

# Electronics recycling rule overview

Electronics recycling rule webinar

May 23, 2023



# Webinar agenda

- ▶ Rule timeline and background
- ▶ Overview of major changes
- ▶ Summary of changes to solid waste regulations
- ▶ Summary of new chapter implementing E-Cycle Wisconsin
- ▶ Requirements for electronics collection sites
- ▶ Solid waste processing license application and approval overview

# Wisconsin statutes and code applicable to electronics recycling

- ▶ [S. 287.07\(5\), Wis. Stats.](#) – Electronics disposal bans
- ▶ [S. 287.17, Wis. Stats.](#) – Electronics recycling law that governs E-Cycle Wisconsin
- ▶ [Ch. 289, Wis. Stats.](#) – Solid waste facility regulations
- ▶ [Ch. 291, Wis. Stats.](#) – Hazardous waste management
- ▶ [Ch. NR 500, Wis. Adm. Code](#) – General solid waste management requirements
- ▶ [Ch. NR 502, Wis. Adm. Code](#) – Solid waste storage, transportation, transfer and processing
- ▶ [Ch. NR 520, Wis. Adm. Code](#) – Solid waste management fees and financial responsibility requirements
- ▶ Ch. NR 530, Wis. Adm. Code – Electronic waste recycling program requirements
- ▶ NR 600 series of administrative code – hazardous waste requirements (not part of rulemaking scope)

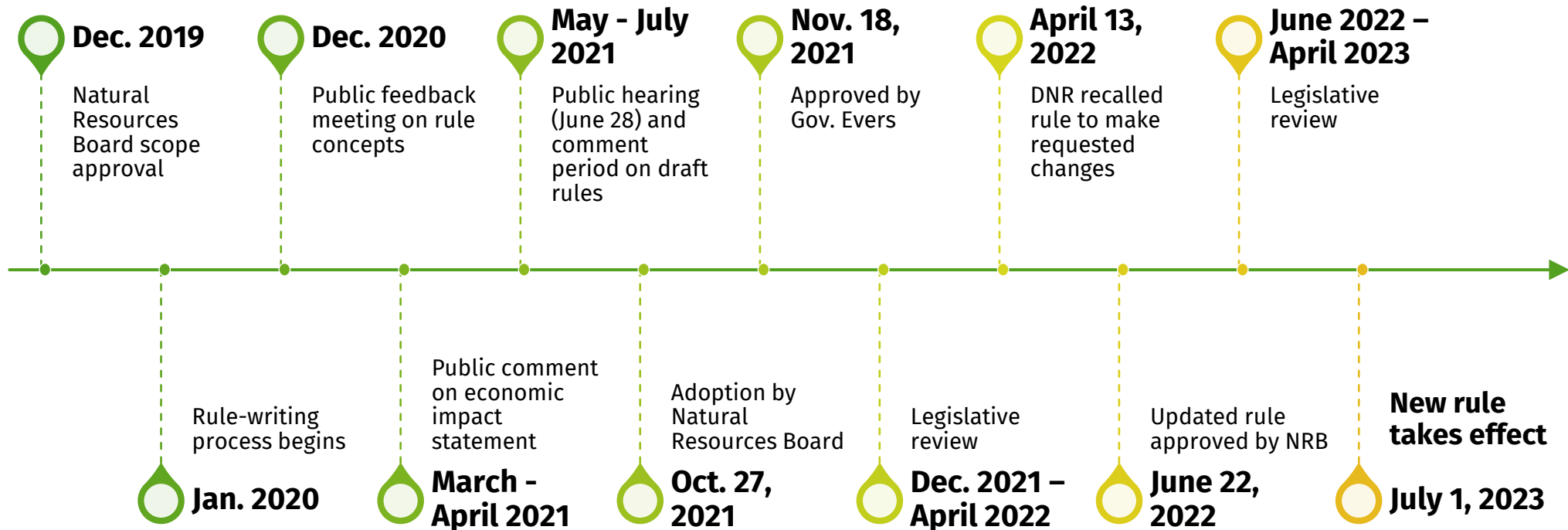
# Rulemaking goals

[Full scope statement](#)

Protect human health and the environment by providing more consistent oversight of electronics recycling operations in Wisconsin.

