

Best Management Practices for Electronics Collection Sites

Collector Workshop

October 29, 2019

Amy Dubruiel – WDNR



Best management practices

Collector Best Management Practices: Electronic Waste

Proper handling of electronic waste protects site workers and the public and prevents pollution. It can also make electronics much more recyclable, and therefore profitable, than improper handling. The following list of best management practices for electronics collection sites could help save the entire electronics collection system money while making your site safer. Most of the suggestions below are not laws or specific requirements under the E-Cycle Wisconsin program, but will help protect human health and the environment.

Site selection

The ideal place to store collected electronics is in an indoor location. The next best option is in covered containers. The idea behind both storage techniques is to keep electronics out of the elements so that they do not crack, leak and weather. If covered storage is not possible, frequent pick-ups by your recycler can help make sure electronics remain recyclable.

Broken cathode ray tubes (CRTs) must be stored in a building with roof, floor and walls and in a container designed and constructed to contain dust.

Electronics contain valuable materials and sensitive data. It is a good idea to secure your site by locking buildings and gates and monitoring with video cameras to protect from theft, vandalism and illegal dumping. You may also want to store electronics in locked containers, especially if it is difficult to prevent unwanted access to your site.



This covered roll-off container provides indoor storage and can be locked for security purposes.

Storage

Every collection site stores electronics in slightly different ways. Regardless of storage methods the following three practices apply:

- ✓ Keep all storage areas clean and orderly.
- ✓ Have an attendant on duty during open hours for security and to prevent mishandling and breakage of electronics.
- ✓ Send all materials off-site for recycling within one year of their arrival.

Work with your recycler to find the best way to store and package electronics so that it works for both of you while minimizing breakage. Recyclers will often provide you with packaging and may assist you in loading materials onto a truck. The suggestions below work for most sites, but if you use large roll-off containers only the stacking practices may apply to you.

- BMPs are not requirements and may be tailored to your site
- Hazardous waste requirements are reduced for electronics destined for recycling if certain standards are met

DNR collector inspections

- What E-Cycle Wisconsin staff look for during inspections
- Other DNR staff may come to sites

What to Expect When You're Inspected: A guide for E-Cycle Wisconsin registered collectors

What is the purpose of an inspection?

DNR staff conduct routine inspections of registered E-Cycle Wisconsin collectors to make sure that they are following program requirements and to see that sites are operating in an environmentally sound manner. Inspections are intended to be a learning opportunity to help you manage your site in the best way possible. Feel free to ask your inspector for advice on how to store electronics on your particular site or for recommendations on record-keeping. The primary intent of an inspection is to improve your site.

How will I know that I'm being inspected?

A DNR inspector will typically call the primary contact for a collection site in advance to schedule an inspection. This will give you time to gather all of the records the inspector will be looking for (see below) and ensure that others involved in your operation can be present if they want. It also gives you time to think of any questions you would like to ask an inspector. Unannounced inspections are possible, but inspections tend to be more productive when scheduled in advance.

What is the inspector looking for?

Records

You are expected to have records that show the total weight of eligible electronic devices (EEDs) you collected and the name(s) of recyclers or other downstream vendors that received the electronics. These records should show how EEDs are kept separate from non-EEDs. They should also show how materials are tracked if your site receives materials from both urban and rural counties. You must keep records for three years and will need to have them available for the inspector.

Processing

The inspector will check to see that only whole, intact EEDs are being counted under the program. Registered E-Cycle Wisconsin collectors may not process or disassemble any electronics that are counted toward manufacturer targets. "Disassembly" includes removing parts of electronics, clipping cords, and removing batteries or toner cartridges. The only exception to this rule is if your recycler has asked you to do some small disassembly for safety or packaging reasons and you are still sending everything to the recycler.

If you are processing electronics that will not be counted towards manufacturer targets, the inspector will check to see that you are following applicable laws.

