



Electronics recycling overview and choosing a responsible recycler

DNR electronics collection site workshop
October 29, 2019

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Wisconsin DNR

Landfill and incinerator bans

- Televisions
- Computers (desktop laptop, netbook, tablet)
- Computer monitors
- Computer accessories (mice, keyboards, external hard drives, etc.)
- Desktop printers & fax machines
- E-readers
- DVD players, VCRs and DVRs
- Cell phones

Which Electronics Are Banned From Wisconsin Landfills?

Wisconsin's electronics recycling law bans most electronics from landfills and incinerators. Electronics contain valuable materials and must be reused or recycled. To find a collection site near you, visit dnr.wi.gov and search "ecycle."



- ❑ Computers: desktop, laptop, netbook, notebook
- ❑ TVs and computer monitors
- ❑ Cell phones, tablets and e-readers
- ❑ Fax machines and desktop printers, including printers combined with fax machines, scanners and copiers
- ❑ Computer accessories, including keyboards, mice, hard drives, scanners, speakers, flash drives and other devices
- ❑ DVD players, VCRs, DVRs and other video players



Wisconsin Department of Natural Resources
Bureau of Waste and Hazardous Materials Management
P.O. Box 70701, Madison, WI 53707 • 608/266-3111
DNR 607: opinion@dnr.wisconsin.gov

*Wisconsin Department of Natural Resources website: dnr.wisconsin.gov
Regulation of hazardous waste and hazardous materials is a complex process. Please contact a DNR representative for more information. Copies of this notice are available at the DNR office.
*This notice is for informational purposes only. For more information, contact the DNR office at 608/266-3111 or dnr.wisconsin.gov.

PH16-001-1427 2015

Wisconsin Department of Natural Resources



dnr.wi.gov "ecycle"

E-Cycle Wisconsin

E-Cycle Wisconsin process



Manufacturer's role



Manufacturers sell electronics through retailers, distributors and/or directly. Some of these products are sold into Wisconsin, which has a law covering electronics manufacturers.



The law assigns manufacturers annual "recycling targets" based on the weight of covered products the manufacturer sells in Wisconsin.



¢/lb.

Manufacturers make agreements with registered recyclers or with brokers that work with registered recyclers to pay a certain number of cents per pound to meet recycling targets.



Manufacturers fulfill their contracts with recyclers, keeping costs lower for the public.



Requirements for collectors

- Must register with E-Cycle Wisconsin **IF** working with a registered recycler or another registered collector
 - Annual report/re-registration submitted to DNR (no fee)
 - Sites/events where electronics collected from the public are reported and displayed on DNR's website (can include restrictions, like community residents only)
 - [Collector FAQ](#)
- Being part of E-Cycle Wisconsin not a requirement if not working with registered recyclers/collectors
- Solid and hazardous waste requirements and BMPs apply to everyone

Requirements for non-households

- Disposal bans apply to everyone
- For equipment not specifically banned, need to determine whether it is hazardous waste and manage accordingly
- Keep data security laws and best practices in mind

A Guide for Businesses, Institutions, Governments and Non-Profits

Managing Used Electronics

Electronics have become central to the workplace. Although they simplify and improve many daily tasks, electronics also create an e-waste problem. Rapid innovations in technology lead to millions of electronics coming to the end of their useful lives every year. In Wisconsin, most electronic devices are banned from landfills and incinerators, and must be reused or recycled, or managed as hazardous waste when you are done with them.

This guide will help you navigate the laws governing used electronics and assist you in managing workplace electronics in a safe, legal and responsible manner.

Each electronic device contains valuable and harmful materials that need to be managed properly.

Legal Requirements for Managing Used Electronics

Lead, cadmium, mercury and other heavy metals are used in many consumer electronics. Steel, aluminum, precious metals, glass and plastics are also in our electronics. If electronics are landfilled, dumped or sent overseas to unregulated recyclers, toxic materials can get into the soil, air and water; workers can be hurt, and valuable materials are lost. For these reasons, there are several laws governing disposal of used electronics.

Wisconsin's electronics recycling law, 2009 Wisconsin Act 50, banned most electronics from state landfills and incinerators. In addition to the electronics specifically banned from disposal (see *Electronics Banned from Wisconsin Landfills* at right), most other business electronics must be reused or recycled, or managed as hazardous waste under federal and state hazardous waste laws.

The combination of these laws can be distilled into this simple message:

When businesses and other workplaces need to dispose of old electronics, they must send them to:

- 1) an organization that is willing to reuse them;
- 2) a legitimate electronics recycler; or
- 3) a hazardous waste management facility.

Most recyclers will work with you to handle all of your electronic devices, whether or not they are banned from disposal. Electronics may be sent to landfills or incinerators only if they are not on the banned list and if you, the generator, can demonstrate through testing that the equipment does not have any hazardous waste characteristics.

For more information on hazardous waste characteristics, see *Managing Unwanted Electronics and Component Parts in the Resources* section on back.



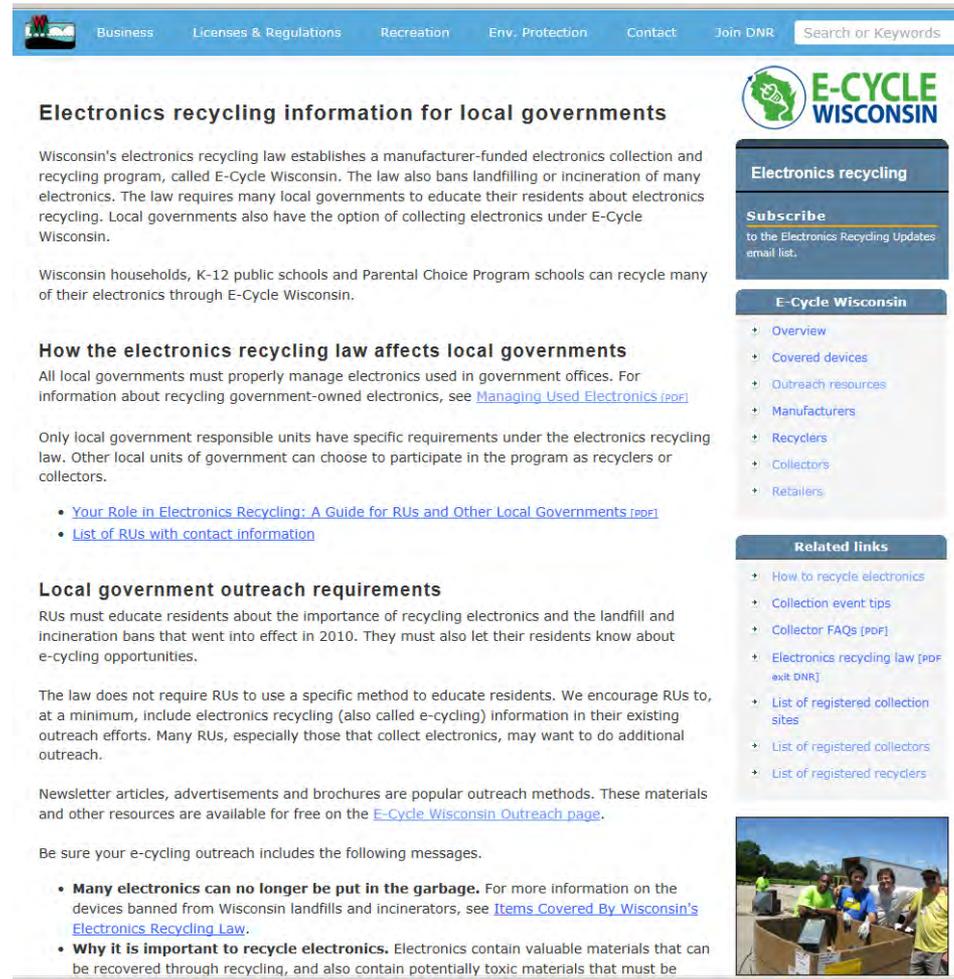
Electronics Banned from Wisconsin Landfills and Incinerators

