



E-Cycle Wisconsin program year 2 results

*Wisconsin Department of Natural Resources Waste and Materials Management Program
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Wisconsin's electronics recycling law (s. 287.17, Wis. Stats.) establishes a statewide program, called E-Cycle Wisconsin, to collect and recycle certain electronics. It is based on a product stewardship approach, in which manufacturers fund collection and recycling programs for their products. To support recycling and minimize disposal, the law banned many electronics from Wisconsin landfills and incinerators beginning in September 2010.

Under the law, manufacturers of TVs, computers and desktop printers must register the brands they sell to households and schools in Wisconsin, and recycle a target weight of electronics each year based on their sales. Manufacturers contract with registered recyclers and collectors to meet their targets.

Program year 2 ran from July 1, 2010, through June 30, 2011, and was the first full E-Cycle Wisconsin program year. Program year 1 ran for only six months, from January 1 through June 30, 2010, in order to align E-Cycle Wisconsin's program year with the state's fiscal year.

The electronics recycling law was intended to expand opportunities for Wisconsin households and schools to affordably recycle electronics, remove the financial burden of electronics recycling from local government, and divert significant amounts of electronics from landfills to productive use. The results below strongly suggest the E-Cycle Wisconsin program is meeting the intent of the law.

Since E-Cycle Wisconsin began:

- The number of electronics recycling locations available to state residents has increased significantly.
- There are far more opportunities to recycle electronics for free or a small charge, thanks to manufacturer funding.
- The volume of electronics being recycled has increased dramatically and is allowing recycling businesses in Wisconsin and nearby states to add workers and expand their facilities.
- Local governments are spending less to help residents recycle electronics.

In addition to its economic benefits, E-Cycle Wisconsin achieves significant environmental benefits. Reusing and recycling electronics reduces "upstream" pollution and energy use associated with extracting raw materials and manufacturing new electronics. Recycling electronics—rather than landfilling, incinerating, or especially illegally dumping or burning them—greatly reduces the chances of materials such as lead, mercury and cadmium contained in electronics polluting the environment..

E-Cycle Wisconsin's successful implementation of the electronics recycling law to date has been greatly helped by the input and cooperation of the program's many stakeholders, including manufacturers, collectors, recyclers, local governments, retailers, schools and residents. As the program matures, DNR staff will continue to evaluate and work with stakeholders to improve E-Cycle Wisconsin's effectiveness in achieving the goals of the electronics recycling law.

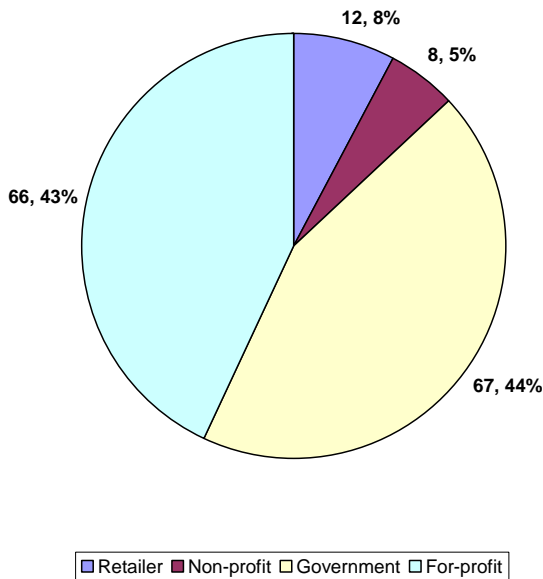
Program participation

Table 1 shows the number of registered collectors, recyclers, manufacturers and brands during program years 1 and 2.