Ensure the electronics recycling program created by s. 287.17, Wis. Stats., continues to function well, including maintaining streamlined registration and reporting practices and preserving a level playing field among program participants.

# Rulemaking timeline





## Next steps

- ▶ Rule submitted for publication; anticipated June 26
- ▶ DNR developing guidance and forms
- ▶ Workshops and one-on-one technical assistance
- ▶ Effective July 1, 2023
- ▶ Existing electronics processing facilities have until July 1, 2024, to receive approval and license

# What will not change under the new rule

## E-Cycle WI does not cover:

- ▶ Non-eligible devices
- ▶ Devices from businesses, higher education, government and institutions
- ▶ Collectors and recyclers not working on behalf of manufacturers

## Other regulations

- ▶ Hazardous waste requirements for management of cathode ray tubes, circuit boards and other hazardous components
- ▶ Universal waste requirements for batteries, lamps and mercury equipment removed from electronics



# Significant changes for Wisconsin facilities and transporters

- ▶ Electronic devices no longer qualify for “salvageable material” exemptions throughout solid waste regulations
- ▶ Collection sites need to meet specific requirements for proper management
- ▶ Most Wisconsin electronics processing facilities will need solid waste approval and license from the DNR by July 1, 2024





# Significant changes for E-Cycle WI participants



More devices eligible to count toward manufacturer recycling targets.



Manufacturers of video game system consoles or other components that meet computer definition must register these devices.



Collectors must independently track loads they send to other collectors or recyclers



Recyclers must use bills of lading for transporting eligible electronics and components to and from their facilities



Out-of-state recyclers may need to update owner financial responsibility

# DNR priorities during implementation



COMMUNICATION AND  
TRANSPARENCY



TECHNICAL AND  
COMPLIANCE ASSISTANCE



STEPPED ENFORCEMENT  
PROCESS AS LAST RESORT

# Overview of changes to solid waste regulations

Sarah Murray, Wisconsin DNR

# Outline of rule changes

Section	Changes
NR 500.03	New electronics recycling definitions; amended “salvageable materials” definition
NR 502.05	Include electronics in storage license exemption for facilities serving apartments, commercial and business establishments, and industries
NR 502.06	Electronic devices no longer meet transportation license exemption for “salvageable materials”; new exemption from C&T license if certain conditions are followed; exemption for mail-back recycling programs
NR 502.07	Ensure electronics drop-off and transfer facilities are included in exemptions from licensing; still need to meet basic requirements
NR 502.08	Clarify the electronics recyclers do not qualify for scrap metal processing license exemption, exempt very small electronics recyclers and collectors that do limited hand sorting from processing licenses requirements, require electronics recycling facilities to obtain solid waste processing license
NR 520	Ensure existing OFR requirements cover electronics recycling facilities