- Televisions
- Computers (desktop, laptop, netbook and tablet computers)
- Desktop printers (including those that scan, fax and/or copy)
- Computer monitors
- Other computer accessories (including mice, keyboards and speakers)
- DVD players, VCRs and DVRs
- Fax machines
- Cell phones

Local government requirements

- Not required to collect electronics or register with E-Cycle Wisconsin
- RUs must provide information to residents on disposal ban & electronics recycling

<https://dnr.wi.gov/topic/Ecycle/Government.html>



The screenshot shows the E-Cycle Wisconsin website. The navigation bar includes links for Business, Licenses & Regulations, Recreation, Env. Protection, Contact, and Join DNR, along with a search bar. The main content area is titled "Electronics recycling information for local governments" and contains several sections: "Electronics recycling information for local governments" (describing the law and local government options), "How the electronics recycling law affects local governments" (explaining requirements for government-owned electronics), and "Local government outreach requirements" (detailing education and outreach needs). A sidebar on the right features a "Subscribe" button for an email list, a "E-Cycle Wisconsin" menu with links to Overview, Covered devices, Outreach resources, Manufacturers, Recyclers, Collectors, and Retailers, and a "Related links" section with various resource links. At the bottom right, there is a photograph of people participating in an electronics recycling event.

Electronics recycling information for local governments

Wisconsin's electronics recycling law establishes a manufacturer-funded electronics collection and recycling program, called E-Cycle Wisconsin. The law also bans landfilling or incineration of many electronics. The law requires many local governments to educate their residents about electronics recycling. Local governments also have the option of collecting electronics under E-Cycle Wisconsin.

Wisconsin households, K-12 public schools and Parental Choice Program schools can recycle many of their electronics through E-Cycle Wisconsin.

How the electronics recycling law affects local governments

All local governments must properly manage electronics used in government offices. For information about recycling government-owned electronics, see [Managing Used Electronics \(pdf\)](#)

Only local government responsible units have specific requirements under the electronics recycling law. Other local units of government can choose to participate in the program as recyclers or collectors.

- [Your Role in Electronics Recycling: A Guide for RUs and Other Local Governments \(pdf\)](#)
- [List of RUs with contact information](#)

Local government outreach requirements

RUs must educate residents about the importance of recycling electronics and the landfill and incineration bans that went into effect in 2010. They must also let their residents know about e-cycling opportunities.

The law does not require RUs to use a specific method to educate residents. We encourage RUs to, at a minimum, include electronics recycling (also called e-cycling) information in their existing outreach efforts. Many RUs, especially those that collect electronics, may want to do additional outreach.

Newsletter articles, advertisements and brochures are popular outreach methods. These materials and other resources are available for free on the [E-Cycle Wisconsin Outreach page](#).

Be sure your e-cycling outreach includes the following messages.

- **Many electronics can no longer be put in the garbage.** For more information on the devices banned from Wisconsin landfills and incinerators, see [Items Covered By Wisconsin's Electronics Recycling Law](#).
- **Why it is important to recycle electronics.** Electronics contain valuable materials that can be recovered through recycling, and also contain potentially toxic materials that must be

Electronics recycling

Subscribe
to the Electronics Recycling Updates email list.

E-Cycle Wisconsin

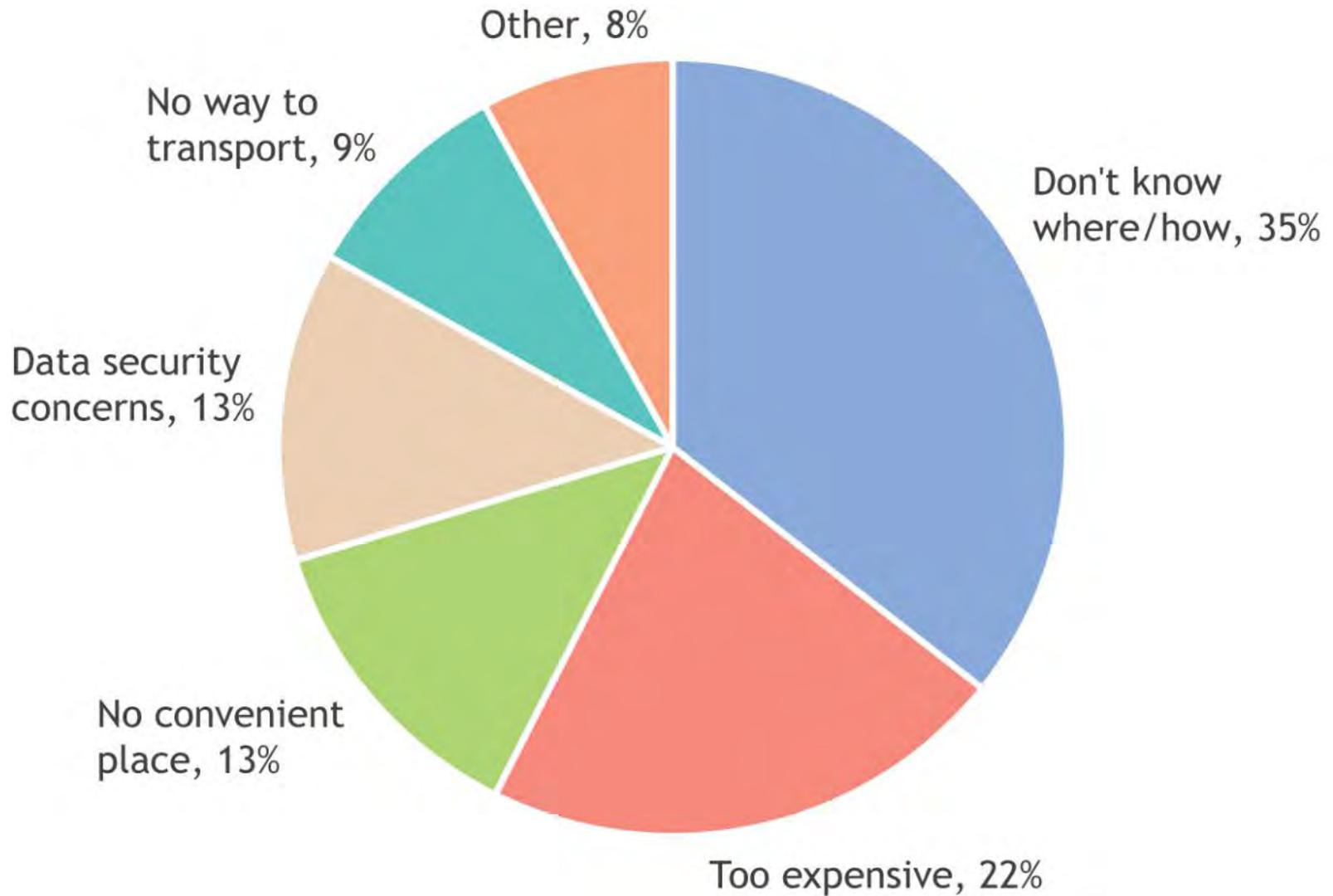
- Overview
- Covered devices
- Outreach resources
- Manufacturers
- Recyclers
- Collectors
- Retailers

