instead, the New York State Department of Environmental Conservation (NYSDEC) calculates the state's recycling rate on a percentage basis and, in calculating this recycling rate, it includes recycled commercial and industrial materials that LL19 does not allow the City to count.

- **The City should examine the restrictions on what is counted as recycling diversion.** No other major U.S. city restricts the materials counted towards diversion goals to exclude the recycling and reuse of inert materials from construction and demolition (C&D) debris and fill waste (with the exception of Seattle, which does so by choice, not by law). Portland, Oregon counts redeemed beverage containers from its bottle and can deposit law in its recycling rate. LL19, however, restricts the materials that are counted toward diversion. Any material that would end up in the DSNY -managed Waste stream if not for recycling should be included in the calculation of the LL19 recycling diversion rate.
- **Set goals that reflect “apples to apples” comparisons.** Most major U.S. cities with diversion rate goals set a target rate of 30% or lower. Exceptions are Los Angeles and San Francisco (50% mandated by the State of California), and Portland and Seattle (60% by 2010, under non-binding city ordinances). However, these goals are not comparable to the City due to: (1) calculation methods used; and (2) the fact that they count diversion of commercial and industrial materials toward attainment of goals.

3.0 A 25% DIVERSION GOAL FOR THE CURBSIDE WASTE STREAM

While it is not reasonable to require DSNY to achieve mandatory recycling levels, it is reasonable to establish percentage-based recycling goals that DSNY must seek to attain through provision of collection services, effective contracts for processing and marketing collected Recyclable materials, public education and enforcement.

The curbside waste stream (which also includes a small amount of containerized waste) is the largest fraction of DSNY-managed Waste. It includes refuse and recycling generated by residents, City agencies and non-profit institutions. Since 1989, this stream has been the focus of DSNY’s extensive Recycling Program that targets paper, metal, glass and plastic Recyclables for diversion.

DSNY’s Preliminary Waste Characterization Study, conducted in May and June of 2004 and attached in Appendix D, found that an estimated 34% of the curbside waste stream consists of paper, metal, glass and plastic materials currently designated for recycling collection by DSNY from residents and public institutions in the City. Although the waste characterization study findings are very preliminary, the 34% figure suggests that this is the sum total of all potentially recyclable paper, metal, glass and plastic materials that is either properly recycled or improperly thrown out with the refuse.

Knowledge of the baseline presence of designated paper and MGP in the overall waste stream, combined with a realistic target capture rate, allows the calculation of a realistic target diversion rate goal. In the City, applying the current level of knowledge, realistic goals are derived as follows:

- Preliminary waste characterization data indicate that approximately 34% of the waste stream is potentially Recyclable Paper and MGP;
- To achieve a 25% diversion rate for these materials would require a capture rate of 71% (25% diversion ÷ 34% total designated Paper and MGP); and
- Both a 25% diversion goal and a 70% capture goal are ambitious, yet reflect a cognizance of the realities of the waste stream and human behavior.

Given the challenge of attaining 25% diversion through paper and MGP recycling alone, as discussed above, it is recommended that an overall goal of 25% from the curbside and containerized waste stream be set through 2007, to be revisited after that time should the serious barriers to composting and other forms of curbside diversion change.

4.0 35% DIVERSION GOAL FOR THE DSNY-MANAGED WASTE STREAM

In addition to the curbside/containerized waste stream generated by residents and some public/non-profit institutions, DSNY manages a number of other waste stream categories. These include:

For Disposal:

- Other DSNY Refuse Collections (Bulk Refuse, Lot Cleaning, Street Dirt, Residual Refuse from Self-Help recycling drop-off centers).
- Refuse collected by other public agencies and non-profit institutions outside of the curbside/containerized system, and disposed of under DSNY's export contracts.