Table 1: E-Cycle Wisconsin program registration (PY = program year)

	PY1 total	Active during PY1	PY2 total	Active during PY2
Collectors	123	77 (63%)	153	136 (89%)
Recyclers	28	15 (54%)	25	20 (80%)
Manufacturers	72	n/a	82	n/a
Brands	114	n/a	123	n/a

Figure 1: E-Cycle Wisconsin year 2 registered collectors, by type



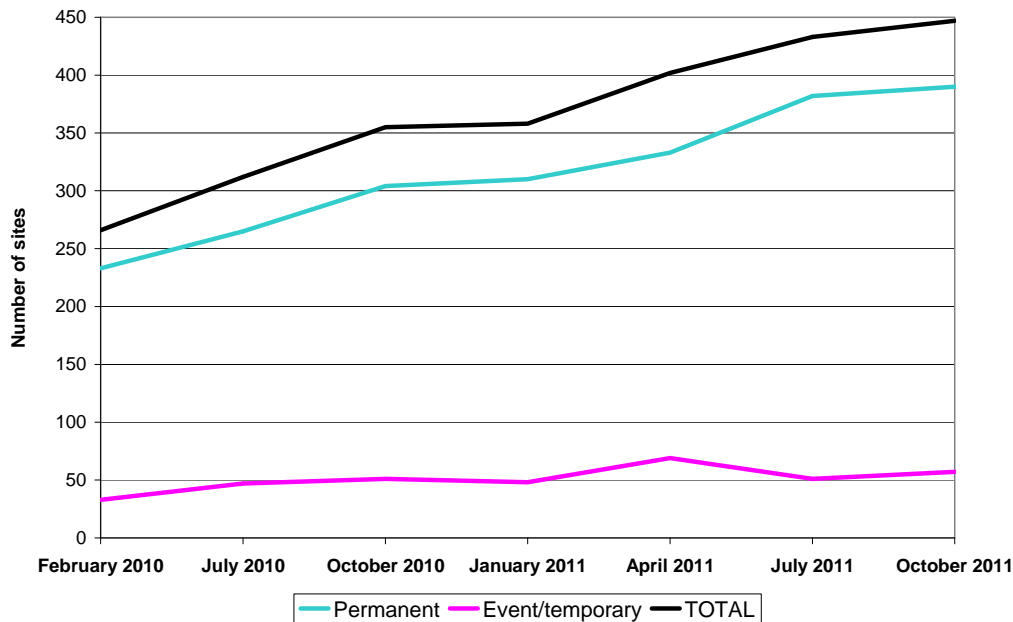
The number of electronics manufacturers registered in Wisconsin increased to 82 during program year 2, due both to increased compliance among manufacturers of existing brands and the introduction of new brands and devices to the marketplace. In particular, we are seeing new registrations from manufacturers of tablet devices and e-readers.

The number of registered recyclers held relatively steady between program years, but the number active in the program (recycled pounds counted toward manufacturers' obligations) increased from 15 to 20.

The number of collectors registered during program year 2 was almost 25 percent higher than during program year 1, and a much higher percentage of the collectors were active in the program (sent electronics to a registered recycler). As Figure 1 shows, the majority of collectors are still local governments or for-profit businesses, though the percentage of collectors that were local governments decreased slightly and the percentage that were retailers or non-profits increased slightly.

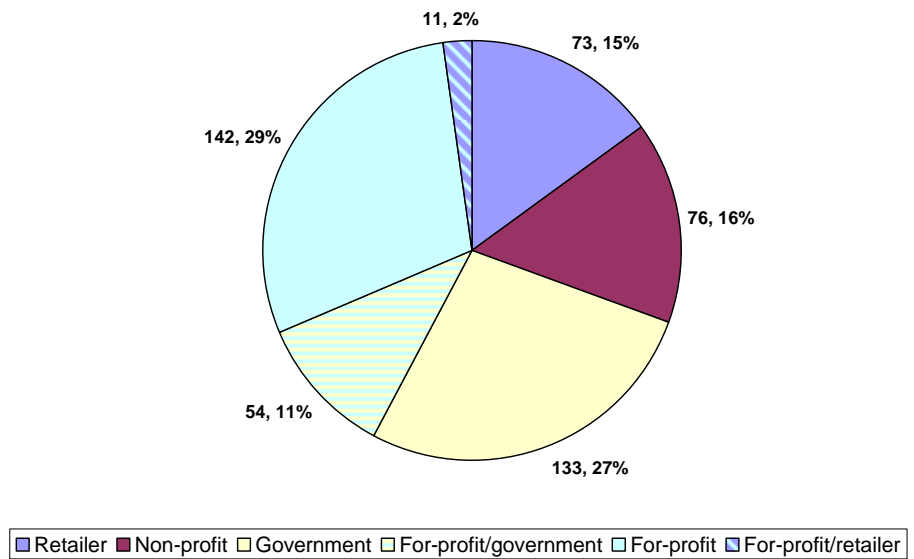
for-profit businesses, though the percentage of collectors that were local governments decreased slightly and the percentage that were retailers or non-profits increased slightly.