Related links

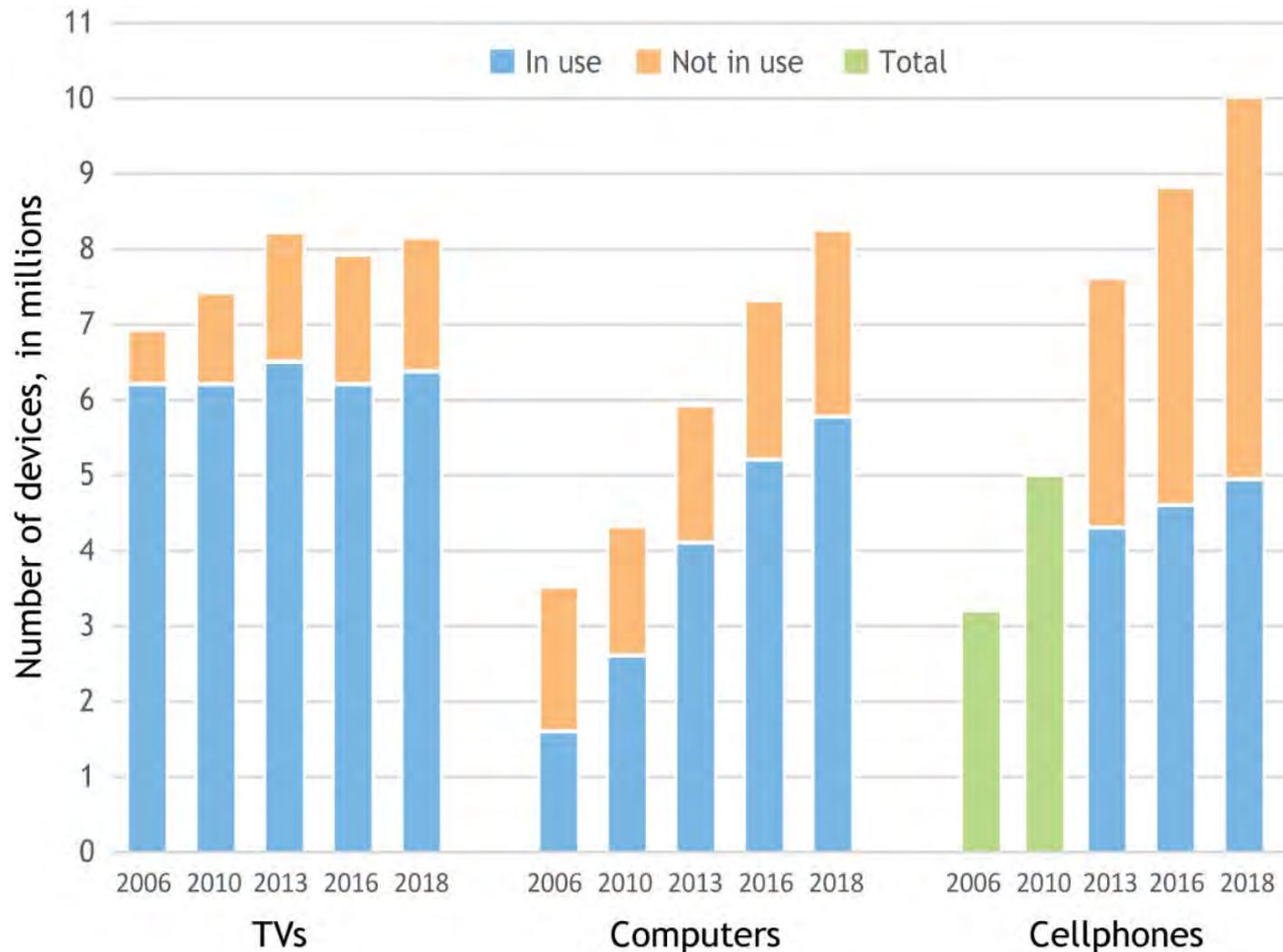
- [How to recycle electronics](#)
- [Collection event tips](#)
- [Collector FAQs \(pdf\)](#)
- [Electronics recycling law \(pdf exit DNR\)](#)
- [List of registered collection sites](#)
- [List of registered collectors](#)
- [List of registered recyclers](#)



Barriers to recycling electronics



Electronics in WI households



DNR's free outreach resources

<https://dnr.wi.gov/topic/Ecycle/Outreach.html>

E-Cycle Wisconsin outreach resources

Local governments, retailers, collectors, recyclers, manufacturers and others can use the outreach materials on this page to educate their residents and customers about E-Cycle Wisconsin and Wisconsin's electronics recycling law. All materials on this page are available for free use unless otherwise noted.

[Publications](#) | [Newsletter articles](#) | [Graphics and photos](#) | [Videos and PSAs](#)

How to order E-Cycle Wisconsin publications

Anyone is welcome to order free, printed copies of the E-Cycle Wisconsin publications. If you would like editable electronic versions or high-resolution files to print the publications yourself, contact DNRWae-cycling@Wisconsin.gov. We can help you determine the best way to add your local information to these publications.

[E-Cycle Wisconsin Publications Order Form](#) [exit DNR]

Official E-Cycle Wisconsin publications

The tri-fold **E-Cycle Wisconsin brochure** describes the E-Cycle Wisconsin program and provides consumers with basic information about electronics recycling. It is available in both color and grayscale (black and white) formats.

- [E-Cycle Wisconsin color brochure \(WA-1426\)](#) [PDF]
- [Hmong translation \(WA-1498\)](#) [PDF]



Electronics recycling

Subscribe

to the Electronics Recycling Updates email list.