For Composting, Recycling or Reuse:

- Interagency clean fill and road material (inert C&D debris from public construction projects reused at DSNY facilities for road building, paving, landscaping and erosion control).
- Asphalt and millings (inert debris from City Department of Transportation [NYCDOT] road work used at DSNY facilities for road building, paving, landscaping and erosion control).
- Clean dirt (from lot cleaning used in DSNY projects for landscaping and erosion control).
- Abandoned automobiles (collected and recycled under private contract to DSNY)¹
- Redeemed beverage containers.¹
- Furniture and other donated goods handled by the DSNY-funded non-profit organization “Materials for the Arts”
- Automobile Tires (from lot cleaning).
- Bulk Metal (from self-help recycling drop-off centers, lot cleaning operations and special Housing Authority collections).
- Wood and Grass dropped off by private landscapers at DSNY’s leaf composting sites.
- Clean fill and road material (dropped off by private firms at DSNY facilities for road building, paving, landscaping and erosion control).^{1,2}

With the exception of the last two categories, which fall under the classification of “Commercial Technical Assistance,” other DSNY-managed Wastes come entirely from government agencies within the City and City non-profit institutions entitled to DSNY assistance. Some of these wastes are disposed of, some are diverted for reuse or recycling. Together, they represent a distinct waste stream that is managed by DSNY. For this reason, it makes little sense to exclude many of these items from the calculation of “diversion.”

¹ Currently excluded from counting as diversion under LL19.

² Private sector materials.

The diversion rate from this waste stream, due to the high presence of reusable inerts that it comprises, is very high. But overall, this diversion adds only modestly to the diversion achieved from the curbside and containerized waste stream. There is no apparent reason to exclude any forms of diversion in the calculation of an overall rate, and a near-term (2007) goal of 35% diversion for the total DSNY-managed Waste stream, including the currently “excluded” materials, is reasonable.

5.0 DIVERSION GOALS IN OTHER CITIES

Each year, the trade journal Waste News publishes basic program data on the 30 most populous U.S. cities. Among U.S. cities, New York stands alone in mandating a flat diversion tonnage.

Although the Waste News Annual Municipal Recycling Survey does not gather data on what municipalities can count towards the diversion goals they report, DSNY’s research into the methods in use in other municipalities reveals no restrictions of the type imposed in New York.

For example, in California, which requires municipalities to meet a 50% diversion mandate for the combined residential, institutional, commercial and industrial waste streams – or face monetary penalties – jurisdictions are explicitly permitted to include the beneficial reuse of clean fill, C&D debris and asphalt in Section 41781.3 of the Public Resources Code.³

California municipalities are not required by the state to break out or report diversion by material type, or even to directly measure the amount of waste recycled or otherwise diverted from disposal. Instead, California’s waste regulatory agency, the California Integrated Management Board, estimates each jurisdiction's generation tonnage using results of a statewide waste characterization conducted in 1999, which is adjusted annually to reflect inflation, taxable sales, employment and population shifts in that jurisdiction. Diversion is then calculated from this estimate by subtracting the tonnage of waste disposed, using the following formula:⁴

³ At www.ciwmb.ca.gov under “Diversion Rate Measurement”, accessed August 17, 2004.

⁴ CIWMB “What is Diversion?” no date, www.ciwmb.ca.gov/lglibrary/dsg/whatis.htm, accessed March 4, 2004.

California Diversion Rate:
$$\frac{\text{estimated tonnage of total waste} - \text{directly measured tons of refuse disposed}}{\text{estimated tonnage of total waste}} =$$

Any tonnages estimated to have been generated, but not directly measured as disposed, are assumed to have been recycled, composted, reused or prevented. Municipalities are not required to report the composition of diverted materials, or to break down diverted tonnages by their particular method of diversion.

More can be learned about what is counted toward diversion in California municipalities by looking at local solid waste management planning in some of the state's larger cities. In San Francisco, Norcal Inc., the private firm that serves all residential and institutional generators, as well as most commercial sources, recently constructed a C&D recovery facility for materials generated by commercial and residential sources. Wood and metal are among the materials recovered at the facility, as are cement, sheet rock, brick and other inert solids, which make up 15% of the over 6,400 monthly tons processed at that facility alone – all of which count toward diversion.⁵ Among San Francisco city agencies, 75% of diversion, or an annual tonnage of 72,143 tons, consists of C&D debris – nearly all of which is inert material reused in fill and erosion control.⁶

San Jose and Alameda County also count C&D debris recycling in their rate calculation.⁷ And, in Los Angeles, the L.A. City Bureau of Sanitation's AB 939 Report for 2000 shows that diversion of commercial and public C&D materials “including concrete, asphalt, soils and mixed construction and demolition debris” is counted towards that city's diversion rate.⁸

⁵ Quillen, Maurice B. and Robert Reed. “Mixed C&D Recycling On-Line in San Francisco.” BioCycle, February 2004.

