



2013 DPW Annual Residential Recycling Report

Submitted 9/05/14

Introduction and Commentary

The most significant recycling program news in 2013 was a Request for Proposal (RFP) process for a *Regional Recycling System for the Processing and Marketing of Single Stream Recyclables*. The RFP was developed and issued on behalf of the City of Milwaukee and Waukesha County after an authorizing intergovernmental agreement adopted by the Common Council in March 2013. This was preceded by multiple studies that pointed towards a shared recyclables processing system as the most cost effective solution for both the City and the County. The RFP was developed and issued in the summer and proposals were received in the fall. City and County representatives made up the joint evaluation team and scored the proposals. The top proposal, submitted by a company called ReCommunity, was to retrofit the City of Milwaukee's old dual stream Materials Recovery Facility into a modern single stream facility featuring state of the art technology.

The City of Milwaukee and Waukesha County executed contracts with ReCommunity and a second intergovernmental agreement in May of 2014. Work on renovation of the City's building at 1313 W Mt Vernon Ave began shortly after, and the new recycling system is scheduled to be operational by spring of 2015.

A recycling program performance highlight of note is that 2013 saw a continuation of annual increases in tons of recyclables recovered from single family through four-unit residential households we serve. Recycling pounds per household have now increased 19.6% from 2009 to 2013. Milwaukee residents continue to respond favorably and answer the call to *Recycle for Good!*

-Rick Meyers, Resource Recovery Program Manager, DPW



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Recycling Program Report—2013

Results and Achievements

- Citywide in 2013, DPW collected 25,052 tons of residential recyclables, **an increase of 3.7% over 2012 or 5.9% on a pounds per household basis**. This achievement continues an upward trend of annual increases that started in 2009.
- Below are a few results illustrating the improved recycling service and results over the past five years:
 - **Recycling pounds per household in 2013 were 19.6% higher than in 2009.**
 - During the guaranteed collection schedule season (April through November):
 - The number of recycling pick up day inquiries in 2013 was less than 2% of the number in 2009 during that same time period.
 - Missed collection complaints were down 39% in 2013 from 2009.
- Residents' participation in the household recycling program **avoided nearly \$940,000 in landfill disposal costs** in 2013 and **earned over \$1.77 million in revenue** from the sale of recyclables. Overall, the City realized a savings of about \$57 per ton of materials recycled instead of sent to a landfill.
- The City's residential landfill diversion rate was 23.8% in 2013. This was down slightly from 24.3% in 2012 but still above the 5-year average of 23.0%. The decline from the prior year can be attributed almost entirely to a difference in yard waste tons.

Aggressive Resource Recovery Programs at Self Help Centers

- **Half of the material managed through the Self Help Centers was diverted from landfills in 2013.** Over the years DPW has expanded its recycling programs available to residents to make these sites into functioning resource recovery parks.
- **Over 2.2 million pounds of electronics** were collected at Self-Help Centers in 2013, the third full calendar year of the *E-Cycle Wisconsin* producer responsibility program that was created through state legislation in 2009. (See graph of e-scrap recycled 2008 – 2013, page 9.)
- **Over a dozen material categories were recovered** – including scrap metal, used oil, used oil filters, antifreeze, tires, residential asphalt shingles, residential carpet & padding, used cooking oil, appliances, electronics, concrete, bricks and blocks, clean fill dirt, grass clippings, and brush.



January 2013 press event: Mayor Tom Barrett reminds residents that most consumer electronics are banned from landfills and may be recycled at no charge at either of the City's Self-Help Centers.

Compliance Enforcement

Enforcement of local recycling ordinances is conducted by DPW and its Sanitation Inspectors and administered by the recycling office. These ordinances are required by Wisconsin state law as is maintaining and carrying out a plan to ensure compliance. Throughout the compliance enforcement process, education and guidance is offered to property owners to assist them in the implementation of recycling programs. Below is a summary of recycling enforcement activity by DPW in 2013.

Property Type	Written warnings	Citations	Fine amount
1-4 units residential	991	682	\$23,000.00
5+ units residential	12	1	\$108.17
Non-residential (business)	1	0	\$0.00

Education, Outreach and *Recycle For Good* - 2013 Campaign Update

2013 Neighborhood Campaigns – Recycling Outreach

Since the beginning of the *Recycle For Good* campaign, DPW has visited over 12,700 households in Milwaukee neighborhoods to provide recycling education directly to residents. DPW often partnered with non-profit environmental and community groups to conduct the neighborhood campaigns. In 2013, grassroots outreach continued and **targeted over 1,700 households**. Transitional Duty city workers were trained on outreach techniques and then canvassed targeted areas of the city with the lowest recycling rates. Workers spoke with residents about recycling, provided them with copies of their collection schedules, asked for commitments to increase participation, and left behind information on the City's curbside recycling program.