Storage

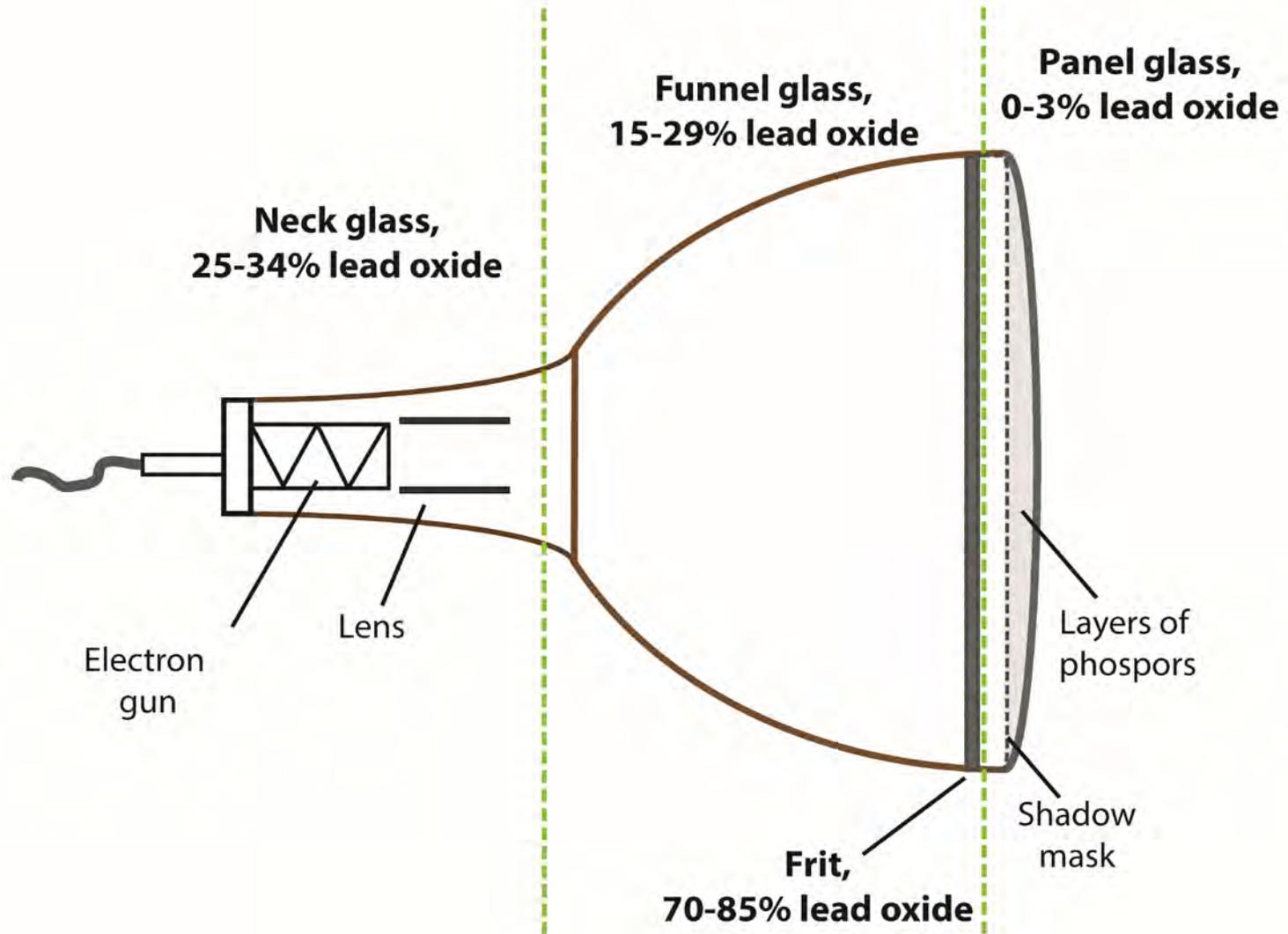
The inspector will check to see that you are storing broken cathode ray tubes properly, since they are considered hazardous waste. Broken CRTs must be stored in a building with a roof, floor and walls and placed in a closed container that is designed to minimize releases of CRT glass to the environment. An inspector will look to see that containers of used broken CRTs are labeled with the following three items: the date the container was first put into use, "Waste Cathode Ray Tubes - Contains Leaded Glass" and "Do Not Mix with Other Materials."

Requirements

- Clean up and properly label/store broken leaded glass
- Send off materials to legitimate recyclers in a timely manner (no stockpiling)
- Maintain records (3 years)
- Report annually if in E-Cycle Wisconsin program
- If enrolled in program, record only eligible materials



Hazardous materials



Hazardous materials



Site selection

- A building is best
- Enclosed trailers work too
- If storing outdoors, remove materials frequently
- Broken CRTs MUST BE containerized OR stored indoors
- Think about view from the road



Outdoor storage



Sorting



- Keep business materials separate
- Appliances don't count

- Label containers with contents and date that you started placing items in it



Site security



- Gated
- Cameras
- Citations posted

- Electronics containing sensitive data need additional security



Site security



Preparing electronics for recyclers

- Talk to your recycler - are there things you can do with sorting to reduce your costs? What can they provide for packaging?
- Minimize chance for breakage
- Keep site safety in mind
- Be aware of devices with batteries