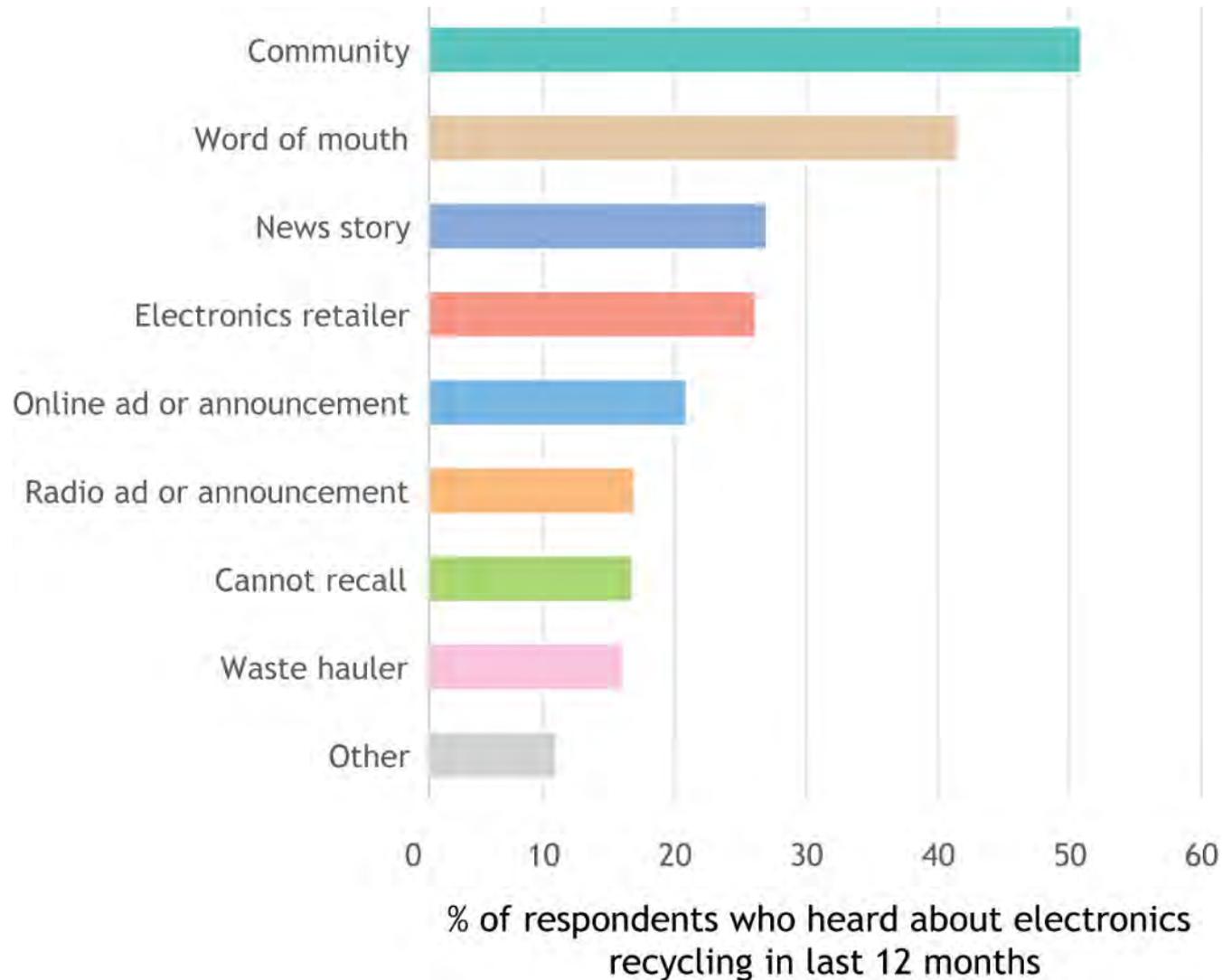
E-Cycle Wisconsin

- [Overview](#)
- [Covered devices](#)
- [Manufacturers](#)
- [Recyclers](#)
- [Collectors](#)
- [Retailers](#)
- [Local governments](#)

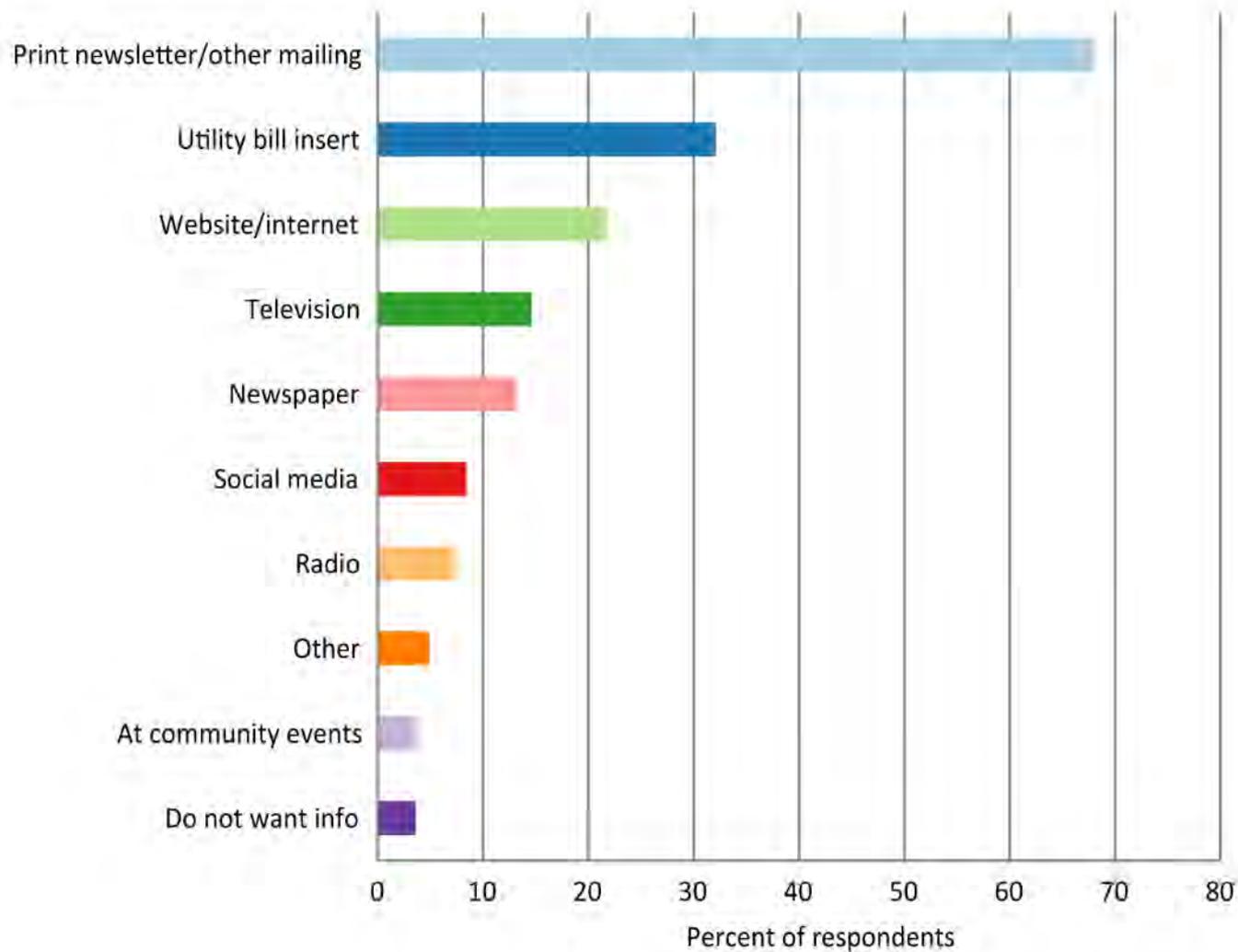
Related links

- [How to recycle electronics](#)
- [Collection event tips](#)

Where people hear about e-cycling



Preferred outreach methods



DNR's collection sites list

Wisconsin Department of Natural Resources



Which items do you need to e-cycle?

- | | | |
|--|---|---|
| <input type="checkbox"/> Cell phones | <input type="checkbox"/> Computer accessories | <input type="checkbox"/> Computer monitors |
| <input type="checkbox"/> DVD players | <input type="checkbox"/> DVRs | <input type="checkbox"/> Desktop computers |
| <input type="checkbox"/> Desktop printers/printer combos | <input type="checkbox"/> E-readers | <input type="checkbox"/> FAX machines |
| <input type="checkbox"/> Laptop/netbook/tablet computers | <input type="checkbox"/> Other electronics | <input checked="" type="checkbox"/> Televisions |
| <input type="checkbox"/> VCRs | | |

Select the Mail-back list tab below to find mail-back/trade-in programs offered by manufacturers. Most programs are free.