⁶ <http://temp.sfgov.org/sfenvironment/aboutus/recycling/municipal.pdf> accessed August 10, 2004.

⁷ Quillen, Maurice B. and Robert Reed. “Mixed C&D Recycling On-Line in San Francisco.” BioCycle, February 2004.

⁸ Los Angeles City Bureau of Sanitation. AB 939 Report for 2000, p. 3-13 at www.lacity.org/san/publications/publications.cfm, accessed August 10, 2004.

Florida similarly permits counting of diversion through C&D recycling in its 30% diversion requirements for combined residential and commercial wastes applied to counties of 75,000 or greater in population. Its Statute 403.706(4)(a) requires that no more than one-half of this percentage be met by a combination of yard waste, white goods, C&D debris and process fuel diversion.⁹

In Portland, Oregon the waste reduction plan addresses the city's 60% diversion goal (again for combined residential and commercial tonnages) by 2005, and explicitly states that "the C&D sector contributes a large amount of materials to the waste stream and will be the primary focus for the SW&R division to increase recovery."¹⁰ Its non-binding city policy NCP-ENN.2.03 notes that for the city to achieve its goals, "it will be necessary to place a stronger emphasis on the recycling and waste prevention of food, *construction and demolition* and fiber (office paper) waste."¹¹ (emphasis added).

In short, there is simply no precedent for excluding the counting of beneficial reuse of inert materials, or abandoned automobile recycling, from a city's diversion rate. In passing LL19 of 1989, an unintended result has been under-reporting of the City's recycling diversion rate in comparison with other cities due to the methodology inherent in the legislation.

When the difficult task of isolating any city's residential/institutional paper, metal, glass and plastic recycling tonnages from municipal C&D recovery and commercial recycling tonnages (including C&D recovery) is complete, the factor that undermines the City's recycling potential in comparison with other cities is quite clear. That factor is the City's relative lack of yard waste – and all that such yard waste entails for increasing curbside diversion in leafy cities with ample

⁹ Florida Department of Environmental Protection, [Solid Waste Management in Florida 2001-2002](http://www.dep.state.fl.us/waste), at www.dep.state.fl.us/waste, accessed August 11, 2004.

¹⁰ City of Portland. "Beyond 60%: Program Strategies for Achieving the 2005 Solid Waste Recycling Goal," at www.portlandonline.com, accessed August 11, 2004.

¹¹ City of Portland. "Beyond 60%: Program Strategies for Achieving the 2005 Solid Waste Recycling Goal," at www.portlandonline.com, accessed August 11, 2004.

backyards and open spaces for compost siting.¹² The diversion rates for residential/institutional paper and MGP achieved in the City before the cuts to the program in 2002 are comparable with, and in many cases superior to, rates achieved in other major cities.

6.0 70% COMBINED WASTE DIVERSION GOAL BY 2015

So what should be counted as the City's official diversion rate? The NYSDEC's Division of Solid and Hazardous Materials requires an Annual Recycling Report from all New York State municipalities that gathers data on residential, institutional and commercial waste management and counts diversion as recycling, reuse or composting of a broad range of categories including reuse of inert materials, recycling of automobile bodies, and even beneficial land use application of biosolids and paper mill sludge, in addition to paper, metal, glass, plastic and other materials recycling; and food waste, yard waste and leaf composting. For calendar year 2003, the most recent DSNY report to the NYSDEC, this method yielded a diversion rate of 54% for DSNY-managed and Commercial Wastes combined.

It is DSNY's conclusion that the materials considered by New York State to count towards diversion should be counted by the City in fulfillment of a non-mandatory 70% combined diversion goal, to be achieved by 2015. Such a goal is in step with the most ambitious in the nation as well as with reporting standards in place in municipalities throughout the U.S.

¹² Isolating municipal diversion rates to compare with what the City is limited to counting as diversion under the current provisions of LL19 is an exercise that must be done for each city, based on published and unpublished data, and constantly updated. For a discussion of how the City compares to other U.S. cities in this regard, see the DSNY's New York City Recycling - In Context, August 2001 and Processing and Marketing Recyclables in New York City, August 2003.

