



Report on electronics recycling in Wisconsin K-12 schools

Wisconsin Department of Natural Resources Waste and Materials Management Program
December 2011

Wisconsin's electronics recycling law, 2009 Wisconsin Act 50, obligated the DNR to study methods to ensure proper recycling and disposal of electronic waste generated in schools. The results of the study and recommendations are in this report to the Legislature's natural resources committees. Overall, this report concludes that schools recycle most discarded electronics and E-Cycle Wisconsin has reduced schools' costs, but that we need to improve outreach to ensure all schools are aware of the program.

Legal requirements for schools

Prior to 2009 Wisconsin Act 50, hazardous waste laws required schools, along with businesses, governments and other institutions to properly manage unwanted electronics, with the primary options being to recycle electronics or manage them as hazardous waste. The electronics recycling law established absolute bans on disposal of a wide range of electronics in Wisconsin landfills or incinerators, regardless of the source. Electronics covered by the disposal ban include televisions, computers, computer monitors, other computer accessories, desktop printers, e-readers, DVD players/VCRs/DVRs, fax machines and cell phones.

Schools and E-Cycle Wisconsin

Wisconsin's electronics recycling law aims to make electronics recycling more accessible for households and K-12 schools through a manufacturer-funded program called E-Cycle Wisconsin. This program, which began operating in January 2010, requires manufacturers of TVs, computers and printers to recycle a certain amount of electronics from households and schools each year. Both public and Milwaukee Parental School Choice Program (MPSC) schools can participate in E-Cycle Wisconsin.

Since E-Cycle Wisconsin began, the DNR has taken several steps to reach out to schools and make sure they are aware of the electronics recycling law and new recycling opportunities under the manufacturer-funded program. Our efforts have included:

- Creating a schools-focused webpage with information about E-Cycle Wisconsin and requirements for managing e-waste (<http://dnr.wi.gov/org/aw/wm/ecycle/schools.htm>). The webpage includes a link for signing up to receive E-Cycle Wisconsin e-mail updates.
- Distributing information through a Department of Public Instruction (DPI) e-mail listserv.
- Sending information about E-Cycle Wisconsin to participants in the state's Green and Healthy Schools program and to the DNR's Education News e-mail listserv.
- Compiling a list of school district contacts and e-mailing basic information to this list.
- Writing an article for the Wisconsin Association of School Business Officials (WASBO) newsletter and presenting at a WASBO conference in May 2011.
- Presenting at the annual Wisconsin Education Association Council (WEAC) conference in October 2010 and distributing information at a conference booth.
- Providing information about electronics recycling in DNR teacher workshops.
- Incorporating electronics recycling information and activities into the DNR's recycling curriculum guide, *Keepin' It in the Loop*.
- Talking with registered E-Cycle Wisconsin recyclers and local recycling programs about the need to reach out to schools and making sure they had resources available (brochures, fliers, web links, etc.) to give to schools they work with.
- Conducting a survey in 2011 to find out what information schools are aware of and how the E-Cycle office can serve them (see results below).

Measuring awareness and needs

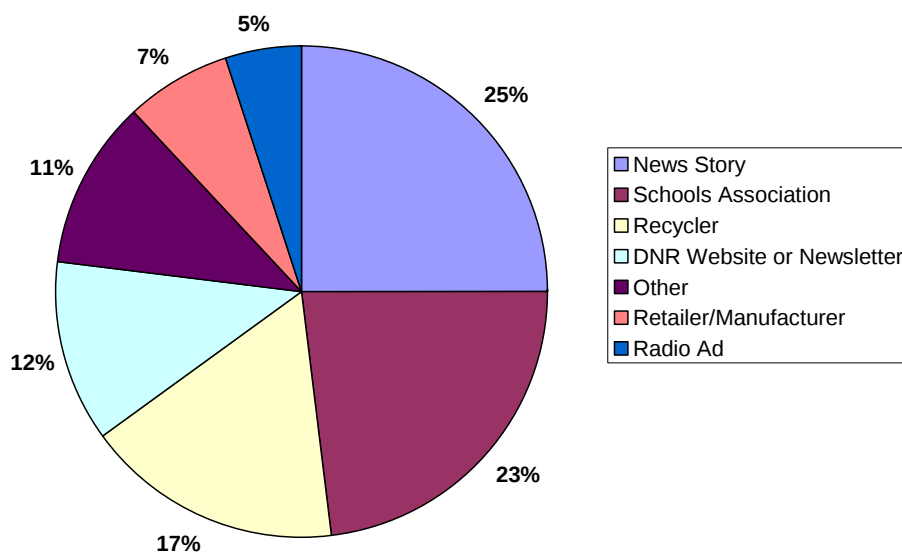
To better understand how Wisconsin schools manage their discarded electronics, E-Cycle Wisconsin staff conducted an online survey in summer 2011. We sent the survey through the WASBO e-mail listserv and the DPI Wisconsin Public K-12 listserv, e-mailed it to a list of school district administrators, and included a link to the survey in a WASBO newsletter.