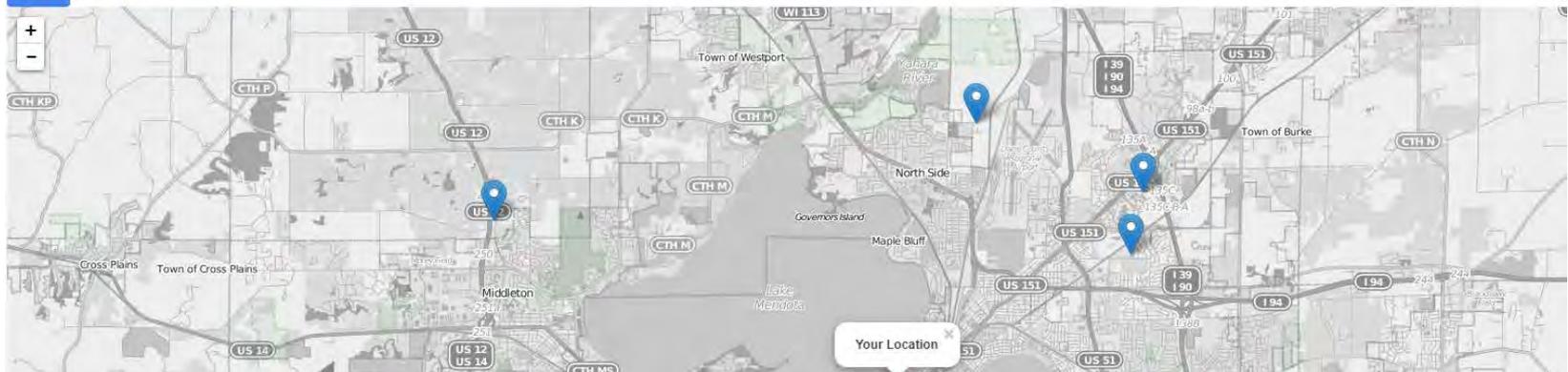
[Call2Recycle](#) [exit DNR] has additional collection sites for **batteries and cell phones**.

Where were the items used?

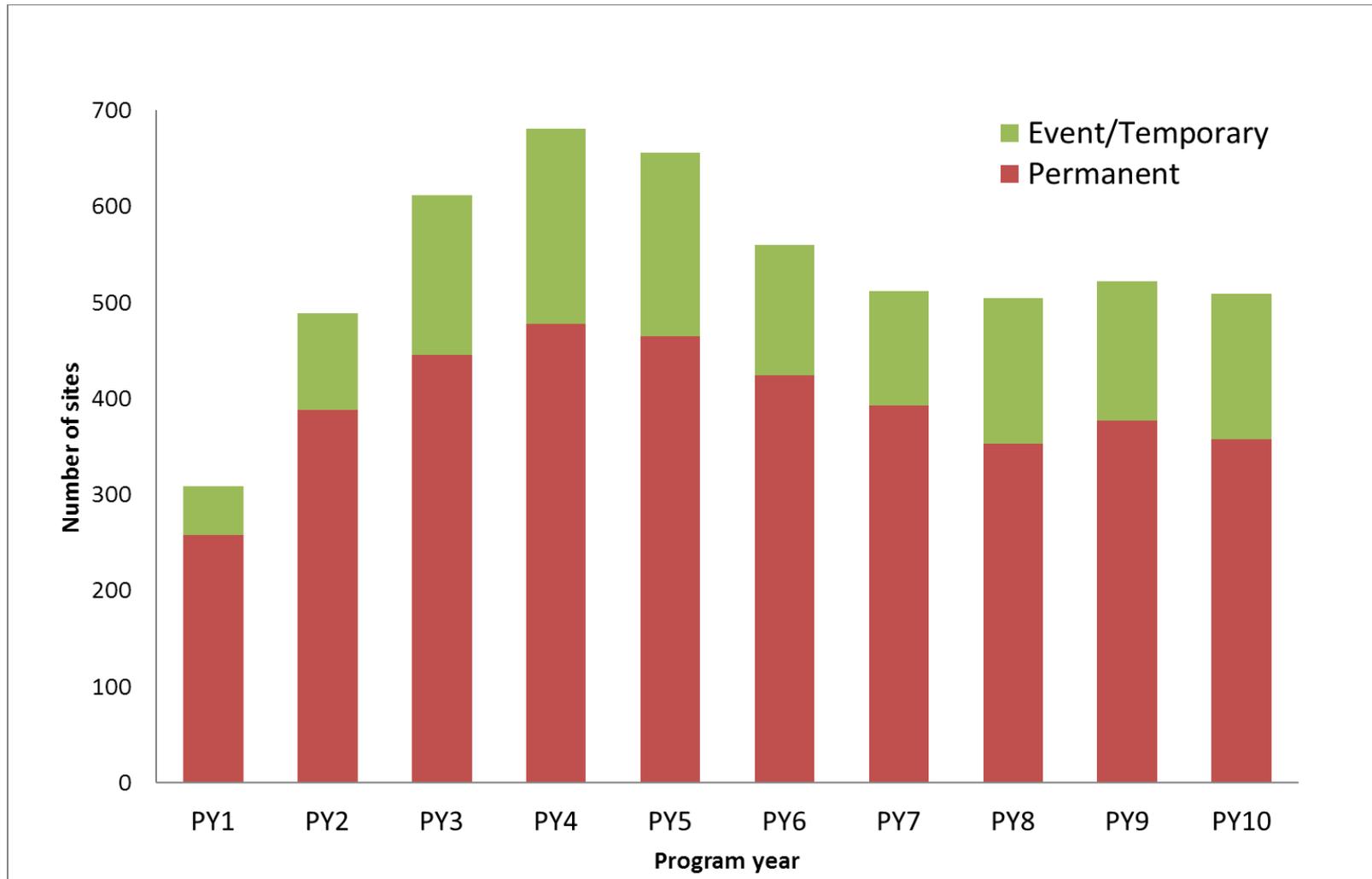
- Households
- Schools
- Businesses
- Others

Don't see a site in your area? Many communities host one-day collection events during spring, summer and fall. Events are added here once scheduled, so check back if you don't see something today.

[Map](#) [List by county](#) [Mail-back list](#)