7.0 THE 70% DIVERSION GOAL SHOULD INCLUDE BOTTLE BILL REDEMPTION

In calculating the City's diversion rate, beverage containers redeemed by New Yorkers at retail locations pursuant to the New York State Returnable Beverage Container Act (the "Bottle Bill") should be included in the City's diversion rate goal. In June 2004, the City Independent Budget Office testified before the City Council in favor of an expanded Bottle Bill, and cited NYSDEC's estimate that 1.4 billion containers were redeemed in the City in 2001.

To consider the recycling tonnage impact of the Bottle Bill in the City, it is necessary to convert the estimated number of redeemed containers to a weight estimate. Extrapolating from a July 2000 Michigan Great Lakes Protection Fund study of the Michigan Bottle Bill, which calculated that 3.9 billion deposit containers resulted in 271,000 tons of redeemed Bottle Bill material, it is roughly estimated that more than 97,000 tons of beverage containers were redeemed for recycling in the City in 2001.

DSNY's promotional materials, including the agency's web site, encourage people to return bottles and cans for the deposit. Thus, DSNY actively promotes recycling via the redemption system and should be allowed to include the tonnage in the diversion rate calculation.

Furthermore, there is precedent in other states to include redeemed bottles and cans, and no apparent basis for exclusion in reporting. For example, Oregon has a Bottle Bill, and Portland includes the tonnage in its diversion rate.

It also appears inconsistent that LL19 allows the City to include recycling of automotive batteries but not redeemed beverage containers. This discrepancy is puzzling since there is a reverse distribution system operated by retailers in the automotive battery industry similar to the private sector infrastructure for redemption of deposit bottles and cans.

Excluding redeemed bottles and cans also places the City on uneven footing with other municipalities located in states without a Bottle Bill. These locales do not lose recyclable beverage containers to the redemption system, enabling them to appear to recycle these materials at a higher rate than can be counted in the City.

Finally, while efforts to promote producer responsibility by industry is discussed in this SWMP as an area to explore, the exclusion of redeemed beverage containers indicates negative implications for calculation of future diversion rates of additional items recycled in cooperation with the private sector. For example, if the City or state succeeds in establishing a system whereby sellers of electronics or other consumer products take responsibility (voluntarily or as a result of legislation), shouldn't the recycling results be counted in the City diversion totals? Otherwise, the City will provide itself with a disincentive to take steps to encourage or require those who profit from the sale of "problem wastes" to take responsibility for recycling these wastes, since the City will be "robbing" itself of materials included in the recycling diversion rate. Therefore, the exclusion of redeemable beverage containers appears to set a conflicting precedent for allowing inclusion of other DSNY-managed materials that may occur in the future when there is private sector involvement in acceptance of items from the public for recycling.

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EXHIBIT 1

**New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
Annual Recycling Report**



**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS
ANNUAL REPORT - PLANNING UNIT RECYCLING REPORT**

1. Report Year: 2005	2. Planning Unit New York City Department of Sanitation
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3. Address, Bureau of Waste Prevention, Reuse and Recycling, 44 City, State, Zip: Beaver Street, 6 th floor, New York, NY 10004	4. Phone 917-237-5656
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5. Contact Person Robert Lange	6. E-mail rlange@dsny.nyc.gov
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7. Sources of Disposal and Recycling Data (type YES where applicable)	Scale weights	yes	Hauler surveys		Estimates	yes
	Truck counts		Facility surveys	yes	Other	yes

WASTE DISPOSED

If you include more than 10,000 tons of solid waste IMPORTED from another P. U., please specify on a separate sheet.
Do not report tons of ash that is disposed of or recovered from incineration, as such would constitute double counting

	Landfilled		Waste-to-Energy		Out of State
	Within PU tons	Outside PU (exported tons)	Within PU tons	Outside PU (exported tons)	Outside PU (exported tons)
Municipal Solid Waste		4,666,4208.51		447,062.37	
C & D (disposed)		1,726,775.81			
Non-Haz. Industrial Waste					
Sewage Sludge (wet/dry?)					

Names of DISPOSAL FACILITIES that received your waste tons listed above (add additional sheets, if necessary):

DSNY does not have information on disposal facilities receiving NYC commercial waste, either inside or outside New York State. Full details on disposal facilities receiving DSNY-managed waste are already on file with the DEC.

