



# **2009 DPW Annual Residential Recycling Report**

**Submitted 5/12/10**

## Introduction

The year 2009 confirmed that recycling is a mature industry whose fortunes are tied to the global economy. The Great Recession brought drastic commodity price reductions for nearly all recyclables, with many losing 50-75% of their value over the high prices of 2008. While depressed demand caused some communities to struggle to move their materials to market, the City of Milwaukee's recyclables continued to flow to consuming mills and secondary processors, albeit at reduced prices. Two main factors contributed to Milwaukee's relative success; 1) DPW is contracted with a large multi-national firm for the processing and marketing of its recyclables, and major suppliers received orders over smaller players; 2) the relative quality of Milwaukee's recyclables collected and processed through its dual stream program received more interest versus the poorer quality materials coming from some single stream programs. Newer single stream technology generally produces materials of comparable quality to dual stream facilities, and the national trend continues towards converting to single stream to achieve collection efficiencies. The City of Milwaukee's Materials Recovery Facility has antiquated equipment, and DPW will take the opportunity to move to a single stream program within the coming years.

Another trend, the significant decline in print circulation, continues to drive tonnage downward in mature recycling programs throughout the country. Newsprint production in the U.S. has dropped 24% over the last decade, according to industry expert, Jerry Powell. The displacement of print subscriptions with online versions is the biggest factor, but the reduction in newsprint was exacerbated with the recession as fewer advertising dollars meant smaller publications. Milwaukee's residential recycling program collected 13% less newsprint in 2009 than the year before. All the other materials increased in 2009, revealing strong and growing participation in the curbside program overall. Many performance and financial figures are included in tables and graphs later in the report, but first DPW presents a brief overview of various aspects of the residential recycling program in 2009.

*-Rick Meyers, Recycling Specialist, DPW*



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[MilwaukeeRecycles.com](http://MilwaukeeRecycles.com)

## 2009 Recycling Program Overview

### Recycling Facility and Collection Alternatives Study

- Comprehensive study of recycling collection and processing options
- Dual versus single stream
- Collection frequency evaluation: bi-weekly, tri-weekly, vs. monthly recycling
  - Collecting every three weeks determined to be most cost effective at this time
  - Bi-weekly collection recognized as optimal schedule, matching standard service level among large cart programs nationally
- Informed the recommendations recently passed by the Recycling Task Force
  - Switch to single stream recycling within the next 1-4 years
  - Explore regional processing at City MRF versus transfer hauling to 3<sup>rd</sup> party

### Outreach and Education

- *Recycle For Good* campaign (see page 5)
- 2009 fall mailer – new format, more content, lower cost
- 2,315 students and 346 adults took an educational tour of Milwaukee’s Materials Recovery Facility
- Media appearances, TV and radio
- Booths at festivals and green events



Milwaukee teens featured on website

### Awards

- 1<sup>st</sup> place for 6<sup>th</sup> straight year: 2009 U.S. Conference of Mayors’ *Cans for Cash – City Recycling Challenge* – only city to win 6 years in a row in any division
- 2009 recycling activities earned runner-up top-three finish for American Forest & Paper Association Community Recycling Award
- Recycling Bin Grant recipient from Associated Recyclers of Wisconsin

### Events

- Electronics recycling collection event, Wisconsin State Fairgrounds (March)
  - over 248,000 pounds collected
- Aldermanic Recycling Relay (May)
- Phone book recycling collection event with partners AT&T & UWM (October)