Community Education Initiatives

- Recycling education to schoolchildren remains a strong component of the recycling outreach program. A partnership with Keep Greater Milwaukee Beautiful to provide educational programming, tours, and activities continued in 2013.
 - 1,411 students and 210 adults participated in educational programs and tours of Milwaukee's recycling facilities.
 - A partnership that DPW helped forge between Keep Greater Milwaukee Beautiful (KGMB), Milwaukee Public schools and Waste Management of Wisconsin Inc. continued, providing recycling education to hundreds more students through classroom visits by KGMB staff. Additional students also received educational recycling programming during after school and summer camps provided through collaboration with KGMB and MPS.

- DPW utilized its annual Waste Reduction and Recycling fall mailer to educate residents on the City’s Single-Sort recycling program. The feature article encouraged residents to “Recycle – Make it NEW Again!” The article highlighted examples of the kinds of products that different recyclables are made into, such as a winter coat, a box of tissue, and a steel refrigerator from plastic bottles, beverage cartons, and steel cans, respectively. This article played off of Keep America Beautiful’s “I Want to be Recycled” campaign. The campaign was based upon research which tested several different strategies or themes for encouraging recycling, and found that illustrating the potential of discarded material was the one that resonated most.

The mailer also included detailed recycling guidelines and contained information on other topics such as Project Clean & Green, food waste reduction, electronics recycling, how to recycle plastic grocery bags and wrap, Self-Help Centers, leaves and brush, and winter garbage and recycling collection. To access DPW’s annual fall mailers, please visit www.MilwaukeeRecycles.com and go to the “Media Room”.

- Through radio ads and a press release, DPW encouraged residents to reduce waste and recycle during the holiday season, a time when household waste may increase by up to 25%.

Recycle For Good – 2013 Campaign Update

The citywide *Recycle For Good* (RFG) campaign continued to raise awareness of DPW’s recycling program and promote the benefits of recycling. The campaign has always focused resources both on targeted underperforming recycling areas as well as the city at large. In 2013, campaign resources were again dedicated to city wide education on the City’s Single-Sort program, the new materials added to the program, and the various products they may become. Campaign activities this past year included:

- On-air and online radio promotion highlights:
 - Continuation of 98.3 online “Recycler of the Month” contest for which the public was encouraged to pledge to improve recycling habits in turn for the chance to win prizes such as cinema and theater tickets, and gift certificates to local stores and restaurants.
 - Online mentions on WHQG’s “Homegrown” website and on WMYX/WXSS “1 Thing” green website.
 - Banner ads on WJMR
 - The *Recycle For Good* campaign radio buy garnered many value-added promotional mentions, including an interview during Community Affairs Program on WLWK and a mention in their newsletter.
- JS Online geo-targeted banner ads
- See graphs of web traffic, 2013 vs. 2012, page 10.
- New recycling promotional visuals created

- Five new *Recycle For Good Milwaukee!* images were created (see example to right) to simply and visually illustrate the different products that can be made from recyclable materials.
- See images of additional campaign elements on pages 11-12.



One of the new *Recycle For Good!* graphics developed in 2013. More on page 12.

2013 Compost Bin & Rain Barrel truckload sale

In 2013, DPW held its second compost bin and rain barrel truckload sale, bringing the popular event back again to encourage residents to harvest rainwater and manage organic wastes onsite.

Compost bins and rain barrels were offered at significant savings from regular retail prices. Sales of compost bins and rain barrels increased over 2012 by 46 and 23 percent respectively. Over 500 compost bins and 350 rain barrels were sold to more than 570 visitors, most from the City of Milwaukee.



People line up to buy compost bins and rain barrels at Washington Park

Food Waste Reduction Study and Demonstration Project

During the summer of 2013, DPW launched a study and demonstration project in partnership with InSinkErator to reduce the amount of food waste sent to landfills by residents. The program involved about 175 households that were recruited in collaboration with Southside Organizing Committee to participate in one of two subgroups: one utilizing in sink disposal units and the other utilizing backyard compost bins. Through this study, the efficacy of both of these strategies for reducing food waste in the city's residential waste stream was examined. The project area boundaries are roughly W. Mitchell on the north to W. Lincoln Ave on the south,

and from about 20th St to 32nd St, east to west. This area belonged to a garbage route with the highest generation of waste in the City.