RECYCLABLES RECOVERED

Do not report recyclables that result from the Returnable Container Act or are part of a Beneficial Use Determination.

Category	Material	Tons	Material	Tons	Material	Tons
PAPER	Newspaper	178,652.66	Magazines		Corrugated	58,633.84
	Office Paper		Junk Mail		Paperboard	
	Mixed Paper	532,338.73	Other – specify type:			
GLASS	Glass - Clear	20,031.55	Glass - Brown	4,860.98	Glass - Mixed	44,376.32
	Glass - Green	10,153.04	Other – specify type: 448.65			
METAL	Containers	19,509.44	Aluminum	4,875.58		
	Enameled Metal Appliances (white goods)			18,366.95		
	Other – specify Ferros household items and bulk		428,041.81			
	Other – specify Abandoned auto bodies		9,347			
PLASTIC	PET #1	15,873.62	Mixed Plastic			
	HDPE #2	15,764.75	Other Plastics - specify			
CO-MINGLED	Glass, metal, and Plastic containers collected co-mingled			63,921		
	Deposit containers redeemed under NYS Bottle Bill (tons)					
	Other Co-mingled Mix: please describe mix:					

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 DIVISION OF SOLID & HAZARDOUS MATERIALS
ANNUAL REPORT - PLANNING UNIT RECYCLING REPORT (continued)

Category	Material	Tonnage	Material	Tonnage
YARD WASTE	Leaves	11434.8	Mixed Yard Waste	
	Grass	5496.4	Brush	
ORGANICS	Food Waste	4565.6	Other – Xmas trees	1489.8
RUBBER	Tires (in tons 100 tireston	1,846	Other Rubber	
WOOD	Wood Pallets		Lumber	
C & D (recycled - not disposed)	Asphalt	279,302.4	Petroleum Contaminated	
	Concrete/Brick/Rock/Fines	1,977.118	Other C & D/Inert (incl.	4,964,343.8
SEW. SLUDGE	Sludge that was composted	594,356	<==Is this figure WET tons or DRY tons?	Wet

ADDITIONAL RECYCLABLES NOT LISTED ABOVE (see Appendix A for some examples)

Recycled Material	End Use or Destination Facility	Tonnage
textiles and furniture	Materials for the Arts - reuse	717.6
batteries, special wastes, paint	DSNY special waste sites - recycling	93.1
CFC refrigerants	Refron - recycling	8.93
Oil, oli filters, antifreeze	DSNY Bureau of Motor Equipment - recycling	123.55

Names of RECYCLING FACILITIES from where you derived your recycled tons (add additional sheets, if necessary):

DSNY does not have information on recycling facilities receiving NYC commercial recycling, either inside or outside New York State. Full details on recycling facilities receiving DSNY-managed waste are already on file with the DEC.

Estimate the percent of total recycled tons reported that were	a) managed by Planning Unit	26%
	b) managed by private sector	74%
Estimate the percent of total recycled tons reported that were	a) picked up curbside:	99.5%
	b) collected via drop-off:	0.5%

If applicable, please add any information about Waste Prevention, Recycling Metrics, Best Practices or other aspects of your Waste Reduction and Recycling or disposal programs not reflected in this report

please see attached

Appendix A - Examples of Other Recyclables

Recycled Material Type	End Use or Destination Facility	Tonnage
#4 Plastic	ABC Plastic Lumber Inc.	10.74
Latex Paint	Sherman Wilson - made into new latex paint	7.5
Textiles	Good Will - donated for reuse	20
Electronics	Monitors 'R' Us - Dismantled for scrap	43
Paper Mill Sludge	Used in paper mix for animal bedding	1,000
Foundry Waste	U. Becher Asphalt - used in asphalt mix	300