Electronics Recycling Event



Recycling relay during DPW Week



Phone book recycling event

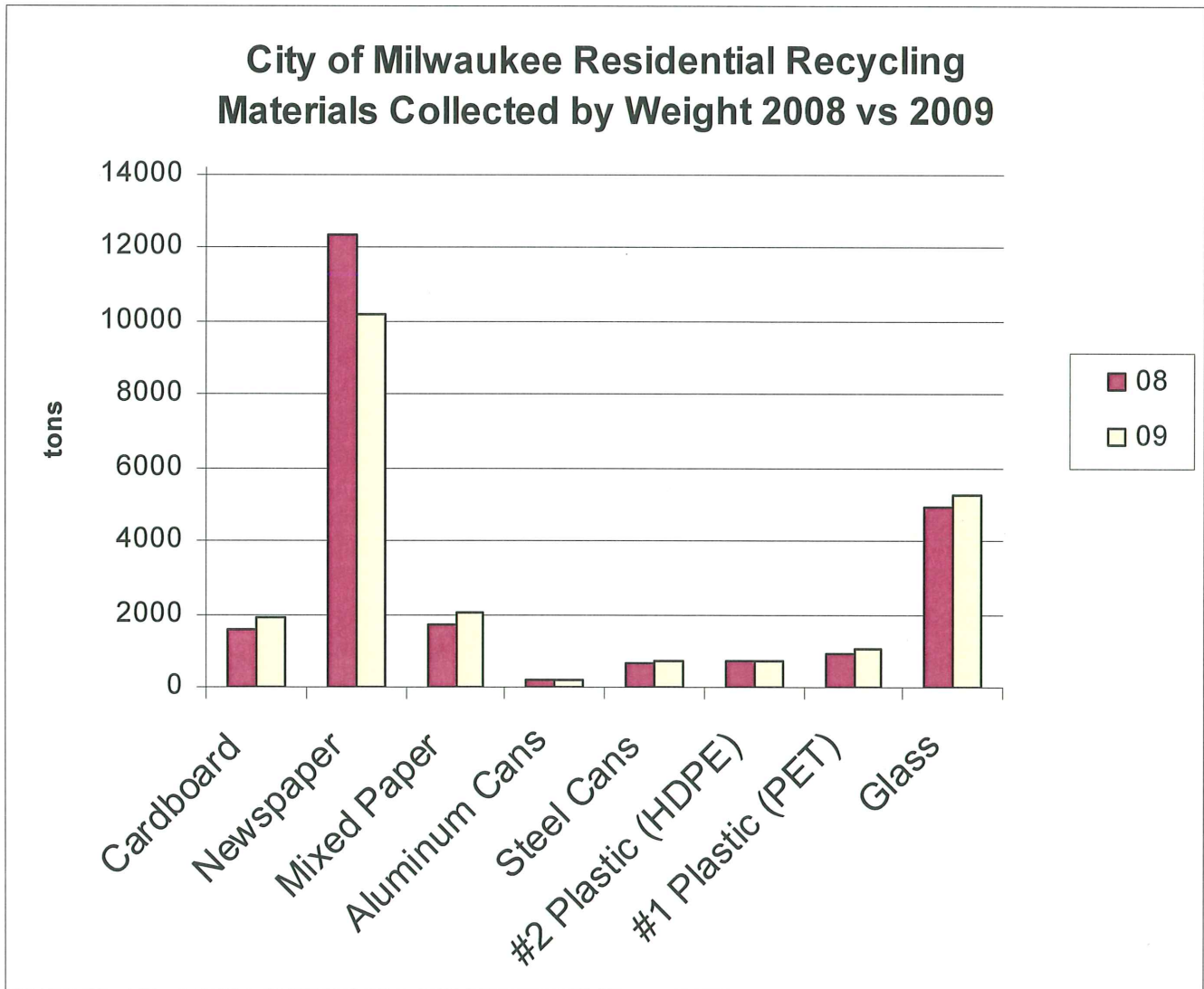


Compliance Enforcement

Property Type	Written warnings	Citations	Amount
1-4 units residential	637	361	\$9,660.00
5+ units residential	26	10	\$1,298.02
Non-residential (business)	61	5	\$635.74

Future Initiatives

- Continuous improvement of curbside collection program
  - Planning for single-stream and exploring facility options
  - Increased collection efficiencies
  - Move towards bi-weekly schedule
- Expanded electronics recycling to include TVs and other items to be banned from landfills September 1<sup>st</sup>
- Facilitate greater recovery of resources through Self-Help Centers



## Recycle For Good - 2009 Campaign Update



### Background

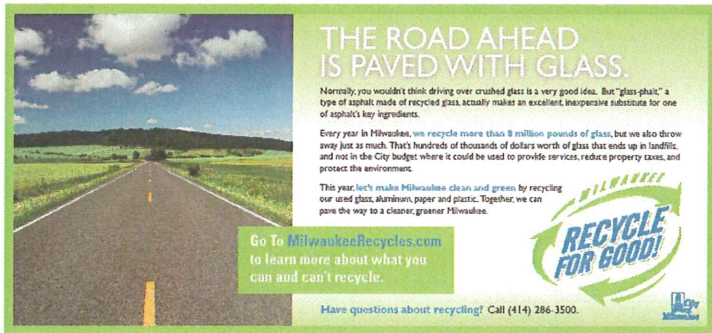
- City wide promotional campaign to increase recycling participation and raise awareness
- Special emphasis on lower participation areas
- Focus groups and phone surveys preceded campaign development
- Public launch September 2008
- Traditional media and community-based outreach

