



Impacts of Wisconsin's e-cycling law on local governments

Results from the 2013 E-Cycle Wisconsin local government survey
January 2014

Summary

Among local governments that responded to a May 2013 Department of Natural Resources survey, awareness of the electronics disposal ban, E-Cycle Wisconsin and the requirement that recycling responsible units educate their residents about electronics recycling was high. In general, respondents seemed to be positive about the law and E-Cycle Wisconsin. The DNR's E-Cycle Wisconsin brochure, full-page flier and newsletter templates had helped governments spread the word about this potentially cost-saving program to their residents. However, the law and E-Cycle Wisconsin had not solved all e-waste problems. Local governments were still facing issues like illegal dumping and, for those that collect electronics, program costs. Many collectors—especially those not registered with E-Cycle Wisconsin—had not seen a drop in collection costs, and some had seen costs rise. A handful of respondents commented that the combination of charging a fee and having inconvenient drop-off locations leads to continued illegal dumping. Several DNR projects may address some of the challenges local governments face. Overall, the E-Cycle Wisconsin program appears to be helping local governments handle an increased quantity of electronics.

Introduction

Wisconsin's electronics recycling law, 2009 Wisconsin Act 50, affects local governments in several important ways. The law requires local governments that are recycling responsible units (RUs) to educate residents about the importance of recycling electronics, upcoming e-cycling opportunities and the electronics disposal ban that went into effect in 2010. In addition, the law's E-Cycle Wisconsin program offers local governments collecting electronics the opportunity to register with the DNR and work with recyclers that have manufacturer contracts to help cover recycling costs. Finally, the expansion of electronics collection points under E-Cycle Wisconsin gives some governments the opportunity to direct residents to alternate collection locations.

One of the intentions behind the electronics recycling law was to reduce the cost and burden of collecting electronics on local governments. The DNR's E-Cycle Wisconsin staff have been periodically checking in with local governments to see if the law is having the desired effects. In 2011, we conducted a short, informal survey of local governments registered as E-Cycle Wisconsin collectors to ask about changes to their electronics collection costs as a result of the 2010 implementation of the electronics recycling law. All 24 respondents had seen positive results—lower costs or reduced burden—as a result of the law, but this was a select, small sample of local governments. In 2012, we surveyed all registered collectors (40 percent of which were local governments) to learn about their experiences with the electronics recycling law. The survey responses again showed generally positive results.

To get a broader picture of how the e-waste law affects local governments across the state, the E-Cycle Wisconsin staff sent out another local government survey in May 2013. We sent on-line and paper surveys to approximately 1100 contacts in local governments; mostly RU primary contacts and local governments registered as E-Cycle Wisconsin collectors. Contacts were encouraged to forward the emailed survey link or pass the paper survey on to the person who was most likely to know the answers to survey questions. For this reason we do not know exactly how many people received the survey. A total of 419 surveys were at least partially completed, and all but five of these were fully completed. Assuming the survey reached 1100 people, 419 responses is a 38 percent response rate. Eighty-six percent of the respondents were filling out the survey for an RU. The remaining 14 percent were representing local governments that are not recycling responsible units.