# New definitions

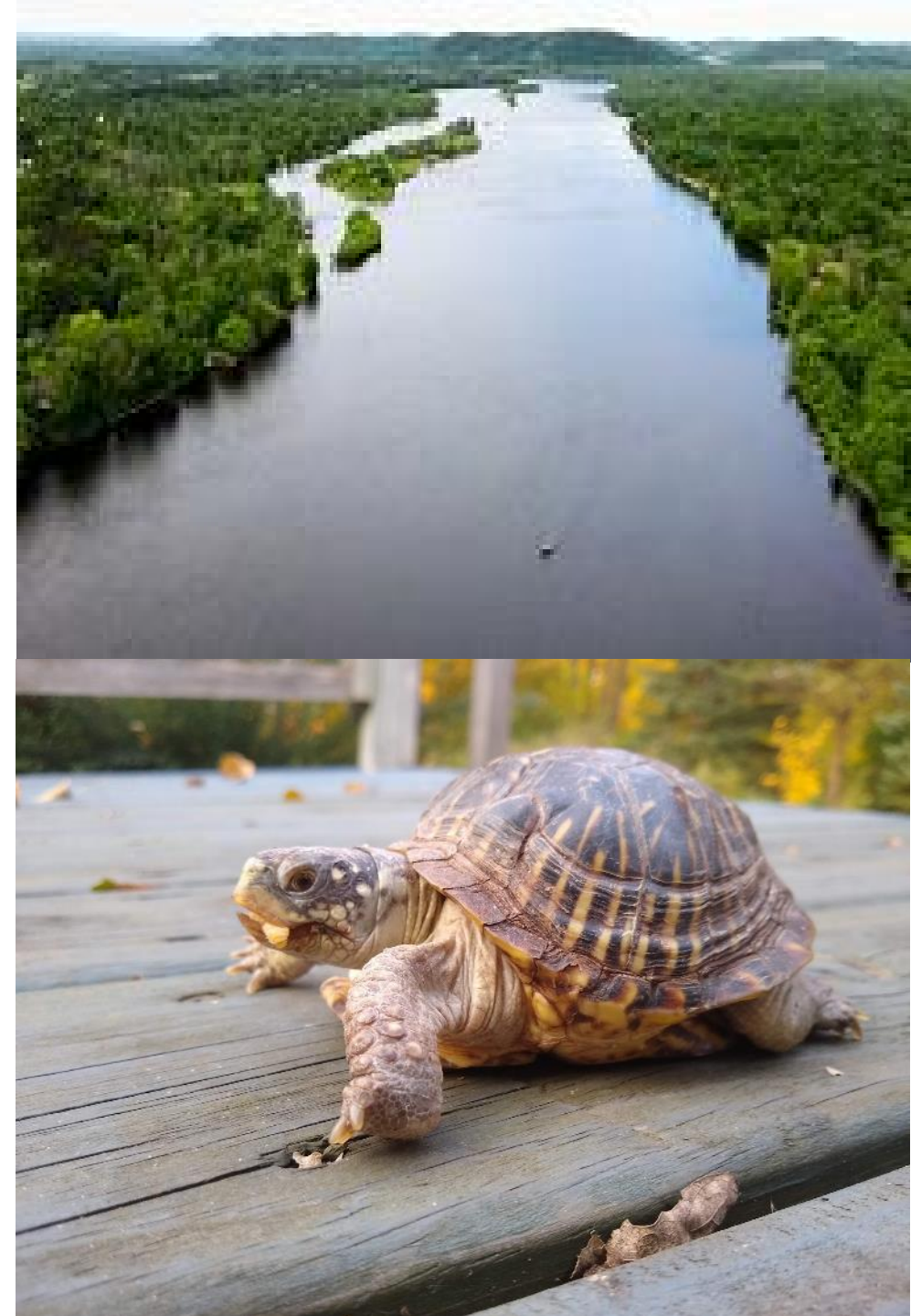


- ▶ **Electronic device** means a device that requires electric current or electromagnetic fields to function and that contains a circuit board. “Electronic device” does not include a major appliance or a motor vehicle.
- ▶ **Salvageable material** means junk cars, machinery or equipment, scrap metal or other junk or scrap materials that are of further usefulness mainly as a raw material for reprocessing, or as imperfect stock from which replacement or spare parts can be extracted. “Salvageable material” does not include electronic devices.
- ▶ **Electronics processing facility** means a solid waste processing facility that accepts electronic devices or components derived from electronic devices for the purpose of electronics processing.