### Campaign Advertising

- Outdoor advertising: 12 recycling packers featuring RFG logo and photography
- Radio, print, online, and TV advertisements



Recycling packer featuring one of four different image boards



Print ads such as this appeared in community publications



TV advertisement shown on WISN and on Fox Sports Wisconsin

### Neighborhood Campaigns

- Partnerships: Sherman Park Community Association (SPCA), Southside Organizing Committee (SOC)
  - Door-to-door outreach, Community events, meetings, socials, cleanups, Phone calls, Email blasts, Pledges from residents



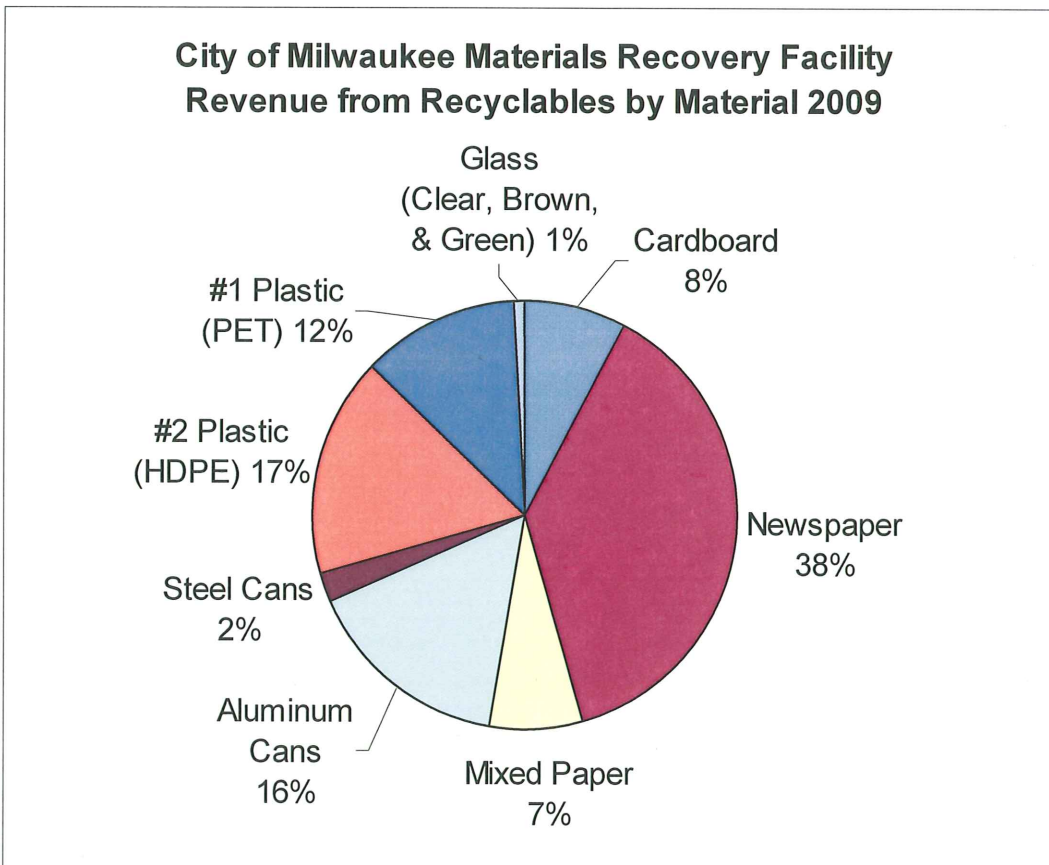
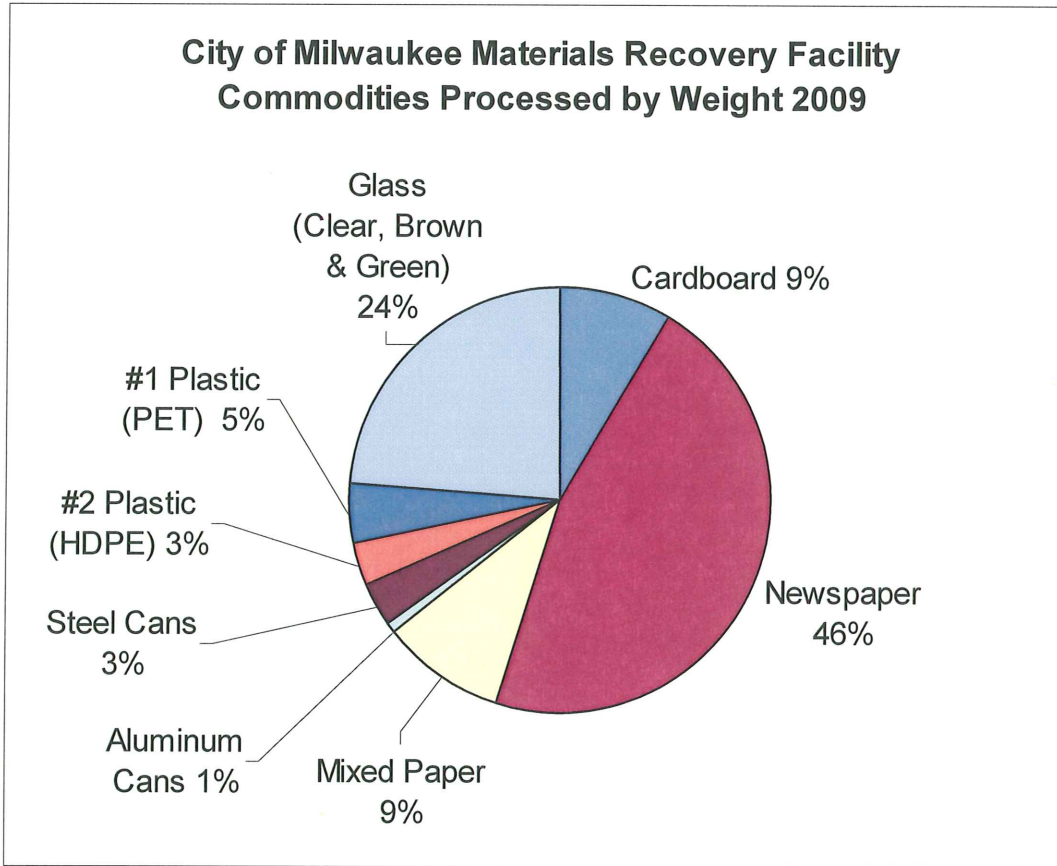
Presenting \$2,500 award check to the Southside Organizing Committee