Appendix B - Description of Selected Categories

Material	Component Categories	Examples
Paper	Newsprint	Newspaper that may include certain amounts of other paper
	Corrugated Cardboard	Multi-layer kraft corrugated shipping boxes and inserts.
	Paperboard/Chipboard/Boxboard	Cereal boxes, shoe boxes, gift boxes, lightweight cardboard.
	Office Paper	Copy paper, computer printout, ledger and letterhead paper.
	Mixed	Mixed recyclable paper, news, junk mail, magazines, etc.
	Other Paper	Tissue paper, towels, or as specified.
Plastic	PET (#1)	Soda bottles, liquor bottles.
	HDPE (#2)	Milk jugs, shampoo bottles.
Glass	Other Glass	Ceramic glass, light bulbs, plate glass
Metal	Containers	Food cans, Pet food cans, soda cans, hair spray, aerosols
	Aluminum	Soda cans (non-deposit), juice cans, foil and foil pans.
	White Goods/Enameled metal	Refrigerators, washing machines, stoves, other appliances.
	Other Metal	Coat hangers, scrap metal.
	Other Metal	Siding, cookware, machine parts, utensils, electrical wiring
Organics	Food Waste	Kitchen scraps, dog food, food processing wastes.
	Other Organics	Brewery waste, fish processing waste.
Wood	Lumber	Plywood sections, particle board.
	Other Wood	Crates, sawdust, animal bedding.
C & D (recycled)	Asphalt	Roofing shingles, siding, road surfacing.
	Concrete/Brick/Rock	Gravel, house bricks, stones.
	Petroleum Contaminated Soil (PCS)	PCS made into a product - not PCS that is landfilled
	Other C&D	Sheetrock, plaster, insulation.
Sewage Sludge	Sewage sludge composted	Sludge from POTWs that is composted, not landfilled. Note that the amount will be converted to dry tons for calculations

Appendix C - Sample Volume to Weight Conversion Factors

If you have more specific or accurate conversion factors for your materials,
you can use your own conversion factors and advise DEC of your factors and calculations.

MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT	
GLASS-whole bottles	1 cubic	0.35 tons	GLASS-crushed mechanically	1 cubic yard	0.88 tons
GLASS-semicrushed	1 cubic	0.70 tons	GLASS-uncrushed-manually	55 gallon	0.16 tons
PAPER-high grade loose	1 cubic	0.18 tons	NEWSPRINT-loose	1 cubic yard	0.29 tons
PAPER-high grade baled	1 cubic	0.36 tons	NEWSPRINT-compacted	1 cubic yard	0.43 tons
PAPER-mixed loose	1 cubic	0.15 tons	CORRUGATED-loose	1 cubic yard	0.15 tons
			CORRUGATED-baled	1 cubic yard	0.55 tons
PLASTIC-PET-whole	1 cubic	0.015 tons	PLASTIC-HDPE-whole	1 cubic yard	0.012 tons
PLASTIC-PET-flattened	1 cubic	0.04 tons	PLASTIC-HDPE-flattened 1	1 cubic yard	0.03 tons
PLASTIC-PET-baled	1 cubic	0.38 tons	PLASTIC-HDPE-baled	1 cubic yard	0.38 tons
PLASTIC-styrofoam	1 cubic	0.02 tons	PLASTIC-mixed, grocery	45 gallon bag	0.01 tons
ALUMINUM-cans-whole	1 cubic	0.03 tons	FERROUS METAL-cans-	1 cubic yard	0.08 tons
ALUMINUM-cans-flattened	1 cubic	0.125 tons	FERROUS METAL-cans-	1 cubic yard	0.43 tons
WHITE GOODS-uncompacted	1 cubic	0.10 tons	WHITE GOODS-compacted	1 cubic yard	0.5 tons
YARD WASTE (uncompacted)	1 cubic	0.10 tons	FOOD WASTE	55 gal drum	0.20 tons
YARD WASTE (compacted)	1 cubic	0.20 tons	MSW (Compacted)	1 cubic yard	0.50 tons