Recordkeeping

- Keep clear separation between eligible and non-eligible materials
- Keep records of where materials go downstream—including end markets for hazardous materials
- BMP—keeping your own records on top of what the recycler provides
- Record all collection events or sites

Fee options

- Price/lb
- Price/item
- Flat fee to access site, additional charge for certain items



Surviving tough economics

- Collection frequency: events vs. permanent sites
- Partner with other collectors to make full loads, pool resources
- Charge a fee
- Restrict access (customers, employees or residents)
- Restrict number of items per visit
- Restrict type of items

Site operator training

- Establish a procedure for broken leaded glass
- “Used cathode ray tubes - contains leaded glass” and “Do not mix with other glass materials”
- “Leaded glass from televisions or computers” and “Do not mix with other glass materials”
- Battery and lamp safety



Site operator training

How to handle...

UNIVERSAL WASTE

[As per NR 673 W.A.C. Refer to code for details.]



LAMPS

Labels must read:

- "Universal Waste - Lamps"
- "Used Lamps"
- "Waste Lamps"

NOTE: "BULBS" IS NOT A PROPER LABEL.

TRAIN

Employees who handle universal waste require training. Keep training records.

KEEP CLOSED

All containers of used lamps, antifreeze, pesticides and mercury-containing equipment must be kept closed.

LABEL

All containers or individual items must be correctly labelled.

DATE

Containers or individual items must be labelled with the date when the item was first placed in the container or the date when the item became waste.

REMOVE

Waste must be picked up or taken for recycling within one year of the date on the container.



BATTERIES

Labels must read:

- "Universal Waste - Batteries"
- "Used Batteries"
- "Waste Batteries"



RECALLED OR UNUSED PESTICIDES

Labels must read:

- "Universal Waste - Pesticides"
- "Waste Pesticides"

and have original product label



ANTIFREEZE

Label must read:

- "Used Antifreeze"



MERCURY-CONTAINING EQUIP.

Labels must read:

- "Used Mercury-Containing Equipment"
- "Waste Mercury-Containing Equipment"

EQUIPMENT: THERMOSTATS, SWITCHES, THERMOMETERS, BAROMETERS



GOT A LEAK?

Any items that are leaking or damaged must be contained in closed, leakproof containers.

IMPORTANT REMINDER...
If not managed as universal waste, these items **must** be managed as hazardous waste.

Devices containing Li batteries

- Fire risk when batteries are damaged
- [US DOT requirements for transportation to recycler](#)
- Watch for swelling/visibly damaged batteries and place in sand or kitty litter to prevent "thermal event"
- Call2Recycle battery safety training and resources



Communicating to the public



2019 Pierce County · Wisconsin
RECYCLING GUIDE!



**PIERCE COUNTY RECYCLING CENTER
SOLID WASTE DEPARTMENT**

707 North Maple Street • Ellsworth, WI 54011
 phone: (715) 273-3092 fax: (715) 273-4867
 recycle@co.pierce.wi.us • www.co.pierce.wi.us

Solid Waste Administrator: Steve Melstrom
 Recycling Center Supervisor: David Murphy

Directions:
 Take the service road off Highway 65 across from Ingli Auto & Ellsworth Ford, then take the first right off the service road.



Recycling Center Drop Off Hours
 Monday-Friday 6:00 am - 4:30 pm
 1st & 3rd Saturdays 8:00 am - Noon

Programs Available
 2-Stream Commingle Recycling • Other Waste Items • Bulky Waste Items
 Special Event Recycling Bins • Facility Tours • Used Clothing & Shoes
 Used Cooking Oil/Grease • Latex Paint • Holiday Lights
 • Semi-Annual Clean Sweep & Pharmaceutical Collection Events

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WINNEBAGO COUNTY, WISCONSIN
Solid Waste Department

Departments

- Electronic & Bulb Recycling
- Container Rental Program
- Composting
- Household Hazardous Materials
- Landfill
- Recycling
- Unwanted/Expired Medication
- Solid Waste Home

County Homepage

Solid Waste

Mission Statement
 To provide competitive, cost-effective solid waste management systems for processing solid waste and recyclable materials from Winnebago County customers.

HOURS OF OPERATION
 Monday - Friday 7:00 a.m. - 3:00 p.m.
 Saturday 7:00 a.m. - 12:00 p.m.
 (excluding holidays)

New and Noteworthy...