SPCA Community Event featuring Recycle For Good

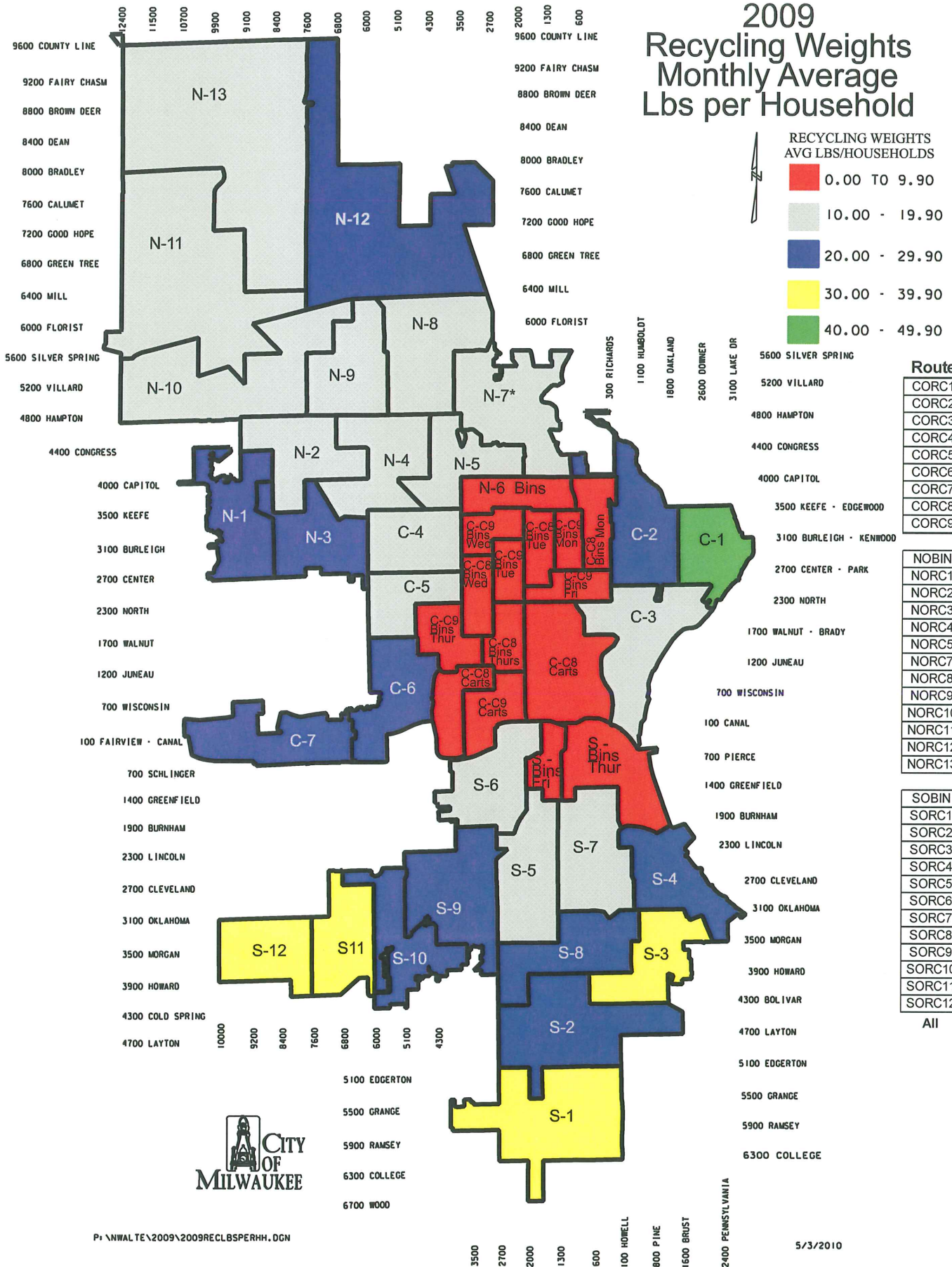
### 2009 Campaign Results

- Recycling of all materials except for newspaper increased in 2009
- Targeted lower participation areas experienced highest improvement





# 2009 Recycling Weights Monthly Average Lbs per Household



Route	Average
CORC1	43.00
CORC2	20.84
CORC3	14.41
CORC4	12.90
CORC5	17.68
CORC6	27.46
CORC7	27.40
CORC8	4.23
CORC9	3.71

NOBIN	4.80
NORC1	27.88
NORC2	19.28
NORC3	26.54
NORC4	12.49
NORC5	13.90
NORC7	13.10
NORC8	14.02
NORC9	13.72
NORC10	17.95
NORC11	19.18
NORC12	20.81
NORC13	19.01

SOBIN	3.76
SORC1	30.07
SORC2	29.07
SORC3	30.50
SORC4	29.28
SORC5	18.69
SORC6	16.81
SORC7	16.40
SORC8	27.97
SORC9	26.71
SORC10	29.35
SORC11	31.82
SORC12	34.26

All 19.26



**Table 1**  
**Residential Tons Collected**  
**2008 - 2009**

	<u>2008</u>	<u>2009</u>	<u>Change</u>	
			<u>Tons</u>	<u>Percent</u>
<b>Recycling Materials - household</b>				
Combined Paper	14,110	12,280	-1,831	-13.0%
Corrugated Cardboard	1,568	1,925	358	22.8%
Aluminum Cans	172	222	50	29.0%
Steel Cans	655	710	56	8.6%
Glass Containers	4,900	5,267	368	7.5%
