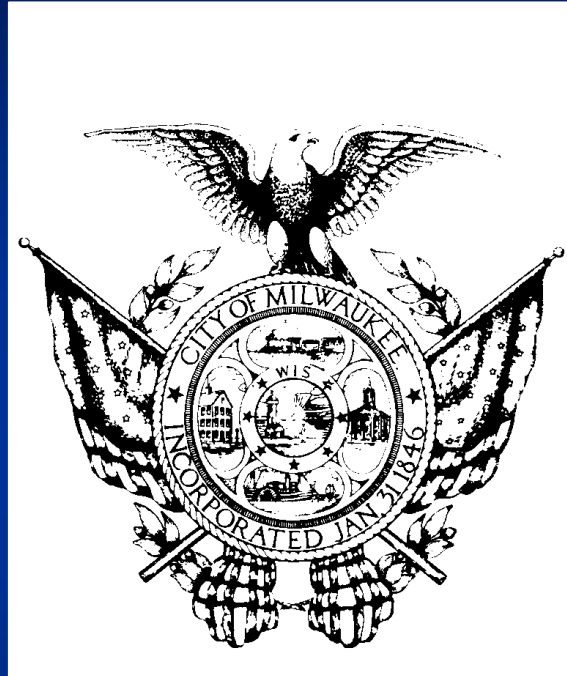


# Audit of the City of Milwaukee Recycling Program



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City Comptroller  
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# City Recycling Program Audit

## Audit Objectives

Determine the cost and tax levy associated with the recycling program.

Evaluate program performance and efficiency.

Evaluate compliance with State statutes and City ordinances.

Identify opportunities to improve performance and efficiency of the program.

# City Recycling Program Audit

## Background

The City is a leader in recycling with a program operating for nearly 38 years.

In operation since 1971 the program has grown from 6 drop off centers to a household cart and bin collection service for over 191,000 Milwaukee households.

# City Recycling Program Audit

## Background



- ① Federal funded program offers 6 self-help drop-off sites for recycling
- ② Federal funded program expanded to 9 self-help drop-off sites for recycling
- ③ Wisconsin Electric and Reynolds Aluminum build processing plant for refuse derived fuel (RDF)
- ④ RDF processing plant closed due to problems with glass contamination damaging power plant boilers
- ⑤ Wisconsin Act 335 financial assistance for local recycling, city begins bin collection of recycling
- ⑥ 1991 State Landfill Ban - Batteries, appliances, and motor oil
- ⑦ City begins cart collection of recycling
- ⑧ 1993 State Landfill Ban - Yard-waste
- ⑨ 1995 State Landfill Ban - Newspaper, other paper, foam packaging, aluminum, glass, plastic, tires, etc.
- ⑨ City recycling program fully implemented serving approximately 191,000 households

# City Recycling Program Audit

## Background

City's recycling program is a hybrid program.

- Monthly cart collection for 163,000 households.
- Weekly bin collection for 28,000 household.

Program collects over 25,000 tons of recycled material each year, or 9 percent of all recycling, yard waste and refuse collection.

# City Recycling Program Audit

## Program Cost and Levy Impact

	Recycling	Refuse
<b>Expenditures</b>		
Salaries and Benefits	\$ 3,545,662	\$ 17,537,972
Operating Expenses	165,030	396,438
Disposal Expenses	1,148,884	5,716,956
Vehicles and Equipment	1,560,641	3,900,974
Containers	257,774	785,692
<b>Total Expenditures</b>	<b>\$ 6,677,991</b>	<b>\$ 28,338,032</b>
<b>Tons Collected</b>	<b>28,786</b>	<b>226,146</b>
<b>Total Expenditures Per Ton</b>	<b>\$ 232</b>	<b>\$ 125</b>
<b>Grants and Revenue</b>		
State Recycling Grants	\$ 3,217,258	
Sale of Recyclables	\$ 1,167,065	
Other Revenues	81,167	\$ 1,374,360
Solid Waste Fee		24,942,022
<b>Total Grants and Revenue</b>	<b>\$ 4,465,490</b>	<b>\$ 26,316,382</b>
<b>Tax Levy</b>	<b>\$ 2,212,501</b>	<b>\$ 2,021,650</b>
<b>Waste Fee Per Ton</b>		<b>\$ 110</b>
<b>Tax Levy Per Ton</b>	<b>\$ 77</b>	<b>\$ 9</b>
<b>Total City Charges Per Ton</b>	<b>\$ 77</b>	<b>\$ 119</b>

# City Recycling Program Audit

## Program Cost and Levy Impact

Gross recycling program expenditures grew at 3.6%

Recycling material sales revenue increased significantly due to contract redesign and commodity price increases.

Recycling grants increased due to Recycling Efficiency Incentive Grant.

Due to recycling material sales revenue and grants net recycling program expenditures decreased slightly.