# Requirements for all facilities handling used electronics (NR 502.04, Wis. Adm. Code)

- ▶ Cannot build/operate on site where facility would harm surface water, groundwater or wetlands
- ▶ Cannot cause a “take” of endangered or threatened species
- ▶ Cannot emit hazardous air contaminant exceeding the limitations for those substances in state law
- ▶ After facility stops accepting waste, remove all waste within 60 days





## Requirements for collecting and storing electronics (NR 502.05 and 502.07)

- ▶ If electronics are **not** stored at a collection site/transfer facility or processing facility, storage facility may need solid waste storage license
- ▶ Public drop-off sites don't need solid waste storage or transfer facility license if meeting requirements
- ▶ Facilities where electronics are consolidated for shipping to recycler (e.g., retailer logistics/distribution center) don't need license for this activity if following requirements

# Requirements for transporting e-waste (NR 502.06)

- ▶ Exempt from solid waste licensing if meeting requirements:
  - ▶ Transport electronics only to facilities licensed or approved by DNR, or facilities exempt from regulation by DNR
  - ▶ Vehicles or containers must be loaded and moved in a way that contents don't fall, spill or leak
  - ▶ Comply with disposal bans
  - ▶ Maintain cleanliness of materials for recycling purposes
- ▶ Electronics processing facilities must notify carriers/haulers they contract with of requirements



New ch. NR 530:  
E-Cycle Wisconsin  
implementation

**E-CYCLE**  
**WISCONSIN**





# Key points for program participants



Registration and report requirements remain the same unless otherwise noted



Several existing guidance documents now requirements



In-state facilities must meet new solid waste requirements



# New covered and eligible devices

- ▶ Video game components that meet “consumer computer” definition now covered and eligible devices



- ▶ Three new categories of devices now eligible electronics because of batteries

- ▶ Telephones with video display



- ▶ Phone accessories with batteries



- ▶ Video game accessories/devices with batteries



# New requirements for registered recyclers

- ▶ On registration, list all facilities where you process or store eligible electronics (currently, only required to list processing facilities) and maintain owner financial responsibility for any storage facilities, in addition to current requirement for processing facilities
- ▶ **In-state** recyclers need solid waste processing license and must follow OFR requirements in ch. NR 520
- ▶ **Out-of-state** recyclers' OFR must meet equivalent standards, including naming independent 3<sup>rd</sup> party as beneficiary or obligee, estimating costs based on independent 3<sup>rd</sup> party performing work, and notifying DNR of OFR change or cancelation in a timely manner
- ▶ Use and keep records of bills of lading for electronics loads

# New requirements for registered collectors

- ▶ Notify the DNR in a timely manner of changes to sites, events, materials accepted, etc.
- ▶ Maintain independent records of loads of eligible electronic devices you send to another registered collector or recycler
  - ▶ Use DNR templates or your own system



**Electronics Collection Site Weight Tracking Template**

Collection site name and location: \_\_\_\_\_

Date started collecting: \_\_\_\_\_ Date load picked up: \_\_\_\_\_

Hauler name: \_\_\_\_\_

Receiving recycler or collector name: \_\_\_\_\_

Receiving recycler or collector address: \_\_\_\_\_

**Materials sent off-site**

If your site accepts multiple categories of electronic waste, please indicate the category below. You can adjust category types as needed.