Plastic Containers	1,665	1,769	104	6.3%
<b>Subtotal</b>	<b>23,069</b>	<b>22,174</b>	<b>-895</b>	<b>-3.9%</b>
<b>Recycling Materials - other</b>				
Appliances with Refrigerants	197	245	48	24.5%
Lead Acid Batteries	22	36	14	62.4%
Waste Tires	733	700	-33	-4.5%
Waste Oil	250	195	-55	-22.0%
Electronics	230	353	123	53.4%
Scrap Metal	1,189	1,461	272	22.9%
Miscellaneous	74	58	-16	-22.0%
<b>Subtotal</b>	<b>2,694</b>	<b>3,046</b>	<b>352</b>	<b>13.1%</b>
<b>Yard Waste</b>				
<b>Subtotal</b>	<b>37,611</b>	<b>36,113</b>	<b>-1,498</b>	<b>-4.0%</b>
<hr/>				
<b>Total Diverted</b>	<b>63,374</b>	<b>61,333</b>	<b>-2,042</b>	<b>-3.2%</b>
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<b>Household Solid Waste</b>				
Cart collection (1-4 unit HHs)	184,601	178,171	-6,430	-3.5%
Dumpster service (>4 unit HH)	20,148	19,220	-928	-4.6%
Skid loader	5,513	4,203	-1,310	-23.8%
Clean & Green program	1,382	1,763	381	27.6%
Miscellaneous	1,932	1,718	-214	-11.1%
<b>Subtotal</b>	<b>213,575</b>	<b>205,075</b>	<b>-8,500</b>	<b>-4.0%</b>
<b>Total Residential Solid Waste</b>	<b>276,950</b>	<b>266,408</b>	<b>-10,542</b>	<b>-3.8%</b>