Figure 2: Number of registered E-Cycle Wisconsin



As of October 2011, there were nearly 400 permanent collection sites and several dozen temporary/special event collection sites registered with E-Cycle Wisconsin. During 2011, there have been E-Cycle Wisconsin collection opportunities in 68 of Wisconsin's 72 counties. The number of collection sites increased by 68 percent between February 2010 (just after the E-Cycle Wisconsin program began) and October 2011. This is mostly due to an increase in the number of permanent sites. The number of temporary or event sites varies somewhat by season. Most events are held between late spring and early fall (see Figure 2).

Figure 3: E-Cycle Wisconsin program year 2 collection sites, by type



During program year 2 (July 2010 to June 2011), there were a total of 489 registered collection sites (this includes all temporary/event sites and permanent sites that were only registered for part of the year). While retailers and nonprofits made up just 13 percent of the registered collectors, they had more than 30 percent of the registered sites. For-profit collectors operated the highest number of sites (207 total, or 42 percent), many of these were at retail or government locations, as shown by the striped sections in Figure 3.

A recent survey by the National Center for Electronics Recycling showed Wisconsin's permanent collection site total was second only to California's among 15 states with electronics recycling programs.

Collection totals

Collection of eligible electronics under E-Cycle Wisconsin rose dramatically during program year 2 compared with program year 1. From July 2010 through June 2011 (program year 2), registered collectors took in more than 35 million pounds of electronics from Wisconsin households and schools (see Table 2). This was equivalent to 6.2 pounds per person, one of the highest rates among states with electronics recycling laws. Program year 2 showed significant growth over program year 1, when registered collectors took in about 10.4 million pounds during the truncated year (January through June 2010), which would be a collection rate of 3.7 pounds per person if collection had gone on at the same pace for a year (20.8 million pounds in a 12-month period).

Table 2: Program year 2 pounds of eligible electronics received by registered collectors

Urban pounds	Rural pounds	Additional pounds not sent to registered recyclers ¹	Total pounds EEDs collected
29,259,178	3,274,641	2,616,090	35,149,909

¹ The bulk of this amount was sent to recyclers that are now registered for program year 3.

Collection exceeded the overall manufacturer recycling target for program year 2 of approximately 29 million pounds. With the rural credit² factored in, Table 3 shows that registered recyclers had 33.2 million eligible pounds available and sold just less than 30.7 million pounds to manufacturers.³ Manufacturers that paid for more pounds than their target weight earned credits to be used in future years. Thirteen manufacturers paid shortfall fees, either because they had a small target and chose to pay the fee rather than contract with a recycler, or because they were not able to buy enough pounds from the recyclers with which they chose to work.

Table 3: Eligible program year 2 pounds

Urban pounds received	Rural pounds received	Total eligible recycled pounds with rural credit	Pounds counted for manufacturer targets
29,228,660	3,214,044	33,207,235	30,639,218

Collection analysis

Several factors may have contributed to the increased collection rate during program year 2, including:

- Program year 1 began so quickly after the law passed (in late October 2009) that it was difficult for many collectors and recyclers to get operations fully up and running until toward the end of the six-month program year.
- The disposal bans that went into effect in September 2010 generated a lot of publicity, with stories in many local TV markets and newspapers. Many collectors reported collections increasing sharply during fall 2010.
- The fact that manufacturers would have to pay a shortfall fee if they failed to meet their targets for program year 2 may have provided an extra incentive to establish strong collection programs.