We received 95 completed surveys, representing 22 percent of Wisconsin's 424 school districts. Of the respondents, 99 percent worked for public schools and 89 percent were answering for a school district. One person responded from a charter school and 12 respondents did not answer this question. Sixty-five respondents chose to enter their locations, showing us that we have wide geographic distribution around the state and a mix of urban and rural districts. However, many of Wisconsin's larger school districts and schools in northeastern and central Wisconsin are not represented in the responses.

Electronics recycling knowledge

Nearly all (96 percent) of the respondents had heard of the landfill and incinerator bans on electronics. While this is positive, it may reflect a bias in the respondents who chose to take our survey. Those already aware of electronics recycling law may be more interested in taking an electronics recycling survey than those unaware of the law. Even with this potential bias, less than half (46 percent) of respondents had heard of E-Cycle Wisconsin. Most respondents received their information from news

Figure 1: Where schools heard about the ban or E-Cycle Wisconsin

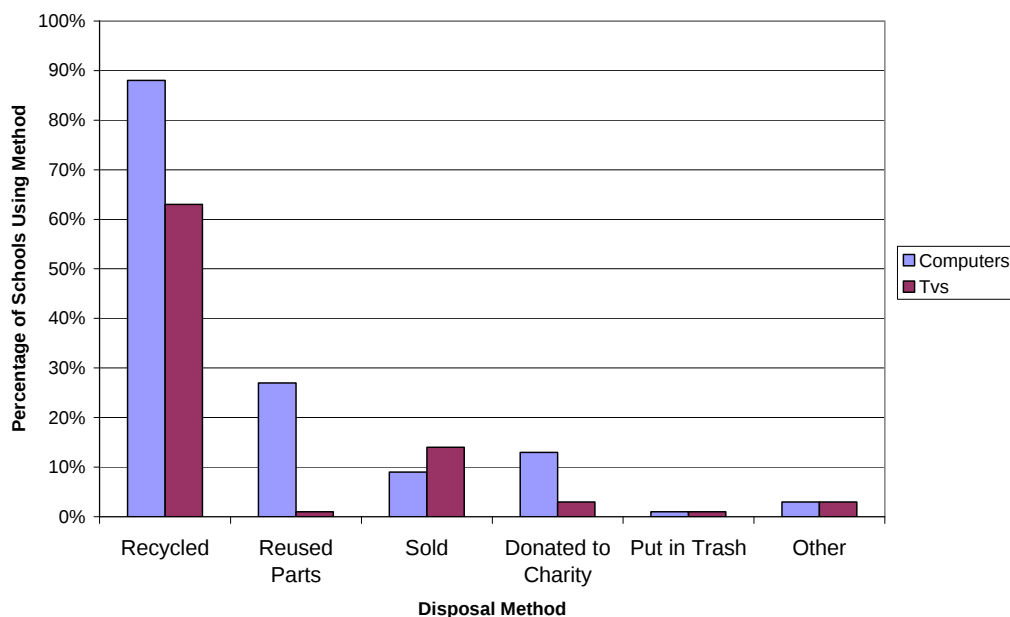


stories, schools associations or their electronics recyclers. Few respondents had learned of the program or disposal bans directly from the DNR website or newsletters. The radio, and electronics retailers and manufacturers were also not major sources of information for these respondents (see Figure 1).

Electronics disposal methods

All of the responding schools/districts own TVs and DVD players/VCRs/DVRs, desktop computers and computer monitors. Most own laptop computers, printers and fax machines. Several schools/districts also lease some of these electronics. Responding schools/districts generally keep computers and TVs for four years or longer; however, many had disposed of computers (95 percent) and TVs (71 percent) in the past 12 months. Eighty-seven percent of respondents who disposed of computers did so through recycling. Computers were also reused for parts and donated to charity. Most school/districts (64 percent) also chose to dispose of TVs through recycling. TVs were also sold or donated to charity. Only one respondent placed the district's computers and TVs in the trash (see Figure 2).