Education and outreach was provided to residents to encourage proper use of both the food waste disposers and the backyard compost bins. Compost bin training sessions were held so those residents participating in the compost bin segment would know how to utilize their new backyard composter. Pre- and post- surveys were sent to residents receiving food waste disposers to learn more about their use of the disposal units.

Pre- and post-project implementation waste sorts were conducted in order to analyze the landfill reduction results of the project. Preliminary results showed reductions in total food waste of 15% for the garbage disposal group and 10% for the backyard composter group. "Vegetative food scraps," a subcategory of food waste, showed the most significant reductions of 32% for food waste disposers and 24% for backyard composters. Results from a one-year later waste sort to conclude this pilot project are expected in the fall of 2014. DPW will use the findings to assess potential policy or program recommendations to encourage sustainable management of food waste.



Top: Participants learn about backyard composting at a training session. One resident looks at a container of finished compost.



Right: A Master Composter helps to answer questions about composting.



Workers separate waste into different categories during a waste sort event to determine the % composition of food waste, targeted recyclable materials, and other materials.

October 2013 – “Milwaukee Plastic Film Recycling Awareness Month”

At a press event at the Pick ‘N Save located at 605 E Lyon St on October 10th, 2013, Mayor Tom Barrett helped to kick off Milwaukee’s WRAP Recycling Action Project (WRAP) campaign. The Mayor was joined by DPW Commissioner Ghassan Korban, Roundy’s VP of Investor Relations & Corporate Communications Jim Hyland, Wisconsin Film and Bag President Jim Feeney, Trex Director of Sustainability Dave Heglas, and representatives from sponsor companies Ziploc®, Bemis Company, and Waste Management.



WRAP campaign banner



Mayor Tom Barrett emphasizes the importance of recycling plastic bag and film at participating stores.

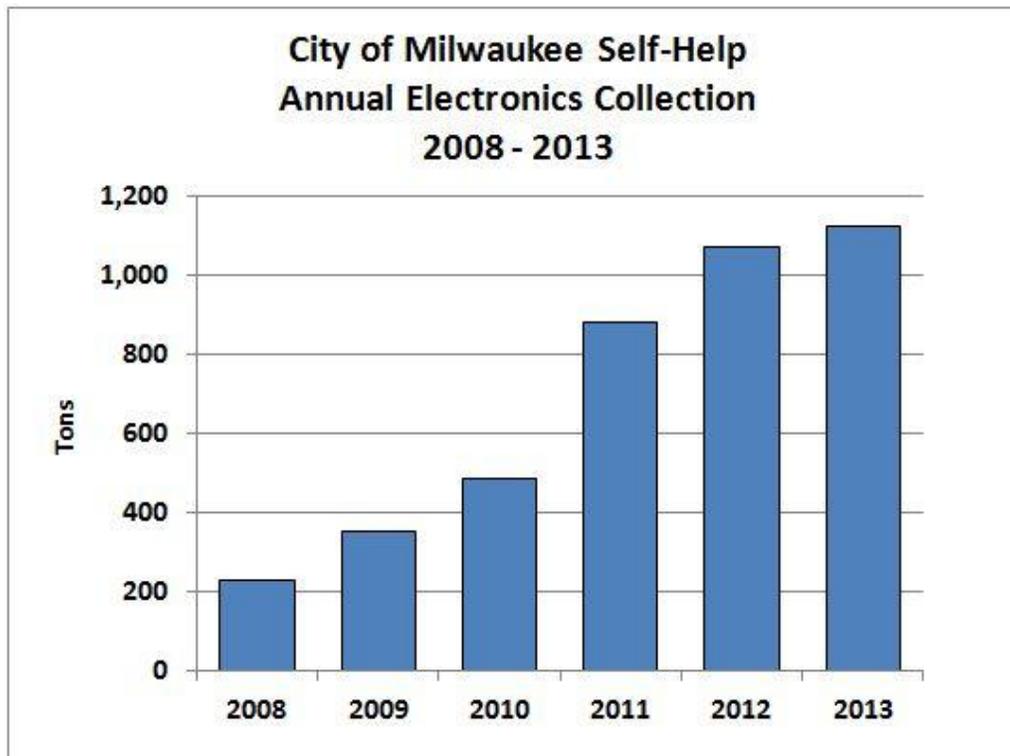
A proclamation was issued, in which Mayor Tom Barrett declared October 2013 as “Milwaukee Plastic Film Recycling Awareness Month.” The Mayor challenged Milwaukee residents to dramatically increase recycling of plastic grocery bags and more: dry-cleaning bags, newspaper bags, bread bags, produce bags, plus plastic wraps for water bottle cases, paper towels, and other plastic film.