Appendix D - NYSDEC REGIONAL AND CENTAL OFFICE ADDRESSES

SEND A COPY OF THIS REPORT TO YOUR REGIONAL OFFICE **AND** A COPY TO THE DEC CENTRAL OFFICE

DEC Region	Address and Phone	
1	Regional Solid & Haz Materials Engineer Loop Road Bldg 40 - SUNY, Stony Brook, NY 11790-2356	(631) 444-0375
2	Regional Solid & Haz Materials Engineer 1 Hunters Point Plaza, 47-40 21st Street, Long Island City, NY 11101-5407	(718) 482-4894
3	Regional Solid & Haz Materials Engineer 21 South Putt Corners Road, New Paltz, NY 12561-1696	(845) 256-3136
4	Regional Solid & Haz Materials Engineer 1150 North Westcott Road, Schenectady, NY 12306-2014	(518) 357-2346
5	Regional Solid & Haz Materials Engineer 1115 Route 86, P.O. Box 296, Ray Brook, NY 12977-0296	(518) 897-1241
6	Regional Solid & Haz Materials Engineer 317 Washington Street, Watertown, NY 13601-3787	(315) 785-2522
7	Regional Solid & Haz Materials Engineer 615 Erie Blvd. West, Syracuse, NY 13204-2400	(315) 426-7419
8	Regional Solid & Haz Materials Engineer 6274 E. Avon-Lima Road, Avon, NY 14414-9519	(585) 226-5408
9	Regional Solid & Haz Materials Engineer 270 Michigan Avenue, Buffalo, NY 14203-2999	(716) 851-7220
DEC Central Office in Albany	Bureau of Solid Waste, Reduction & Recycling 625 Broadway, 9 th Floor, Albany, NY 12233-7253 Attn: Recycling Reporting Section	(518) 402-8706

New York City Department of Sanitation, Notes to 47-15-51PU (1/06)
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS, "ANNUAL REPORT - PLANNING
UNIT RECYCLING REPORT 2005"

Note 1: New York City only collects data on transfer stations, not disposal end sites. We cannot comment on location of disposal as being in or out of state

Note 2: On paper categories

- all commercial paper is classified as mixed
- DSNY paper includes magazines office, beverage cartons, and all other types of mixed paper

Note 3: On Glass

Other glass includes plate and other noncontainer glass.

Note 4: on Metal

“Containers” represents ferrous containers only

Aluminum includes containers and other aluminum (foil, other)

Ferrous bulk includes commercial metal recycling; all other metal tonnages are DSNY-managed recycling only

Note 5: on Plastic

All tonnages are for DSNY-managed recycling only.

Note 6: On Commingled

Commercial glass, plastic, and metal container recycling is not broken out, and is reported under commingled.

WASTE REDUCTION AND REUSE

SOURCE REDUCTION STRATEGIES

METHOD OF
REDUCTION

MATERIALS

TONS (if available)

EDUCATIONAL STRATEGIES

765 tons

Consumer Source Reduction Shopping Tips	<p>"Waste Prevention Shopping Tips", a virtual shopping tour, is maintained on the NYCWasteLe\$\$ website: www.nyc.gov/nycwasteless. This feature provides information to consumers on how to make environmentally friendly purchasing decisions for a variety of everyday services and products.</p>	
Junk Mail Reduction Campaign	<p>A section for "Waste Prevention Tips for Your Home" includes information on how to reduce junk mail. A downloadable pdf of DSNY's "Stop Junk Mail" post card is also available on the site. With the cooperation of the Direct Marketing Association, anyone can fill out the card and send it in to the DMA to be removed from national mailing lists.</p>	
Source Reduction Literature, News Articles, Events, etc.	<p>In August 2005, BWPRR launched the NYCWasteLe\$\$ website on NYC.gov: www.nyc.gov/nycwasteless. The new website serves as New York City's one-stop resource for waste prevention and recycling information. Key sections include: waste less at home, waste less at agencies & schools, waste less in business, new homes for old stuff, and recycling in NYC.</p> <p>The 2005 Web Trends report (which started in September 2005) indicates that the site received 5,281 average hits and 401 average visitors per day who had an average visit length of nearly 13 minutes. The top visited pages in include: Recycling in NYC, What to Recycle, New Homes for Old Stuff, and Electronics Recycling.</p>	
	<p>Materials for the Arts (MFTA – www.mfta.org), a program of the Department of Cultural Affairs, with additional funding from the Departments of Sanitation and Education, provides donated, used goods to nonprofit arts organizations and schools. In FY 2005, MFTA received more than 2,158 material donations and diverted 765 tons of material from the waste stream to educational and arts organizations in need. The estimated value of the redistributed material is over \$4.57 million.</p>	765
	<p>DSNY established the Materials Exchange Development Program with the City College of New York in Fall 2005 to conduct a survey of existing materials exchange programs within New York City and then develop a one day conference and other technical assistance programs aimed at improving the effectiveness and sustainability of local materials exchanges and increasing public access to such services. The survey began in Spring 2005 and will continue throughout the Summer of 2006.</p>	