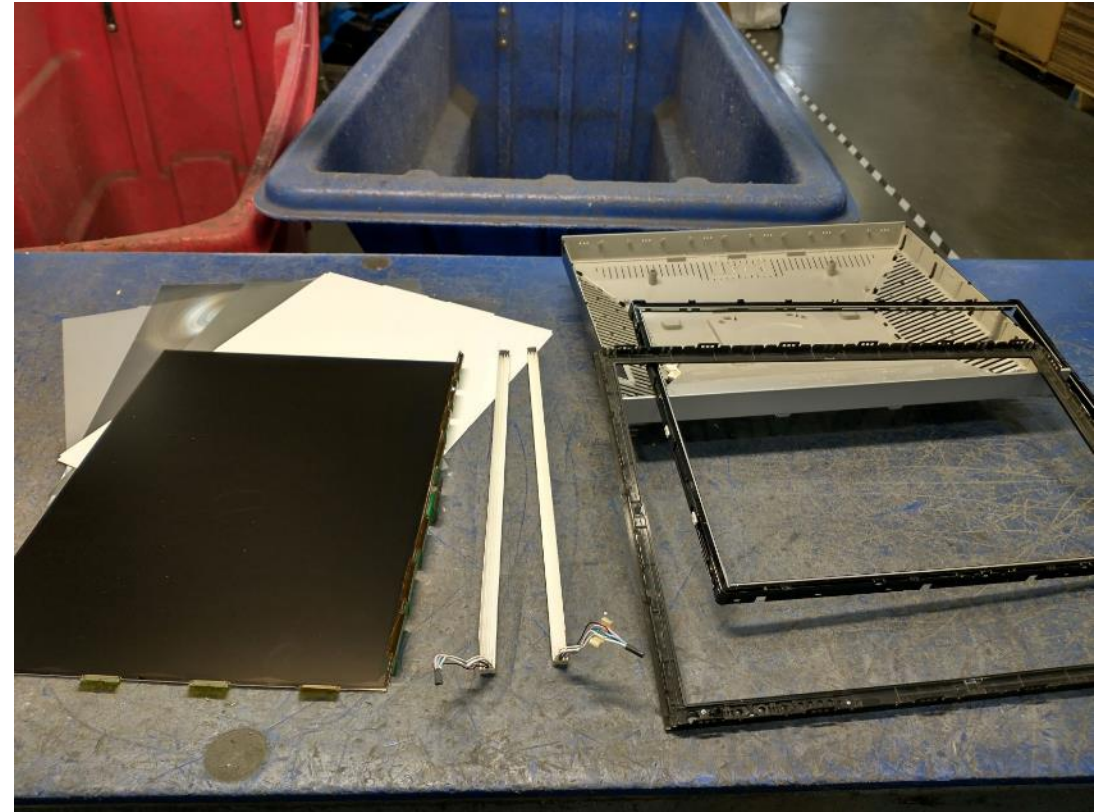
Type of electronics	Number of Gaylords	Number of pallets	Single items	Total estimated pounds (See chart on page 2)
CRT (or mixed) TVs and monitors				
Flat panel TVs and monitors				
Plasma or projection TVs				
Desktop computers				
Laptops/Tablets				
Desktop printers				
Video players (i.e., DVD player, VCR, etc.)				
Mixed peripherals				
Mixed electronics				
Unrecyclable electronics*				
Other:				

\* This category includes electronics that cannot be recycled under E-cycle Wisconsin. This includes desktop, laptop and mobile computers, desktop printers, video display devices (e.g., TVs, monitors, e-readers), video players (e.g., DVD players, VCRs), fax machines and computer/gaming/cellphone peripherals received from households and K-12 schools. See [www.dnr.wisconsin.gov/epa/e-cycle/wisconsin](http://www.dnr.wisconsin.gov/epa/e-cycle/wisconsin) for specific definitions of E-cycle. All materials from businesses and institutions are E-cycle and should not be included in the categories above. To a collector or recycler, all materials are E-cycle. If you are a collector or recycler, you can put them in the other category and indicate the amount on a separate sheet.

Developed by the Wisconsin Department of Natural Resources. Last revised April 2022

# Criteria for determining when materials are not “recyclable”

- ▶ Current end markets for material documented by recycler
- ▶ Efforts recycler has documented to separate recyclable from non-recyclable components or materials
- ▶ % by weight of a device the component or material represents
- ▶ Whether material is hazardous
- ▶ Other relevant factors







## Eligibility of illegally dumped/disposed electronics

- ▶ If a collector receives eligible electronics recovered from waste loads/illegal dumping that can **reasonably be assumed** to be from a WI household or covered school, can send to registered recycler for recycling on behalf of manufacturer
- ▶ Does NOT include electronics abandoned by registered recyclers
- ▶ Check with DNR on specific cases



# Formalizing role of “authorized brokers”

Authorized brokers provide services to registered manufacturers and recyclers

Must notify DNR and provide contact info for person responsible for compliance

Can transact “paper” pounds with registered recyclers, other brokers and manufacturers

Required to submit weight summary by March 1 each program year

# Requirements for electronics retailers

## Sales

- ▶ May not sell unregistered brands of covered electronics to households or schools
- ▶ Must remove from shelves in brick-and-mortar stores
- ▶ Must either remove for sale from online store or block sales to Wisconsin households and schools