# City Recycling Program Audit

## Program Cost and Tax Levy Impact

	2000	2001	2002	2003	2004	2005	2006
Recycling Expenditures	\$ 5,772,668	\$ 5,967,379	\$ 6,117,883	\$ 6,285,927	\$ 6,431,940	\$ 6,612,032	\$ 7,003,345
Recycling Revenue	\$ 119,373	\$ 158,843	\$ 254,697	\$ 102,929	\$ 1,614,025	\$ 2,099,388	\$ 1,063,510
Recycling Grant Revenue	\$ 2,767,262	\$ 2,814,641	\$ 2,800,636	\$ 2,802,582	\$ 3,252,931	\$ 3,190,287	\$ 3,217,258
Subtotal	\$ 2,886,635	\$ 2,973,484	\$ 3,055,333	\$ 2,905,511	\$ 4,866,956	\$ 5,289,675	\$ 4,280,768
Net Total	\$ 2,886,033	\$ 2,993,895	\$ 3,062,550	\$ 3,380,416	\$ 1,564,984	\$ 1,322,357	\$ 2,722,577



# City Recycling Program Audit

## Program Compliance

Audit found the recycling program and City ordinances to to be in compliance with State statutes.

Compliance qualifies the City to receive the State's Recycling Grant and Recycling Efficiency Incentive Grant.

Both grants are funded through the State Recycling Fund.

# City Recycling Program Audit

## Impact of Diversions

Year	Recycling Surcharge	Recycling Fee	Total Collections	Fund Transfers	Grant Awards	Net Eligible Recycling Costs	Grant Awards as % of Net Eligible Costs
1992	\$ 32.1	-	\$ 32.1	\$ (4.8)	\$ 18.5	\$ 35.6	52.0%
1993	36.8	-	36.8	-	23.7	48.5	48.9%
1994	47.7	-	47.7	-	29.8	56.5	52.7%
1995	40.6	-	40.6	-	29.1	61.0	47.7%
1996	41.6	-	41.6	(21.1)	29.2	66.3	44.0%
1997	51.5	-	51.5	-	29.2	68.8	42.4%
1998	53.6	-	53.6	(3.9)	23.9	71.4	33.5%
1999	35.9	-	35.9	-	24.1	73.3	32.9%
2000	9.6	0.4	10.0	(15.0)	24.3	76.6	31.7%
2001	26.3	2.0	28.3	(7.0)	24.3	84.1	28.9%
2002	12.5	6.0	18.5	(0.0)	24.3	82.6	29.4%
2003	15.4	22.4	37.8	(10.1)	26.3	84.4	31.2%
2004	25.5	19.9	45.4	(7.3)	26.4	85.7	30.8%
2005	13.2	23.7	36.9	(6.9)	26.3	90.1	29.2%
2006	19.5	23.2	42.7	(22.4)	26.3	96.2	27.3%
<b>Total</b>	<b>\$ 461.8</b>	<b>\$ 97.6</b>	<b>\$ 559.4</b>	<b>\$ (98.4)</b>	<b>\$ 385.7</b>	<b>\$ 1,081.1</b>	<b>35.7%</b>

# City Recycling Program Audit

## Program Cost and Tax Levy Impact

City's Recycling Grant was \$3.2 million, less than \$6 per capita. Had transfers not occurred the Recycling Grant could have been \$8 per capita, or \$1.5 million greater.

Recommendation 1: Work to end the practice of diverting funds from the State Recycling Fund thereby increasing grants to municipalities and reducing the burden on City taxpayers.

# City Recycling Program Audit

## Program Efficiency and Effectiveness

For each additional ton diverted from the refuse stream through recycling reduces the overall cost of both recycling and refuse programs.

A 15% increase in recycling could have reduced expenditures by \$112,000.

# City Recycling Program Audit

## Program Efficiency and Effectiveness

Recommendation 2: Study conversion to single stream recycling. An interdepartmental workgroup should study the costs and benefits of moving to single stream recycling including the costs of MRF repairs.

# City Recycling Program Audit

## Program Efficiency and Effectiveness

Recommendation 3: Improve route management by evaluating route sizes and utilizing quantifiable route management tools.

Recommendation 4: Consider scheduled curbside setout of recycling carts.

Recommendation 5: Consider bi-weekly recycling collection.

# City Recycling Program Audit

## Program Efficiency and Effectiveness

Recommendation 6: Enhance recycling  
Education

Recommendation 7: Develop a recycling  
enforcement policy.