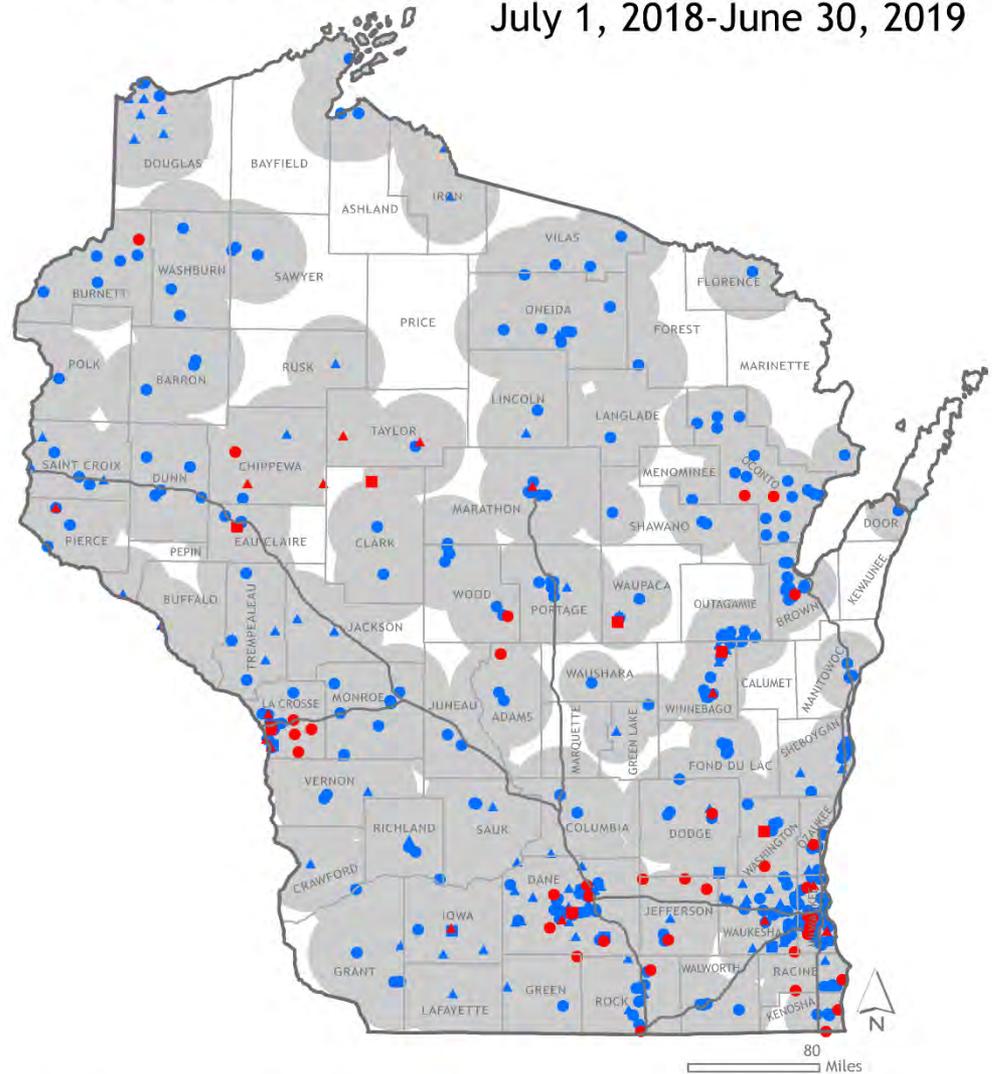


Registered collection sites



Registered E-Cycle Wisconsin Collection Sites

July 1, 2018-June 30, 2019



Collection sites registered during program year 9, with 15-mile (north, west and southwest) or 10-mile (northeast and southeast) radius circles showing average distance willing to drive to recycle electronics.

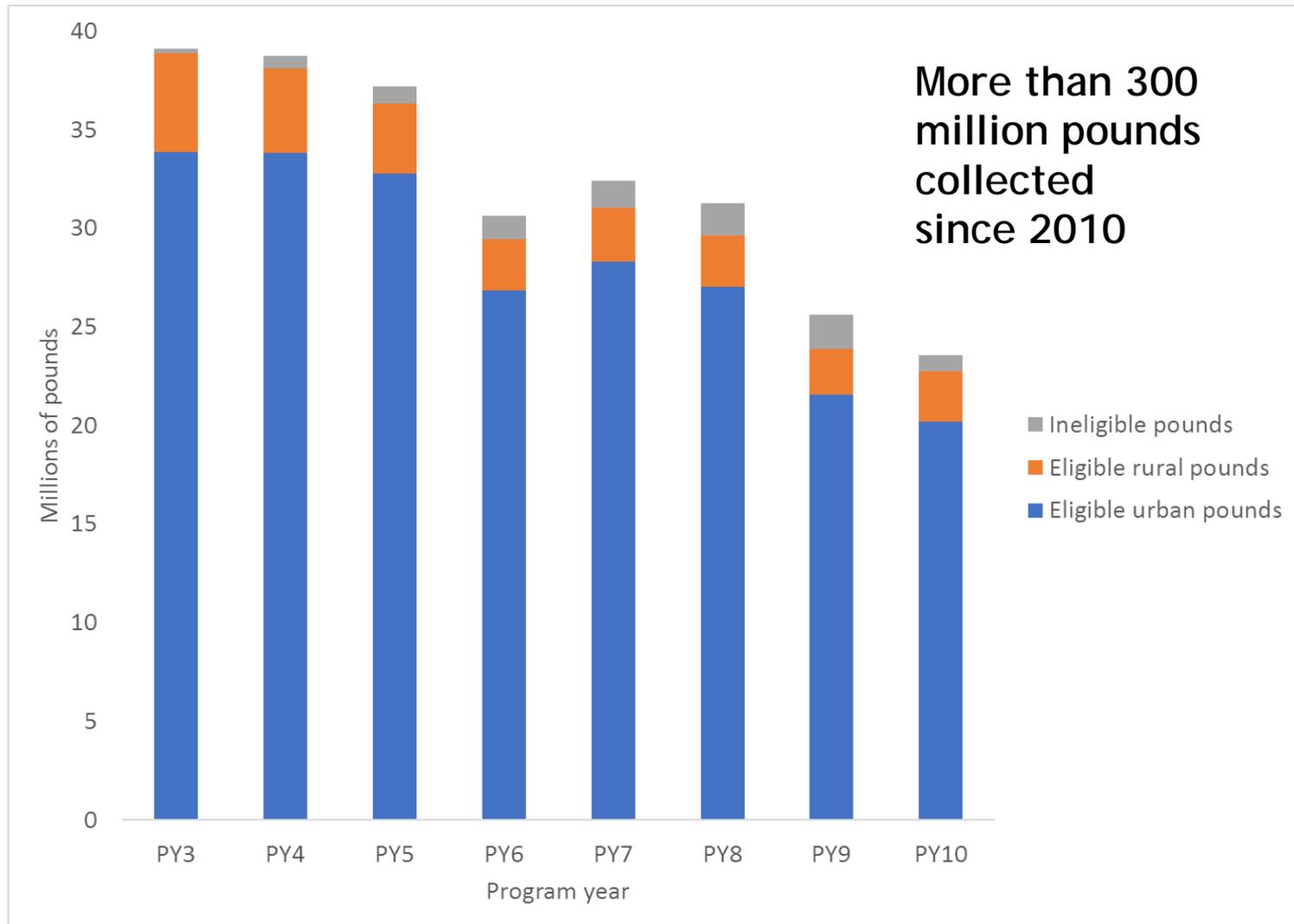
15-mile coverage area of collection sites*
10-mile coverage area of collection sites*

● Permanent collection sites
▲ One-day collection sites
■ Temporary collection sites