Collection more than doubled from program year 1 to program year 2 among all types of collectors (retailer, non-profit, government and for-profit), as shown in Table 4. The biggest growth was among for-profit collectors (businesses), though it should be noted that many for-profit collectors partner with local governments, so the totals in the for-profit and government categories may be slightly skewed.

Table 4: Program year 1 and 2 pounds collected, by collector type

Type	Program Year 1	Program Year 2
Retailer	1,972,842	5,674,573
Non-profit	3,182,499	7,433,391
Government	1,763,830	6,291,347
For-profit	3,491,488	15,750,598
Total	10,410,659	35,149,909

A small number of registered collectors in the retailer and non-profit categories collected a large portion of the total in both program years 1 and 2; the breakdown for program year 2 is shown in Figure 4. Some of the largest collectors include the various Goodwill store groups across the state, Best Buy stores and American TV and Appliance stores.

Of the 35.1 million pounds collected, about 1.5 million came from schools, according to voluntary collector reports. For more information about electronics recycling in schools, see the report on that topic available at <http://dnr.wi.gov/ecyclewisconsin>.

² Each pound collected in a county designated as “rural” earns 1.25 pounds toward a manufacturer’s target. For a map showing which counties are designated urban and rural, see <http://dnr.wi.gov/org/aw/wm/ecycle/collectors.htm>.

³ The urban and rural pounds are slightly different from Table 2 because of the way collectors and recyclers report pounds collected before the end of a program year but not received by the recycler until the next year.

Collectors were not required to provide a breakdown of what they collected by product type (TV, computer, etc.). However, about a quarter of those that reported collection totals did provide this breakdown, giving a rough picture of the types of electronics being collected under E-Cycle Wisconsin (see Table 5). TVs and computer monitors made up most of the collection (84 percent).

This indicated a slight shift from what the voluntary reports showed for program year 1 (55 percent TVs compared with 64 percent in program year 2). It may be that the group of collectors choosing to report this information is not representative of the full group. It may also be that,

since the disposal bans went into effect during program year 2 and there was increased publicity for the program, more consumers have been choosing to recycle old, heavy TVs that would have been more expensive or more difficult to recycle before the program started. The program year 2 breakdown is fairly close to that found in the E-Cycle Washington program, which requires collectors to report this information (69 percent TVs, 23 percent monitors and 9 percent computers).

Figure 4: E-Cycle Wisconsin program year 2 pounds collected, by collector type

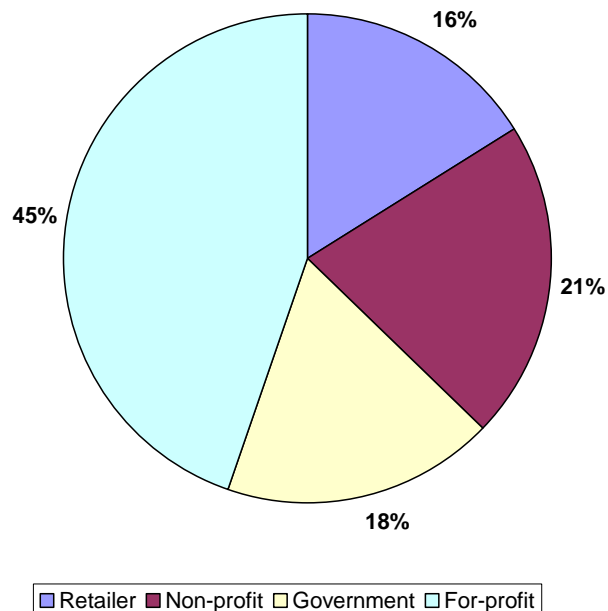


Table 5: Collection by product type (PY = program year)