The state wide WRAP project is a public-private voluntary partnership between the Wisconsin Department of Natural Resources (DNR), the American Chemistry Council’s Flexible Film Recycling Group (FFRG) and GreenBlue and the Sustainable Packaging Coalition (SPC). The public awareness campaign launched in Milwaukee served as the kick-off and focal point for the pilot outreach campaign.

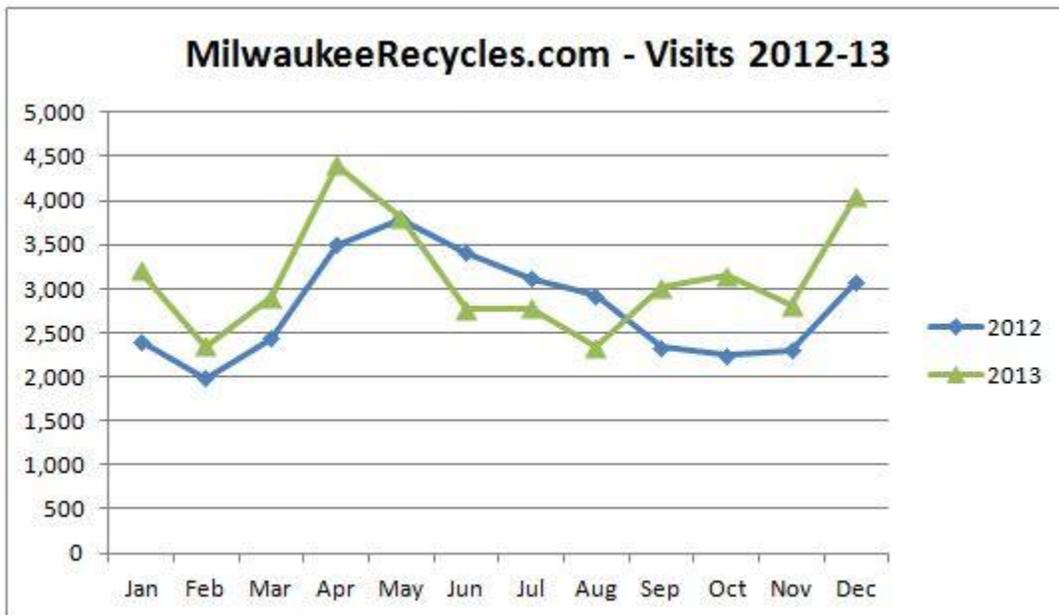


DPW Commissioner Ghassan Korban addresses project partners.

Popular Electronics Recycling Program Continued Growth



Web Analytics 2013



Sample of Images from 2013 *Recycle For Good* Campaign



Jammin' 98.3 Recycler of the Month Contest



Display ad on Entercom (WMYX/WXSS) "1 THING" green website



Big box ads and listing on WHQG "The Hog" Homegrown website

Sample of Images from 2013 *Recycle For Good* Campaign (cont'd)



Top and right: JS Online geo-targeted banner ads

Below: Visuals designed in 2013 to educate the public on what products recyclables are made into.