## Customer outreach

Must provide information to customers on electronics disposal bans and how to recycle. Options include:

- ▶ Info on receipts
- ▶ Post signs in store
- ▶ Provide by phone
- ▶ Provide on website or in CatLog

# Details for registration suspension/revocation

## Collectors and recyclers

- ▶ Devices collected or recycled during suspension or revocation not eligible to count toward manufacturer targets
- ▶ For registration to be reinstated, must resolve all compliance issues that led to suspension/revocation and demonstrate compliance with all program requirements

## Manufacturers

- ▶ If registration is revoked, brands will be on Do Not Sell list
- ▶ For registration to be reinstated, must resolve all compliance issues that led to revocation and demonstrate compliance with all program requirements

# Requirements for electronics collection sites and transfer points

Marcy McGrath, DNR

# Electronics collection site requirements

- ▶ Most requirements apply regardless of E-Cycle Wisconsin registration status
- ▶ Most electronics collection sites will continue to be exempt from transfer station licensing
  - ▶ Public drop-off sites
  - ▶ “Exempt electronics transfer facilities” like retailer logistics centers, collectors that consolidate electronics from elsewhere but do not accept public drop-offs
- ▶ Most best management practices are now rules
- ▶ Registered E-Cycle Wisconsin collectors must keep independent records of loads sent to recyclers

CRT TV's  
CRT COMPUTER  
MONITORS



# Storing electronics at drop-off sites

- ▶ Containers or packaging for waste electronics must be:
  - ▶ Adequate to prevent breakage and spills
  - ▶ Compatible with the contents
  - ▶ Structurally sound
- ▶ Electronics must be stored in a manner that will prevent damage from weather, theft or vandalism
  - ▶ Store indoors, shipping or other containers, under a roof or tarped (at a minimum)
  - ▶ Access to facility should be restricted



# Recordkeeping

- ▶ Must keep independent records
  - ▶ Weigh each load and verify with hauler before they leave the site
  - ▶ Track using your own spreadsheet or recordkeeping system
  - ▶ Use DNR tally sheet – provides estimated weights if no scale is available

[Electronics Collection Site Weight Tracking Template \(wisconsin.gov\)](http://wisconsin.gov)

The key is that you are able to verify when loads were picked up and the amount of material (EED vs. non-EEDs) rather than relying on what your recycler provides to you.

Maintain all records for E-Cycle WI for a minimum of 3 years.

# Additional requirements



- ▶ Label with date and type of material, e.g. CRT TVs, computer accessories, mixed EEDs
- ▶ Ship electronics to a recycler at least once per year
- ▶ Keep area clean and free of litter
- ▶ No burning of electronics or other solid wastes
- ▶ Provide means to control fires
- ▶ Maintain all-weather access road and parking

# Solid waste processing approval and license overview

Mallory Susdorf, DNR



# Changes to NR 502.08

- ▶ Clarifies electronics recyclers do not qualify for scrap metal processing license exemption
- ▶ Exempts very small electronics recyclers and collectors that do limited hand sorting from processing licenses requirements
- ▶ Requires electronics recycling facilities to obtain solid waste processing approval and license