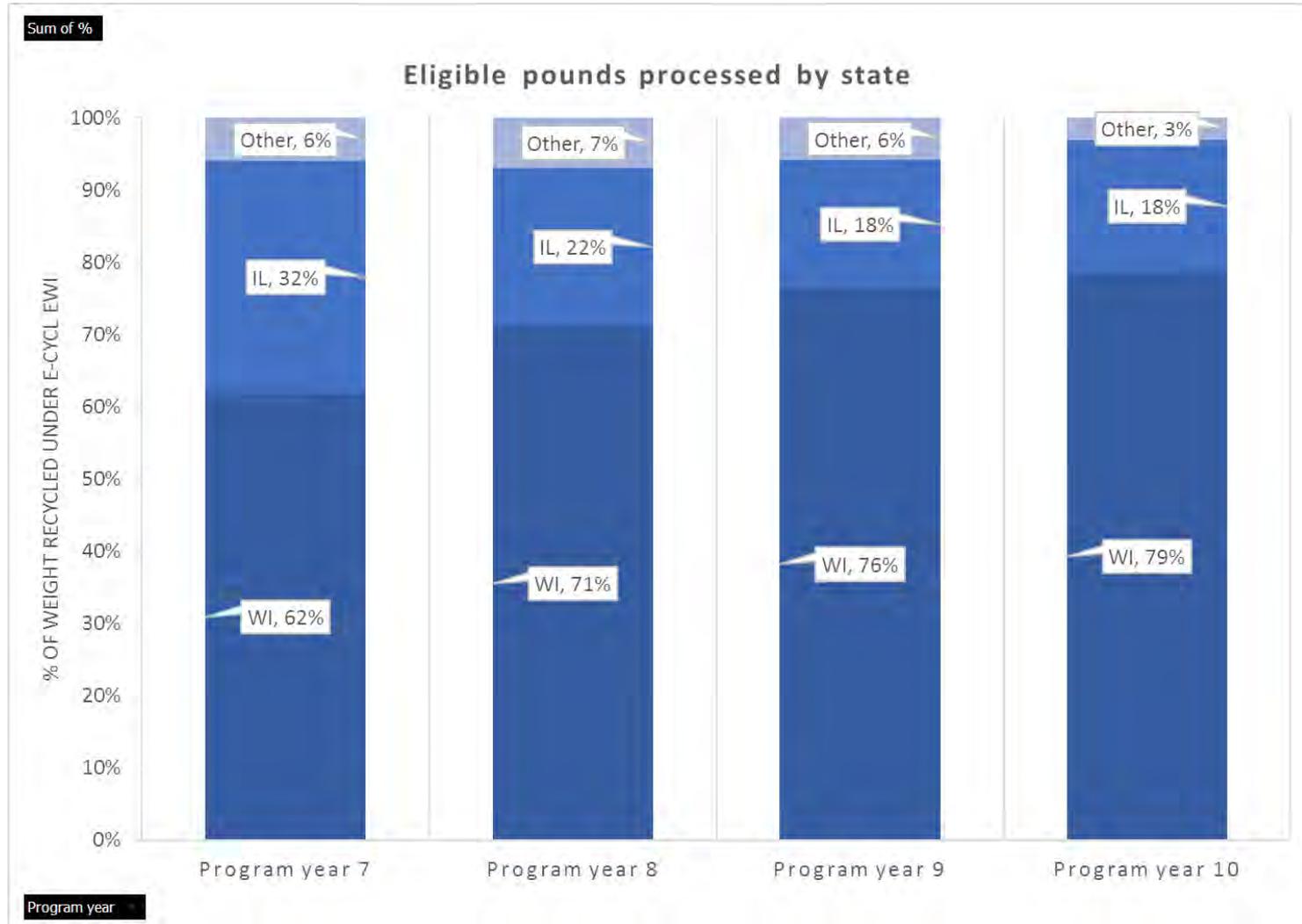
— Interstate highways

*Based on the 2018 WDNR Household Survey question, "How far would you be willing to travel to recycle electronics?"
● ■ ▲ Collection sites available only to employees and customers of a company or residents of a village, town, city or county.