Table 1
Residential Tons Collected
2012 - 2013

	<u>2012</u>	<u>2013</u>	Change	
			<u>Tons</u>	<u>Percent</u>
Recycling Materials - household				
Combined Paper	12,800	12,746	-54	-0.4%
Corrugated Cardboard	2,600	2,340	-260	-10.0%
Aluminum Cans	188	231	43	22.6%
Steel Cans	751	748	-3	-0.3%
Glass Containers	5,672	6,795	1,123	19.8%
Plastic Containers	2,135	2,191	55	2.6%
Subtotal	24,147	25,052	905	3.7%
Recycling Materials - other residential*				
Appliances with Refrigerants	89	92	4	3.9%
Lead Acid Batteries	8.0	1.4	-6.6	-82.6%
Waste Tires	551	665	114	20.8%
Waste Oil	131	141	11	8.0%
Electronics	1,072	1,120	48	4.5%
Scrap Metal	499	598	100	20.0%
Miscellaneous	120	122	1	1.2%
Subtotal	2,469	2,741	271	11.0%
Yard Waste				
Subtotal	32,855	30,070	-2,786	-8.5%
Total Diverted	59,472	57,862	-1,609	-2.7%
Household Solid Waste				
Cart collection (1-4 unit HHs)	160,230	160,988	758	0.5%
Dumpster service (>4 unit HH)	17,316	17,086	-229	-1.3%
Skid loader	3,625	2,959	-666	-18.4%
Clean & Green program	1,917	1,915	-2	-0.1%
Miscellaneous	2,266	2,371	105	4.6%
Subtotal	185,353	185,319	-34	0.0%
Total Residential Solid Waste	244,824	243,181	-1,643	-0.7%

*Does not include 5,601 T of concrete and asphalt shingles recycled in 2013 through the Self Help Centers. The State of Wisconsin does not include these categories as residential in annual reporting.

Table 2
Residential Program Metrics
2012 - 2013

	<u>2012</u>	<u>2013</u>	<u>Change</u>
Effectiveness Measures			
Household Material Recycling Rate*	9.9%	10.3%	0.4%
Yard Waste Recycling Rate	13.4%	12.4%	-1.1%
Other Materials Recycling Rate**	1.0%	1.1%	0.1%
Total Recycling Rate	24.3%	23.8%	-0.5%
Household Materials Recycling lbs. Per Household	262.11	277.90	15.79
	<i>Percent change 2012 to 2013:</i>		6.0%

Efficiency Measures - Household Recycling Only

Residential Recycling Program Costs (reported to State)	\$ 9,561,852	\$ 9,187,019	\$ (374,833)
State Cost Sharing/Grant Revenue	\$ 2,324,896	\$ 2,325,945	\$ 1,048
Recyclable Commodity Sales Revenue	\$ 1,912,279	\$ 1,774,648	\$ (137,631)
Avoided Landfill Disposal Costs	\$ 899,442	\$ 939,772	\$ 40,329
Subtotal of offsets	\$ 5,136,618	\$ 5,040,365	\$ (96,253)
Net Costs - Residential Recycling Program	\$ 4,425,234	\$ 4,146,654	\$ (278,580)
Net Cost Per Ton - Res. Recycling Program	\$ 183.26	\$ 165.52	\$ (17.74)

*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.

**Does not include 5,601 T of concrete and asphalt shingles recycled in 2013 through the Self Help Centers. The State of Wisconsin does not include these categories as residential in annual reporting.

Table 3
Recyclables Processing Financials Comparison
2012 - 2013

*This table relates to processing of residential recyclables after collection.
It does not include collection costs or recycling grant revenues.*

	<u>2012</u>	<u>2013</u>	Change	% Change
Commodity Sales Revenue				
Revenue/Ton (Market Value)	\$ 97.77	\$ 87.59	\$ (10.18)	-10.4%
City's Share (Rev/T Received from Contractor)	\$ 78.22	\$ 70.07	\$ (8.15)	-10.4%
Total revenue to City	\$ 1,912,279	\$ 1,774,648	\$ (137,631)	-7.2%
Processing Costs				
Processing per ton rate	\$ 50.45	\$ 51.29	\$ 0.84	1.7%
Processing tons	24,207.42	25,089.21	881.79	3.6%
Processing costs	\$ 1,221,243	\$ 1,286,812	\$ 65,569	5.4%
Net Revenue				
Net revenue (received)	\$ 691,036	\$ 487,836	\$ (203,200)	-29.4%
Net revenue per ton	\$ 28.55	\$ 19.44	\$ (9.11)	-31.9%
Avoided Disposal Costs				
Landfill costs per ton	\$ 37.16	\$ 37.46	\$ 0.30	0.8%
Landfill costs avoided	\$ 899,442	\$ 939,772	\$ 40,329	4.5%
Total Benefit				
Total Net benefit	\$ 1,590,479	\$ 1,427,608	\$ (162,871)	-10.2%
Total Net benefit per ton	\$ 65.70	\$ 56.90	\$ (8.80)	-13.4%

The net benefit figure compares total processing costs with recyclables revenue and avoided landfill disposal costs. In 2013, despite an increase in recycling tons, revenue declined due to lower recyclable commodity prices overall combined with a changing recyclable stream composition reflecting a growing proportion by weight of glass, a low value material.