Awareness

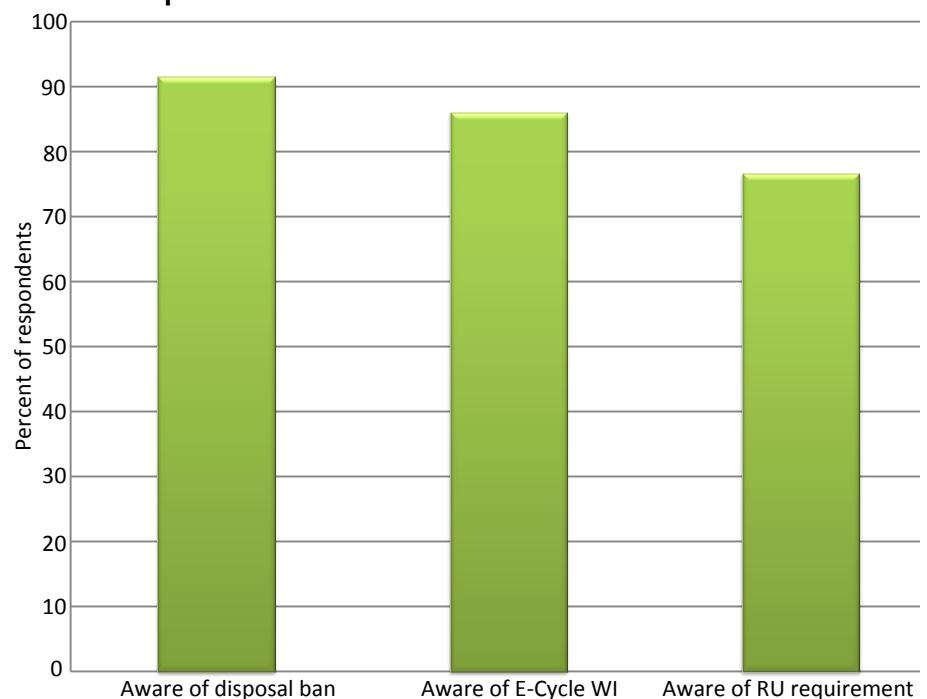
Overall, survey respondents were very aware of Wisconsin's e-waste law and their requirements under it, though we recognize that we may have received a disproportionate number of responses from local governments enthusiastic about recycling. Ninety-one percent of respondents knew about the disposal ban, 85 percent knew about E-Cycle Wisconsin and 76 percent knew about the RU educational requirement (see Figure 1). While this is an encouraging result, ideally we would like all RUs aware of their educational requirements and resources the DNR provides to help meet them. Our household surveys have found that many state residents receive their recycling information primarily from their communities, making community awareness vital.

Outreach

While most respondents were aware of the RU education requirement, not all were aware of the materials that the DNR has created to make fulfilling this requirement easier. About one-quarter of respondents had not used any of the DNR tools. Among those who had used DNR materials, the brochures, fliers and newsletter templates were the most used (see Figure 2). When asked for outreach material ideas, many respondents suggested materials we already offer—or made comments saying that they were not aware of our materials and looked forward to using them.

Several respondents offered outreach ideas that the DNR could potentially implement in the future. These included: quarterly news releases to local papers, a social media page with upcoming collection events, a video PSA for public or cable TV, and brochures with a place for an RU to put in local collector information. One respondent also suggested that we mail a hardcopy of all of our publications to RUs, especially rural RUs that may not have access to the DNR website.

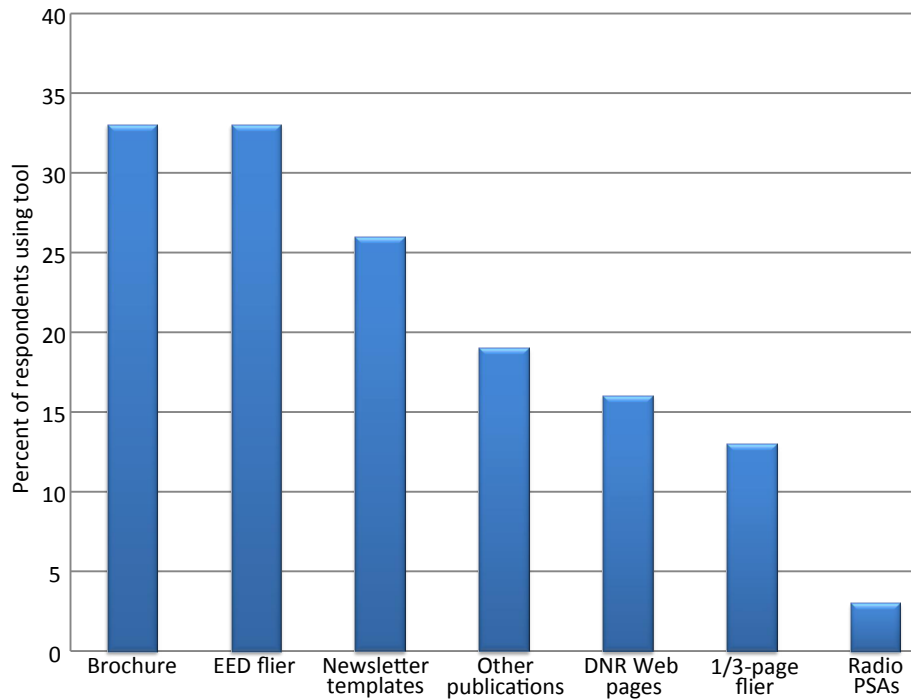
Figure 1: Local government awareness of the e-cycling law and RU requirements