# City Recycling Program Audit

## Program Performance and Reporting

	1998	2006	Tons Change	Percent Change
<b>Recycling Materials</b>				
Combined Paper	20,875	15,592	(5,283)	-25.3%
Corrugated Paper	1,832	2,230	398	21.7%
Aluminum	319	267	(52)	-16.3%
Steel and Bi-metal	998	690	(308)	-30.8%
Glass Containers	4,937	4,940	3	0.1%
Plastic Containers	1,632	1,676	44	2.7%
<b>Subtotal</b>	<b>30,593</b>	<b>25,395</b>	<b>(5,198)</b>	<b>-17.0%</b>
<b>Yard Waste and Other</b>				
Major appliances	1,386	319	(1,067)	-77.0%
Lead Acid Batteries	8	43	35	434.4%
Waste Tires	1,159	618	(541)	-46.7%
Waste Oil	417	297	(120)	-28.9%
Yard Waste	27,444	30,776	3,332	12.1%
Office and Mixed Paper	197		(197)	-100.0%
Scrap Metal		1,759		
Miscellaneous	475	354	(121)	-25.5%
<b>Subtotal</b>	<b>31,086</b>	<b>34,165</b>	<b>3,079</b>	<b>9.9%</b>
<b>Total Diverted</b>	<b>61,679</b>	<b>59,560</b>	<b>(2,119)</b>	<b>-3.4%</b>
<b>Population</b>	<b>612,740</b>	<b>590,370</b>	<b>(22,370)</b>	<b>-3.7%</b>
<b>Recycling lbs per Person (State Target)</b>	<b>106.6</b>	<b>106.6</b>	<b>(0)</b>	<b>0.0%</b>
<b>Recycling lbs per Person (Achieved)</b>	<b>99.9</b>	<b>86.0</b>	<b>(13.8)</b>	<b>-13.8%</b>
<b>Total Solid Waste Tons Landfilled</b>	<b>281,135</b>	<b>285,413</b>	<b>4,278</b>	<b>1.5%</b>
<b>Household Recycling Rate</b>	<b>8.9%</b>	<b>7.4%</b>	<b>(0.016)</b>	<b>-17.5%</b>
<b>Yard Waste, Other Recycling Rate</b>	<b>9.1%</b>	<b>9.9%</b>	<b>0.008</b>	<b>9.2%</b>
<b>Total Recycling Rate</b>	<b>18.0%</b>	<b>17.3%</b>	<b>(0.007)</b>	<b>-4.0%</b>



# City Recycling Program Audit

## Program Performance and Reporting

Recommendation 7: Improve recycling rate information, by reporting separate recycling rates for household recycling, yard waste and other recycling.

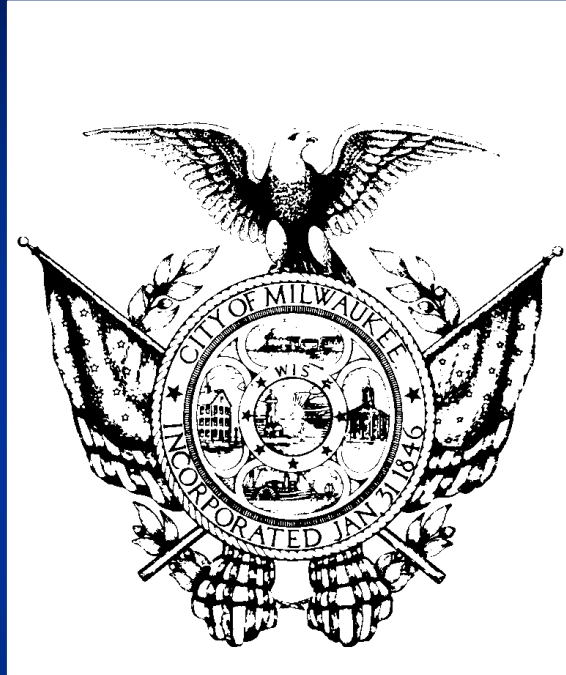
Recommendation 8: Prepare an annual recycling program performance report to the Mayor and Common Council.

# City Recycling Program Audit

## Program Performance and Reporting

<b>Current Measures Reported by DPW</b>	<b>1998</b>	<b>2006</b>	<b>Change</b>
Percentage Participation (DPW Estimate)	NA	85.0%	NA
Tons Diverted From Landfill	61,679	59,560	-2,119
Tons of Recyclables From Curbside Collections	30,593	25,395	-5,198
Household Solid Waste Tons as Reported	172,203	190,895	
Total Recycling Rate	26.4%	23.8%	-2.6%
<b>Recommended Effectiveness Measures</b>			
Household Solid Waste Tons Per Audit	228,099	226,146	(1,953)
Household Material Recycling Rate	10.6%	8.9%	-1.7%
Yard-Waste Recycling Rate	9.5%	10.8%	1.3%
Other Materials Recycling Rate	1.3%	1.2%	-0.1%
Total Recycling Rate	21.3%	20.8%	-0.4%
Household Material Recycling lbs Per Capita	100.2	86.0	(14.2)
Yard-Waste Recycling lbs. Per Capita	89.9	104.3	14.4
Household Materials Recycling lbs Per Household	NA	265.2	NA
Yard-Waste Recycling lbs. Per Household	NA	321.3	NA
<b>Recommended Efficiency Measures</b>			
Household Material Recycling Expenditures Per Ton	NA	\$ 232	NA
Solid-Waste Expenditures Per Ton	NA	\$ 125	NA

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