Figure 2: Electronics disposal methods at Wisconsin schools

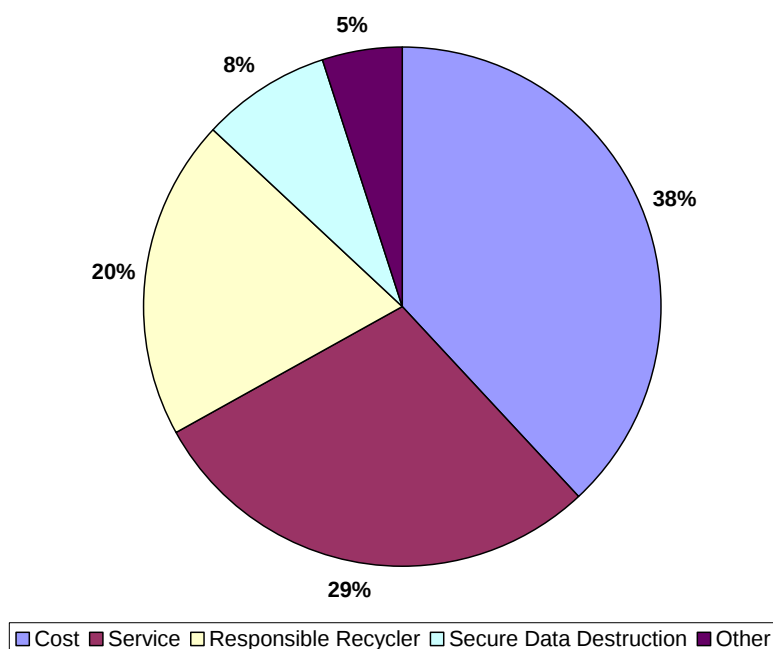


Choosing a recycler

When asked to identify the most important reason for choosing an electronics recycler, 38 percent of respondents selected cost to the school district. Service (e.g., pickup of electronics, wide range of electronics recycled) was most important to 29 percent. About one-fifth of respondents said responsible practices were most important, and only a handful chose data destruction or other reasons (see Figure 3).

One-quarter of responding schools/districts said they recycled electronics through E-Cycle Wisconsin (a handful of respondents did not know whether their recycler was part of the program). Of those who used an E-Cycle Wisconsin recycler, most saved money or received money back for the electronics. About a third of schools/districts who responded said they had recycled electronics through a retailer- or manufacturer-sponsored program for schools at some point.

Figure 3: Most important reason for choosing a recycler



Communicating with Wisconsin's schools

As mentioned earlier, news stories, schools associations and information from e-cyclers were the top three ways schools had heard about the disposal bans or E-Cycle Wisconsin in the past. Respondents indicated that a variety of outreach tools, including the DNR's E-Cycle Wisconsin webpages, fact sheets and articles in newsletters would help them better understand the benefits of E-Cycle Wisconsin. Many respondents listed the newsletters they are most likely to turn to for school business information.

School recycling totals under E-Cycle Wisconsin

Beginning with E-Cycle Wisconsin's second program year (July 2010 through June 2011), the DNR is asking collectors to voluntarily report the weight of electronics they collect from schools. (The law only requires collectors to report a total weight collected, not weights from households vs. schools, and not all collectors have detailed records of this.)

During program year 2, registered collectors took in about 35.1 million pounds of eligible electronics. Of this, collectors reported about 1.5 million pounds came from schools, or 4.4 percent. By comparison, under E-Cycle Washington (the only other state program with schools data) in 2010, about 470,000 or the 39 million pounds collections, or 1.2 percent, came from schools.

Moving forward: changes and recommendations

The best news from the survey is that the virtually all eligible electronic devices from respondent schools are being either reused or recycled. The survey confirms that E-Cycle Wisconsin has successfully saved money for schools that have used registered E-Cycle Wisconsin recyclers. At the same time, the survey confirms there is more work to be done. Not many schools were aware of having used E-Cycle Wisconsin as of summer 2011. While the responding school district officials knew of the landfill and incinerator bans, over half were not aware of the program established to provide them with affordable electronics recycling. E-Cycle Wisconsin's outreach to schools clearly needs to be expanded.

On the recycler side of the equation, an informal survey in late fall 2010 found that many were reaching out to school districts in their areas to let them know about the program. Several recyclers were working with more schools than they had before the electronics recycling law took effect, and were able to take electronics for free or offer small rebates to the schools because of the value of their electronics. Conversations with recyclers in 2011 have confirmed these trends.

Many of the recyclers are interested in working with school districts because electronics from schools are generally an easier, cleaner stream of electronics to process. A recycler can pick up a large volume of relatively uniform electronics at once, and in many cases there is still resale/refurbishment value in some of the equipment. As recyclers seek large volumes to fulfill their manufacturer contracts, schools are an attractive source of material.

E-Cycle Wisconsin seems to be working well for both schools and recyclers when schools know about the program. Therefore, our primary recommendations at this time focus on improving schools' awareness and understanding of electronics recycling opportunities. To expand awareness, E-Cycle Wisconsin program staff will take the following actions:

1. Create fliers that highlight the potential cost-savings associated with using E-Cycle Wisconsin registered recyclers and distribute the fliers to school district offices by mail. Post these fliers on e-mail listservs identified by survey respondents. Encourage registered recyclers to distribute these fliers to local schools.
2. Work with retailers that sell electronics to schools to ensure that they are aware of E-Cycle Wisconsin. Remind them to tell schools of the electronics recycling law whenever they complete a sale of new electronics.
3. Conduct a survey of schools again next fall using hard copies mailed to district offices in addition to links on listservs. This survey will be conducted during the school year and a reminder about the survey will be sent one week after the initial survey is sent to obtain a higher response rate than we received on this year's survey.