Compliance and enforcement

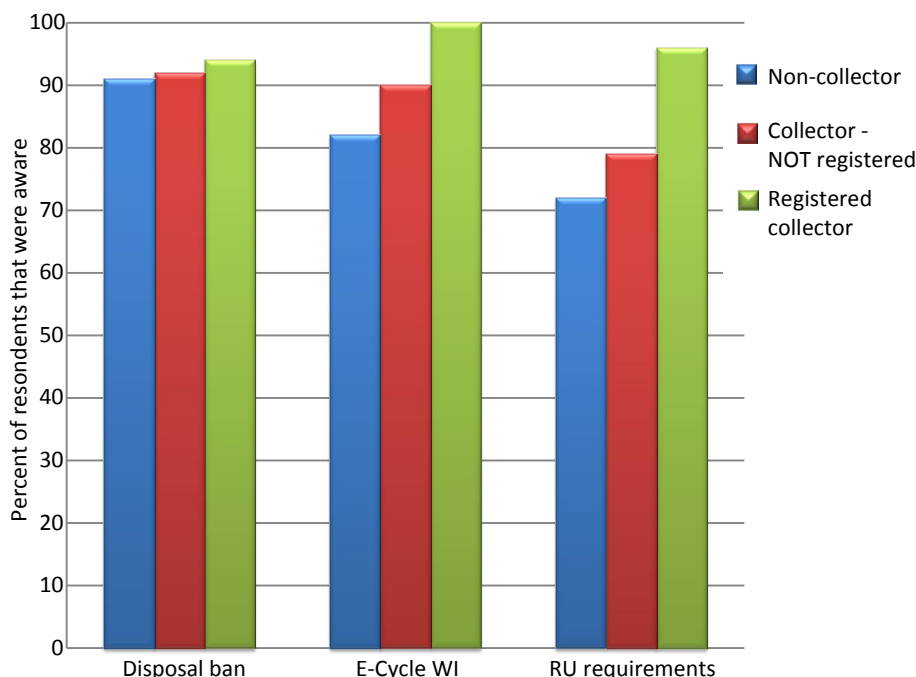
Just under half the survey respondents said their governments had not taken any actions to enforce or ensure compliance with the electronics disposal ban. Of those that had taken compliance measures, the most popular methods of reaching out to the public were issuing verbal warnings and distributing educational material (like placing educational stickers on curbside TVs). A handful of governments had issued written warnings or reported illegal disposal to law enforcement. Only two respondents had issued citations or fines (see Figure 3).

Figure 2: DNR outreach tools used by local governments



Since the electronics recycling law took effect, the DNR has continued to receive periodic reports of electronics illegally dumped on public or private land. Responses to the local government survey indicated this indeed remains an issue, though not everywhere. Thirty percent of respondents reported dealing with illegally dumped electronics during the 12 months prior to the survey. Most had only seen electronics dumped one or two times a year or once every few months (see Figure 4). Only three respondents had seen electronics dumped daily or several times a week.

Figure 3: Awareness of the e-cycling law, by collector status



The 2013 local government survey was done anonymously, with no demographic information collected, so we cannot say if dumping appears to be more frequent in rural or urban areas or in a particular region of the state with few collection sites or high collection fees. We do know from conversations with local governments that dumping happens in cities and in rural areas, in places with many free collection sites and in areas with few collection options.

Where there was dumping, respondents reported mostly seeing whole/intact devices or

a mix of intact and smashed devices. This makes it seem as though the devices are being dumped to avoid a collection fee or inconvenient drop-off location, rather than being dumped after valuable parts are harvested. DNR's 2012 registered collector survey, however, found that residents rarely or only sometimes complain about fees to collect electronics.