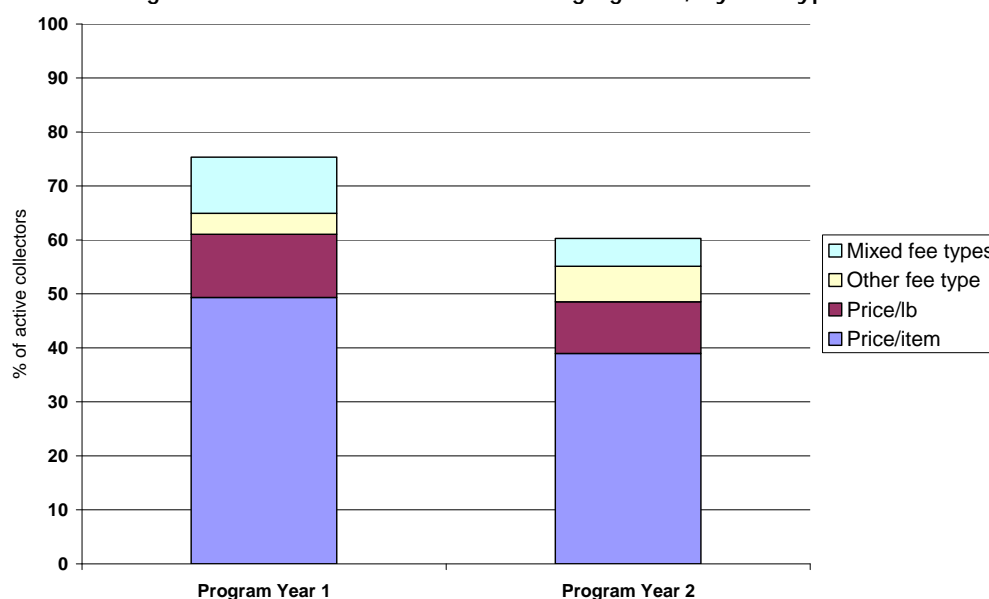
Product type	PY2 % of total weight
Televisions	64%
Computer monitors	20%
Computers	6%
Other eligible electronics (printers, etc.)	10%

Fees charged by registered collectors

Collectors report that fees charged to consumers to recycle electronics have been declining since E-Cycle Wisconsin began, with more opportunities for free electronics recycling. During program year 2, 60 percent of active collectors reported charging some type of fee for some items. This was down from 75 percent of active collectors in program year 1. The majority of fees are assessed per item (e.g., \$15 to recycle a TV), but some collectors charge per-pound fees or use other fee systems (see Figure 5). Of the 82 collectors that charged a fee, about half accepted some items for free.

TVs and computer monitors, especially larger or older, CRT-style models, were the items most likely to be assessed a fee. Some collectors (especially local governments) charged a nominal fee (\$5 or less) to cover handling costs for larger items or to illustrate to consumers that there is a cost to recycling these large items. Some of the charges in the “other” category included charges for home pick-up or a small, flat fee per visit to a drop-off center.

Figure 5: % of active collectors charging fees, by fee type



Conclusions and next steps

The results from E-Cycle Wisconsin's second program year suggest the program is beginning to meet the goals of the electronics recycling law. Collectors and recyclers began the program year with strong collection networks around the state and expanded those networks during the year. With manufacturer contracts more firmly in place, recyclers and their collection networks were able to accept more electronics for free, especially at one-day collection events, or limit charges to larger items. This increased access to more convenient and less expensive recycling options, along with more program publicity from the DNR and its partners, led consumers to recycle millions of pounds of electronics.

The DNR has received mostly positive feedback on the program from participating collectors, recyclers and manufacturers. Staff continue to work with these and other stakeholders to reduce confusion about requirements, streamline the registration and reporting process and make sure administrative requirements do not hinder electronics collection and recycling. Many recyclers have reported being able to expand their facilities or hire new workers because of increased volumes from E-Cycle Wisconsin and similar programs in neighboring states. Local governments have greatly reduced their electronics collection costs, and some have been able to get out of the electronics collection business because enough private options are available to serve their residents.

In 2012, the DNR will conduct a more formal evaluation of E-Cycle Wisconsin and invite feedback and input from stakeholders about any adjustments that could make the program work even better. We will work to expand public awareness of electronics recycling opportunities and the electronics disposal bans. We are pleased that E-Cycle Wisconsin appears to be working well for residents, schools, businesses and environmental protection in Wisconsin.



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