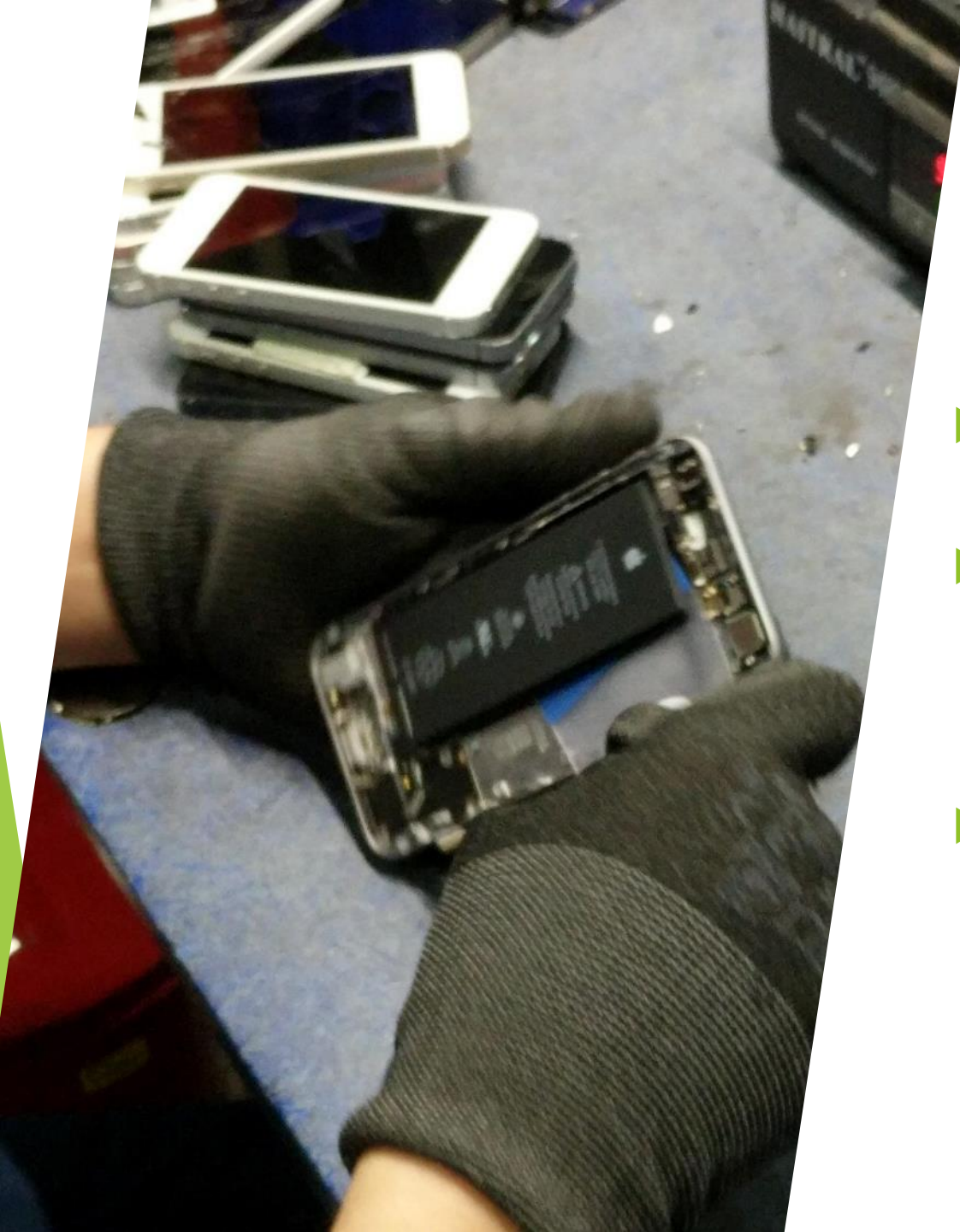
# Defining electronics processing

**Electronics processing** means processing electronic devices for use in manufacturing processes or for recovery of usable materials and includes processing electronic devices or components by **disassembling, baling, crushing, grinding, and shredding**.

Electronics processing does **not** include any of the following:

- ▶ Destruction by incineration or other processes.
- ▶ Land disposal of recyclable materials.
- ▶ Reuse, repair, or any other process through which electronic devices are returned for use in their original form.
- ▶ Removal of an electronic device from another device, such as from a major appliance or motor vehicle.
- ▶ Hand disassembly of electronic devices in an educational setting for educational purposes.
- ▶ Hand disassembly of a waste electronic device generated by a household on the property where it is generated.