It is difficult to make broad statements about how much illegal dumping or improper disposal of electronics is taking place statewide. The local government observations on dumping differ from

the findings of the DNR's 2012 survey of landfill and transfer station operators and 2011 survey of public lands managers. About half of landfill and transfer station operations responding to the 2012 survey had seen electronics illegally abandoned at their facilities, and about 80 percent were seeing some electronics in trash loads arriving at their facilities. In both surveys, respondents reported the amount of dumping remained about the same after the disposal ban took effect. Landfill and transfer station operators also reported that the number of electronics they were seeing in trash loads had decreased since the ban took effect. We will continue to seek methods of quantifying illegal dumping rates in the absence of formal record-keeping.

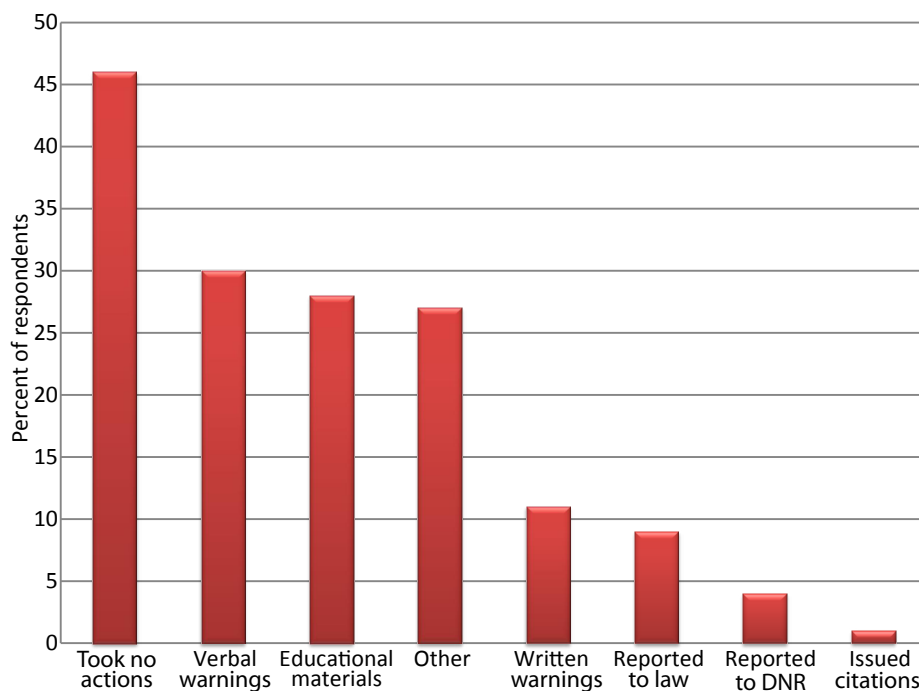
Electronics Collection

It is possible that E-Cycle Wisconsin is reducing the burden of electronics collection on some local governments, but the varying collection histories of survey respondents makes this statement difficult to measure. Roughly 60 percent of respondents were not collecting electronics at the time of the survey, and nearly the same percentage did not collect before the e-waste law took effect.

A handful of governments that collected before 2010 were able to stop collecting because new collection points or collection events appeared, but other governments that have stopped collecting did so because of changes unrelated to the law. For example, respondents (in some cases, several respondents) wrote the following comments: a change in hauler resulted in ceased collections, collections were "expensive" and "difficult" or the volume they were collecting was too little to justify collections. Three respondents commented that they used to collect electronics and take them to the landfill, but had to stop because of the landfill ban.