[Recyclable Material Contamination Memo 2.12.19](#)

[2020 Customer Tipping Fee memo \(effective 1.1.20\)](#)

Recycling Program Changes
 Effective January 1, 2019

The following Recycling Programs will only be available to **Winnebago County Residential/Household Customers:**

- Appliances
- Tires
- Batteries
- Used Oil/Filters/Absorbents
- Antifreeze
- Propane Tanks
- Televisions/Electronics
- Light bulbs/Ballasts

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Solid Waste Department
 E-Mail Address
 100 W. County Road Y
 Oshkosh, WI 54901
 Map It!

Administration/Landfill
 Oshkosh: (920) 232-1800
 Neenah: (920) 727-2884
 Fax: (920) 424-1189

Solid Waste / Recycling Transfer Station
 Oshkosh: (920) 232-1850
 Neenah: (920) 727-2896

Resources for collectors

Collection site list (includes list of manufacturer mail-back programs)

Wisconsin Department of Natural Resources

 [Download Statewide List](#)

Which items do you need to e-cycle?

<input type="checkbox"/> Cell phones	<input type="checkbox"/> Computer accessories	<input checked="" type="checkbox"/> Computer monitors
<input type="checkbox"/> DVD players	<input type="checkbox"/> DVRs	<input checked="" 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.

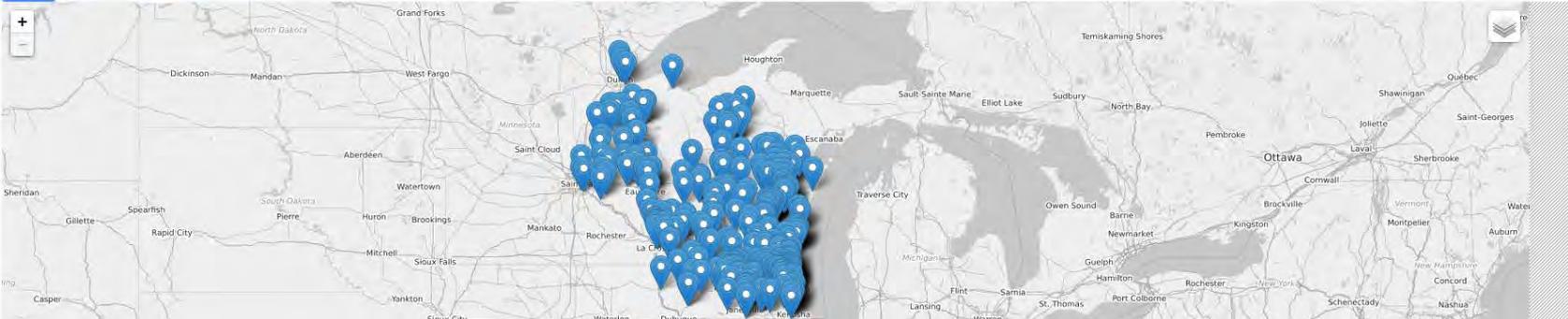
[Call2Recycle](#) [exit DNR] has additional collection sites for **batteries and cell phones**.

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](#)



The map displays the state of Wisconsin with numerous blue pins indicating collection sites. The pins are densely clustered in the central and eastern parts of the state, particularly around the Milwaukee and Madison metropolitan areas, and are more sparsely distributed in the western and northern regions. Major cities like Milwaukee, Madison, Janesville, and Kenosha are visible, along with surrounding counties and neighboring states.

Resources for collectors

- Free publications and posters
- “What happens when I e-cycle?” video- getting redone!
- Tips for choosing a responsible electronics recycler
- “Your role” overview for RUs
- DNR Facebook page, LinkedIn, press releases
- Battery safety video

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

A quick note about refrigerants

DNR Refrigerant Recovery Program

Jeff Myers, Refrigerant compliance coordinator, 608-266-2879

Refrigerant recovery program

Wisconsin law prohibits the release of regulated refrigerants into the atmosphere.

The release of regulated refrigerants generally occurs as refrigeration and air-conditioning equipment is salvaged or dismantled for disposal. The refrigeration chemicals inside the equipment must be properly recovered using approved equipment operated by qualified technicians.

Any person who salvages or dismantles refrigeration equipment is required, under Wisconsin Administrative Code [NR 488 \[exit DNR\]](#), to obtain annual DNR registration.

Overview

Registration

Safe transport

Facility lists

FAQ

DOT salvagers

Registered facilities

The following are lists of facilities registered in DNR's Refrigerant Recovery and Safe Transport Programs. The lists are updated approximately every three months. Please note that some of the listed facilities perform work only for their company and do not take refrigeration equipment from the public. Therefore, contact any facility before bringing refrigeration equipment to a registered facility. In addition, there may be costs associated with these services.

Questions?

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