## Facilities required to obtain a solid waste processing license

- ▶ Registered E-Cycle Wisconsin recyclers
- ▶ Registered E-Cycle Wisconsin collectors that disassemble some electronics
- ▶ Other facilities that disassemble, bale, crush, grind or shred electronic devices or components

# Facilities exempt from processing license requirement under NR 502.08



Facilities processing less than 25 devices per year



Collection sites/other facilities that only hand sort and package electronics for shipping to recyclers

# NR 520 new closure cost language for all non-landfill facilities

**NR 520.07 (2m)** CLOSURE COSTS FOR FACILITIES REQUIRED TO PROVIDE PROOF OF FINANCIAL RESPONSIBILITY UNDER S. NR 502.04 (6).

At a minimum, closure costs for a facility required to provide proof of financial responsibility under s. NR 502.04 shall include: work to remove entire remaining inventory including equipment and materials, recycling or disposal costs, transportation, labor, supervision, overhead costs, and taxes; decontamination; equipment decommissioning; and a 10% contingency. Cost estimates shall be based on the maximum volumes approved to be on-site, including material stored before and after processing and material undergoing processing or on sort lines.

# Processing license application process

## FACILITY

- ▶ **CONTACT** DNR staff
  - Recommend calling to discuss licensing process and requirements before applying
- ▶ **COMPLETE & SUBMIT** *Non-Landfill Solid Waste Facility Initial Site Inspection Application*

## DNR

- ▶ **REVIEW** ISI Application
- ▶ **COMPLETE** initial on-site inspection (new facilities)
  - Up to 22 business days from receipt of fee (new facilities)
- ▶ **ISSUE** preliminary response to application
  - Up to 22 business days from completion of ISI review and inspection

# Processing license application process (cont.)

## FACILITY

- ▶ **COMPLETE & SUBMIT** *Electronics Processing Facility Plan of Operation Approval Application*
  - Make sure you have all necessary documents, which may include drawings, construction documents and engineering plans

## DNR

- ▶ **REVIEW** plan of operation application
- ▶ **ISSUE** application approval (or denial)
  - Up to 65 business days from receiving a complete application, including all necessary documents



# Processing license application process (cont.)

## FACILITY

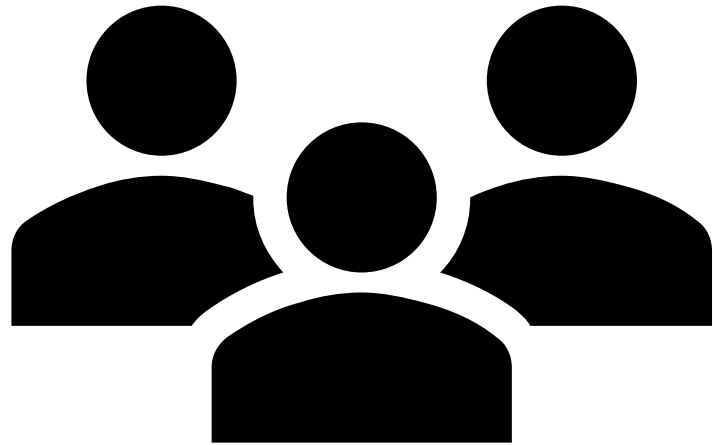
- ▶ **COMPLETE & SUBMIT** *Solid Waste Facility License Application*
  - OFR must be established before license will be issued

## DNR

- ▶ **ISSUE** electronics processing facility license
  - Up to 10 business days

# Processing license implementation timeline





## In-person workshops

- ▶ June 20, 1-3:45 p.m.,  
DNR Fitchburg Service Center
- ▶ June 27, 1-3:45 p.m.,  
DNR Oshkosh Service Center

[Agenda and registration link](#)

# Contacts



DNR website: <https://dnr.wi.gov/topic/ecycle>

Sarah Murray, E-Cycle WI coordinator  
[sarah.murray@wisconsin.gov](mailto:sarah.murray@wisconsin.gov) 608-234-0533

Marcy McGrath, E-Cycle WI compliance specialist  
[marcy.mcgrath@wisconsin.gov](mailto:marcy.mcgrath@wisconsin.gov) 920-632-3076

Mallory Susdorf, E-Cycle WI compliance specialist  
[mallory.susdorf@wisconsin.gov](mailto:mallory.susdorf@wisconsin.gov) 608-381-4011