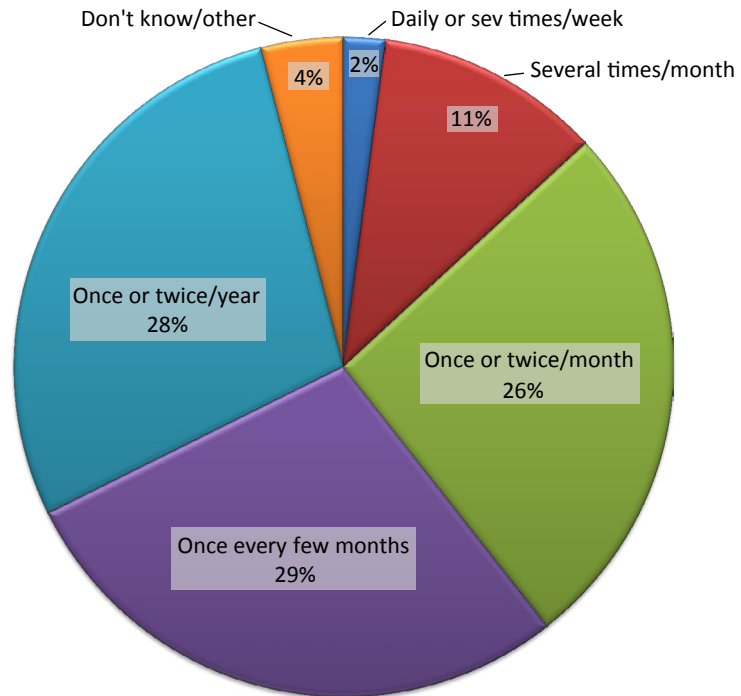
However, nearly 40 percent of the local government collectors that responded to the survey had started collecting after the law went into effect—showing that governments still see a need for collection despite the increase in other sites under E-Cycle Wisconsin. Most surprisingly, nearly two-thirds of the 153 local governments that said they were collecting electronics were not registered with E-Cycle Wisconsin. It is not clear why these governments have not joined the program.

Figure 4: Actions taken by local governments to enforce disposal bans



Participation in E-Cycle Wisconsin made a big difference in terms of awareness and costs among collectors. All registered E-Cycle Wisconsin collectors were aware of the E-Cycle Wisconsin program, 94 percent were aware of the disposal ban and 96 percent were aware of the RU education requirement. For all three categories, this is a higher level of awareness than non-collectors and non-registered collectors (see Figure 5). More than 60 percent of the registered E-Cycle Wisconsin collectors who responded to this survey were already collecting electronics before the law passed, as compared with 41 percent of non-registered collectors.

Figure 5: Frequency of electronics dumping, as observed by local governments



Economics

As mentioned above, two-thirds of the respondents that were collecting electronics were not registered with E-Cycle Wisconsin, and this had a definite impact on answers to questions about cost. Overall, costs for annual electronics collection ranged from no costs (or even a slight profit) to \$46,000. Just over half of respondents were paying less than \$1,000 per year for electronics collection. The low response rate for this survey makes these numbers difficult to extrapolate statewide.

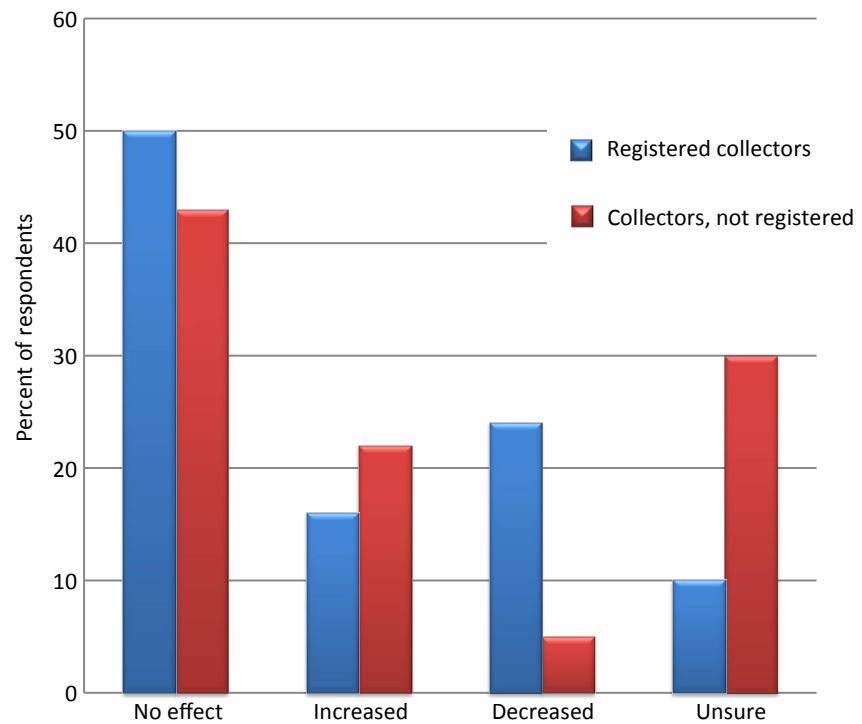
It does not appear from the 2013 survey that E-Cycle Wisconsin has had a hoped-for cost-savings effect across the state, but it does seem to be helping to control costs despite increasing volumes, especially for registered collectors. Forty-three percent of respondents who were collecting electronics outside of the E-Cycle Wisconsin program said the e-waste law has had little to no effect on their collection costs, while nearly a quarter said the law has actually raised their program costs and only five percent had seen their costs decrease.