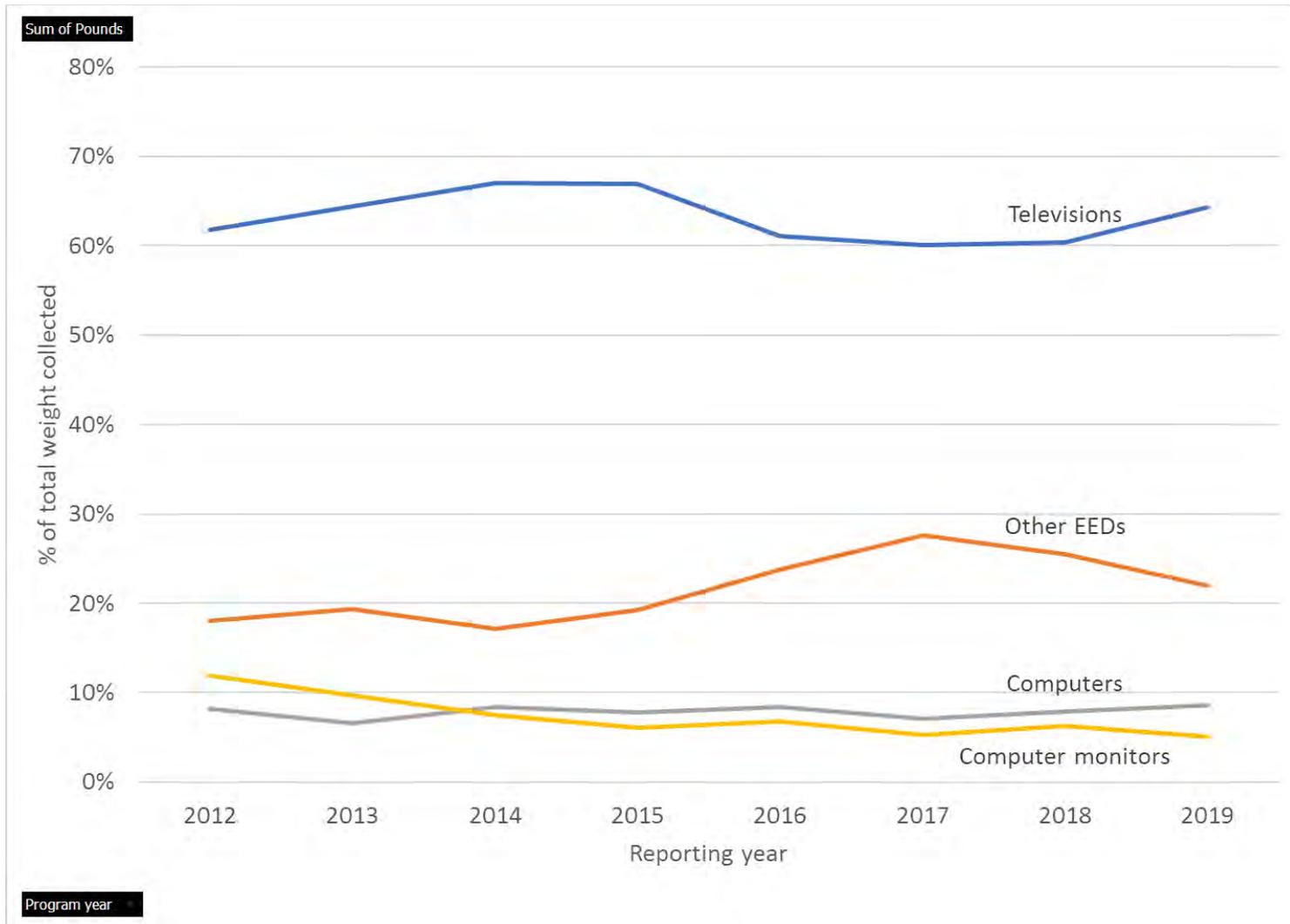
Pounds collected by program year



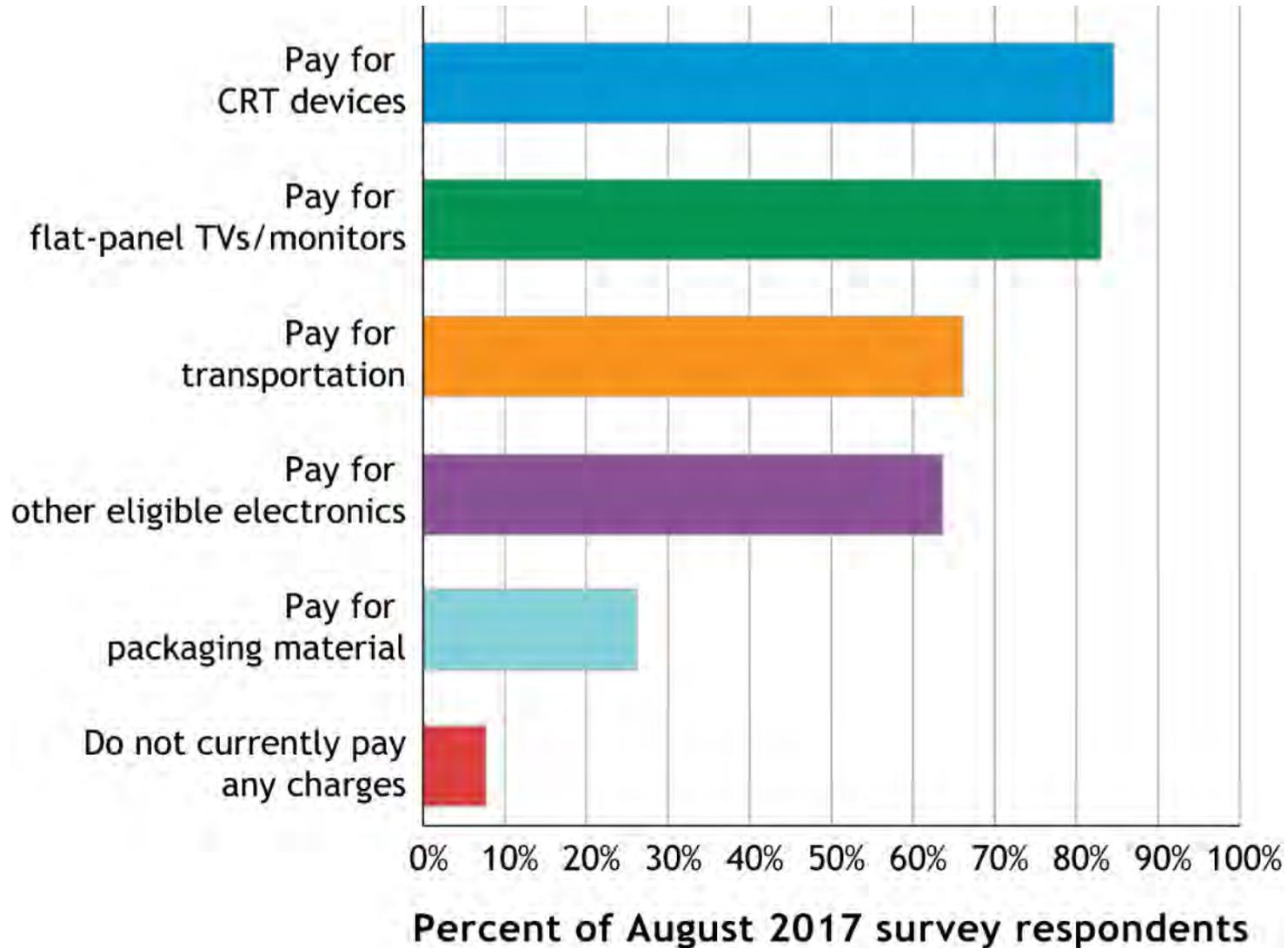
Where collected materials go



TVs dominate collection



What collectors pay to recyclers



Don't be on the hook...



...for illegally dumped electronics.

Play it safe. Choose a responsible recycler.

The proper recycling of your electronics is your responsibility. If your used electronics are found in Wisconsin's forests or on an empty lot – or even at a landfill – you may be on the hook for the costs of cleanup and proper recycling, in addition to a littering fine.





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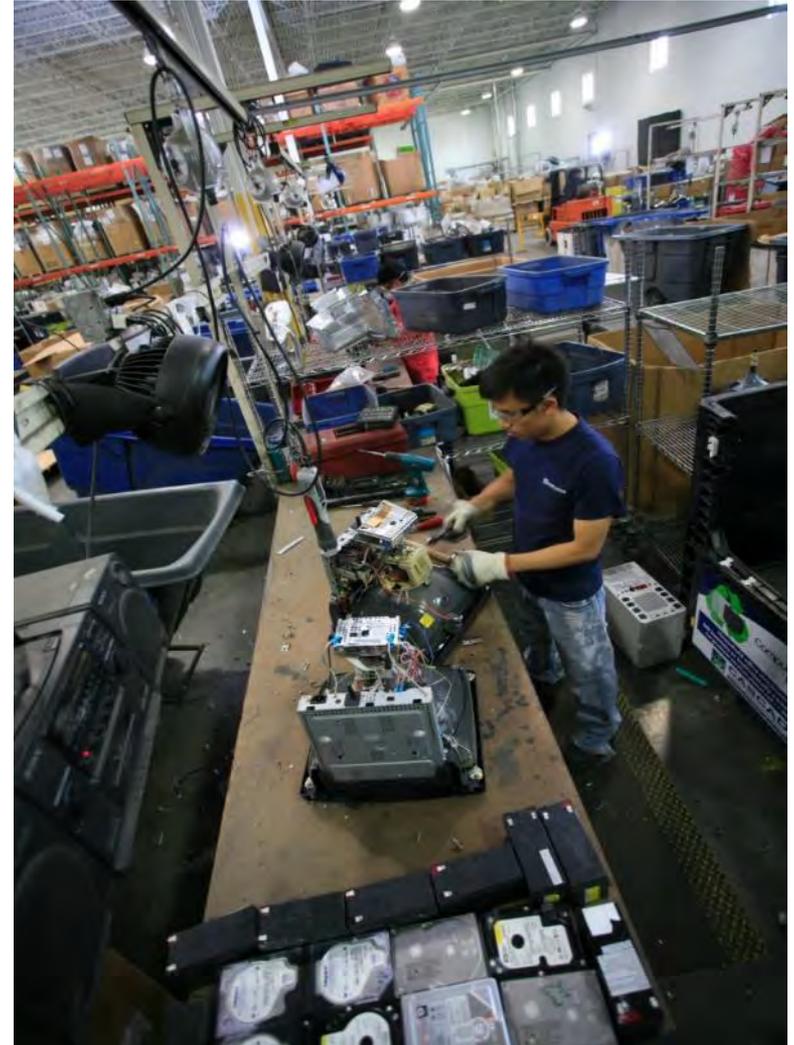


Choosing a recycler

- See DNR [tips on choosing a recycler](#)
- Ask questions about services
 - Do they service your area?
 - Can they accept the types of materials you want to recycle?
 - Do they provide the service you need, e.g. collection events, packaging and loading, etc.?
 - Contract length and change/cancellation provisions
 - Can they provide references?
- Do they hold any special certifications?
 - R2: <https://sustainableelectronics.org>
 - e-Stewards: <http://e-stewards.org/>
 - ISO: <https://www.iso.org/home.html>
 - NAID: <http://www.naidonline.org>

Know what happens to your materials

- Visit your recycler or talk to others who have
- Processing materials in-house?
- Rate of recycling versus disposal
- Where are electronics and components going?
- What documentation do they provide?
- Hazardous material management
- **Not just a one-time task**



Problems at registered recyclers

- Market conditions make fees necessary
 - CRTs
 - Flat panels
 - Plastics markets
- E-Cycle WI has 16 registered recyclers compared to a high of 32 in program year 3
- Be vigilant in verifying your recyclers are properly handling materials - where are components going downstream?

Data security

- Many devices now store data—cell phones, printers, TVs, fitness trackers—not just computers and tablets
- Make sure your recycler can describe and demonstrate its process to maintain “chain of custody” and properly wipe/destroy data
- Look at your own procedures—unsupervised containers at sites with no cameras/security may not work
- Where do you store old electronics in your workplace?



Contacts

- DNR website: <https://dnr.wi.gov/topic/ecycle>
 - [List of registered recyclers](#)
 - [List of registered collectors](#)
- Sarah Murray, E-Cycle WI coordinator
sarah.murray@wisconsin.gov 608-264-6001
- Marcy McGrath, E-Cycle WI compliance coordinator
marcy.mcgrath@wisconsin.gov 920-662-5167