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WASTE REDUCTION AND REUSE

SOURCE REDUCTION STRATEGIES

METHOD OF
REDUCTION

MATERIALS

TONS (if available)

STRATEGIES FOR BUSINESSES AND INSTITUTIONS

5,628 tons

Waste Audits, Operational Changes, Sector Specific Source Reduction, Office Paper Reduction, Exchange Services	The " waste less in business " section of the NYCWasteLe\$\$ website provides detailed waste prevention information on numerous general and business sector specific topics. It also contains measurement tools and detailed lists of recycling vendors, donation outlets, case studies, and resources available to NYC businesses.	
	BWPRR oversees the NY Wa\$teMatch program (www.wastematch.org), a materials exchange program for industrial materials, in conjunction with the City University of New York and the NYC Industrial Technology & Assistance Corporation. In addition to running an on-line exchange service, NY Wa\$teMatch provides businesses with waste assessments and technical assistance. For calendar year 2005, NY Wa\$teMatch programs diverted 5,628 tons of industrial material from the NYC waste stream, saving participants \$672,961.	5,628

LEGISLATION /
REGULATION

Source Reduction Procurement Policies	DSNY promotes Environmentally Preferable Purchasing through the " Green Purchasing " page on the NYCWasteLe\$\$ website: www.nyc.gov/nycwasteless . This page is located on the "waste less at agencies & schools" section of the website.	
	In Spring 2005, DSNY sponsored an Environmentally Preferable Purchasing class for Agency Chief Contracting Officers and other City procurement professionals in coordination with the City's Procurement Training Institute.	

WASTE REDUCTION AND REUSE

STRATEGIES IMPLEMENTED WITH THE GOAL OF INCREASING RECYCLING

MATERIALS

METHOD OF REDUCTION	TONS (if available)
EDUCATIONAL STRATEGIES	
Educational Materials	<p>BWPRR produced a "Recycle More, Waste Less" bookmark to add to the public education materials that are available, for free, to all NYC residents. Materials can be ordered by calling 311 (NYC Citizen Service Center) or through the DSNY website: www.nyc.gov/sanitation. Materials are also distributed by DSNY outreach staff at public events. In 2005, DSNY distributed a total of 920,442 recycling education materials to NYC residents. These materials include items such as decals, flyers, building posters, etc.</p>
Golden Apple Awards	<p>The Golden Apple Awards helps students appreciate how their ideas, values, and actions can make New York City a cleaner and greener place to live. The program consists of three contests (Reduce & Reuse Challenge, Super Recyclers, and Team Up to Clean Up) where schools compete against other schools within their grade division to win cash prizes. The program offers schools an opportunity to raise much-needed funds, while undertaking community service projects that demonstrate that they are recycling and reducing waste. To promote the 2005 Golden Apple Awards program, DSNY mailed copies of the 2005 contest brochure to NYC schools in the fall and also sent reminder postcards. All 2005 participating schools received certificates for entering. In June 2005, both the Sanitation and NYCWasteLe\$\$ websites posted descriptions of the winning entries.</p>
NYC Compost Project Website	<p>To encourage New Yorkers to leave their grass clippings on the lawn and to participate in home composting, DSNY created the NYC Compost Project Website: www.nycompost.org. The calendar section contains information on composting workshops available for free to all NYC residents. Workshops are conducted by the members of the NYC Compost Project: Brooklyn Botanic Garden, Queens Botanical Garden, Staten Island Botanical Garden, Lower East Side Ecology Center, and The New York Botanical Garden.</p>
OTHER STRATEGIES	
Electronics Recycling Events	<p>The New York City Department of Sanitation sponsored five electronics recycling events in October 2005, one in each borough. To hold these events, the Department of Sanitation worked with the Lower East Side Ecology Center and received support from Best Buy and Intel. To notify New Yorkers about the events, BWPRR sent out citywide mailers, ran ads in local newspapers, and posted information on the DSNY and NYCWasteLe\$\$ websites. Approximately 4,300 New Yorkers participated in the October 2005 electronics recycling events, dropping off nearly 196 tons (391,885 pounds) of electronic equipment and 1,432 pounds of cell phones.</p>

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