**Table 2**  
**Residential Program Metrics**  
**2008 - 2009**

	<u>2008</u>	<u>2009</u>	<u>Change</u>
<b>Effectiveness Measures</b>			
Household Material Recycling Rate*	8.3%	8.3%	0.0%
Yard Waste Recycling Rate	13.6%	13.6%	0.0%
Other Materials Recycling Rate	1.0%	1.1%	0.2%
Total Recycling Rate	22.9%	23.0%	0.1%
Household Materials Recycling lbs. Per Household	242.06	232.79	-9.27
	<i>Percent Change '08 to '09:</i>		-3.8%
<b>Efficiency Measures - Household Recycling Only</b>			
Residential Recycling Program Costs (reported to State)	<b>\$ 8,819,334</b>	<b>\$ 9,025,788</b>	<b>\$ 206,454</b>
State Cost Sharing/Grant Revenue	\$ 3,535,679	\$ 3,182,595	\$ (353,084)
Recyclable Commodity Sales Revenue	\$ 1,415,512	\$ 588,684	\$ (826,828)
Avoided Landfill Disposal Costs	\$ 725,896	\$ 715,129	\$ (10,767)
<b>Subtotal of offsets</b>	<b>\$ 5,677,087</b>	<b>\$ 4,486,408</b>	<b>\$ (1,190,679)</b>
<b>Net Costs - Residential Recycling Program</b>	<b>\$ 3,142,247</b>	<b>\$ 4,539,380</b>	<b>\$ 1,397,133</b>
<b>Net Cost Per Ton - Res. Recycling Program</b>	<b>\$ 136.21</b>	<b>\$ 204.72</b>	<b>\$ 68.51</b>

\*The Comptroller's Office method of computing Household Solid Waste Tons includes garbage tons from the City's >4 unit multi-family dwelling customers, a sector not serviced by the City with recycling collection. Since the City does not have recycling tonnage figures for these customers serviced with recycling by the private sector, the resulting recycling rate is artificially low.

**Table 3**  
**Recycling Financials Comparison**  
**2008 - 2009**

*Does not include collection costs or recycling grant revenues*

	<u>2008 Total</u>	<u>2009 Total</u>	<u>Change</u>	<u>% Change</u>
<b>Commodity Sales Revenue</b>				
Revenue/Ton without Negative Commodities	119.78	62.73	(57.05)	-47.6%
50% of Rev/Ton (City's share)	59.89	31.36	(28.53)	<b>-47.6%</b>
<b>Total revenue to City</b>	<b>\$ 1,415,512</b>	<b>\$ 588,684</b>	<b>\$ (826,828)</b>	<b>-58.4%</b>
<b>Processing Costs</b>				
Processing per ton rate	41.86	42.48	0.62	1.5%
Processing tons	24,823.84	22,284.53	-2539.31	-10.2%
Processing costs	<b>\$ 1,039,117</b>	<b>\$ 956,168</b>	<b>\$ (82,950)</b>	-8.0%
<b>Net Revenue</b>				
Net revenue (received)	\$ 376,395	\$ (367,484)	\$ (743,879)	-197.6%
<b>Net revenue per ton</b>	<b>15.16</b>	<b>(16.49)</b>	<b>(31.65)</b>	<b>-208.8%</b>
<b>Avoided Disposal Costs</b>				
Landfill costs per ton	29.24	32.09	2.85	9.7%
Landfill costs avoided	<b>\$ 725,896</b>	<b>\$ 715,129</b>	<b>\$ (10,767)</b>	-1.5%
<b>Total Benefit</b>				
Total Net benefit	<b>\$ 1,102,291</b>	<b>\$ 347,646</b>	<b>\$ (754,645)</b>	-68.5%
<b>Total Net benefit per ton</b>	<b>\$ 44.40</b>	<b>\$ 15.60</b>	<b>\$ (28.80)</b>	<b>-64.9%</b>

Despite the worldwide economic slump that significantly depressed recyclable commodity prices in 2009, the City of Milwaukee still achieved a **net benefit of over \$347,000** when recyclables processing costs are compared to recyclables revenue and avoided landfill disposal costs.