Collectors registered with E-Cycle Wisconsin noticed different results. While 50 percent had seen no effect on their costs, nearly a quarter had seen costs decrease (see Figure 6) and just 16 percent had seen costs increase. In the 2012 registered collector survey (which includes non-government entities), 45 percent of registered collectors said the law had reduced their costs and 30 percent said there was no effect. Since the volume of electronics collected has increased since the e-waste law passed, even “no effect” on cost is a positive result.

In the 2013 survey, none of the collection programs with the highest collection costs (more than \$10,000 a year) said their program costs had risen since E-Cycle Wisconsin began, and three of these collectors had actually seen their program costs go down under E-Cycle Wisconsin.

Just over half of all collectors that responded to the survey charged a fee for collecting electronics. There was no difference in fee collection between registered and non-registered collectors. The survey did not ask respondents how much they charged, so we do not know if registered collectors were charging the same amount as non-registered collectors. Many local government collectors commented on how much residents do not like to pay for someone to take their electronics. Several hypothesized that this reluctance to pay for electronics recycling collection is the primary reason electronics are illegally dumped.

Figure 6: Effect of the e-cycling law on collection costs, by collector type



The local government survey gave respondents the option to comment about concerns they had regarding costs for collectors. Respondents seemed most unhappy about how much it costs to collect, store and recycle CRT monitors and TVs. Some local governments said they were taking in CRTs at a cost to them. One respondent voiced concern that non-profits and private collection sites cherry-pick what they collect and send to recyclers, which “will affect rates for government entities” (who presumably take all electronics).

A number of respondents said they believed the burden of caring for e-waste still lies too heavily on local governments despite (or because of) Wisconsin’s electronics recycling law. Some respondents offered suggestions for better distributing this burden, including: have retail stores educate their customers about how to recycle when they buy new electronics (an element already included in the law), have retail stores collect old electronics, and have state-sponsored electronics drop-offs perhaps combined with UW-Extension offices. Several respondents said they felt that the state should be providing more financial support to help safely collect electronics.

Moving Forward

As the quantity of e-waste increases, some local governments continue to find electronics collection inconvenient, expensive and burdensome despite the E-Cycle Wisconsin program. Other local governments seem pleased with the electronics recycling law and the E-Cycle Wisconsin program, even commenting that the law is an “excellent” approach to handling a growing waste stream. Without having a representative sample of local governments statewide, it is difficult to know if either of these opinions prevails. In either case, e-waste will continue to be a part of our lives and the E-Cycle Wisconsin staff will continue to tweak the program to address participant challenges.

The law is not currently set up to allow the DNR to directly provide financial support to local governments for electronics collection or to change how the E-Cycle Wisconsin program operates at the

local government level. However, several projects underway, listed below, may help support local governments in other ways.

- *Enhanced outreach tools:* The E-Cycle Wisconsin team is in the process of creating a video public service announcement to broadcast on television in spring 2014, and is also looking at digital advertising options. This will increase public awareness of the disposal ban and E-Cycle Wisconsin collection points. The team is also looking into a tool to allow governments to create e-waste collection brochures tailored to their local areas.
- *Direct outreach to RUs:* E-Cycle Wisconsin staff plan to mail a packet of hard-copy outreach tools, dumping enforcement suggestions, collector registration information and collection tips (including collecting and storing CRT devices) to RUs statewide within the next year. This may increase awareness about E-Cycle Wisconsin within local governments. Participation in E-Cycle Wisconsin may reduce or stabilize the financial burden of collecting e-waste on governments that are not currently registered collectors.
- *Retailer compliance:* The law requires electronics retail stores to educate their customers about Wisconsin's electronics disposal ban and electronics recycling options. The E-Cycle Wisconsin team is focusing on retailer compliance in the coming year, including enforcing the customer education requirement. We anticipate that knowledge of where to take electronics for recycling will reduce illegal dumping.



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