



Managing Electronic Wastes

Guidance for generators, collectors, and recyclers

What is electronic waste?

Electronic waste, or E-waste, includes any tool, equipment or appliance containing a printed circuit board or a cathode ray tube (CRT). E-waste includes computers and peripherals, such as keyboards, monitors, and mice. It also includes many common business items like telephones, cameras, scanners, manufacturing control equipment, and medical devices.

Indicators that tools or equipment likely contain a circuit board include the presence of a keypad, touch screen, any type of video or digital display, or common electronic ports or connectors, such as serial, parallel, RJ45 ('network') or USB plugs. Consider equipment having any of these items to be E-waste until you have proven otherwise.

Regulation of E-waste

In Minnesota, the Minnesota Pollution Control Agency (MPCA) regulates E-wastes under the Hazardous Waste Rules. E-waste is hazardous because of its potential to release toxic heavy metals – lead, cadmium, mercury – into the environment if not managed and disposed of properly. Assume all E-waste to be hazardous waste unless you evaluate and can document that it is non-hazardous.

This fact sheet discusses requirements applicable to businesses and government agencies that generate E-waste as well as to those that collect or recycle E-waste.

Note: Guidance contained in this fact sheet discusses hazardous waste requirements for E-waste as applied by the MPCA. Generators and handlers of E-waste in the Twin Cities metropolitan area may be subject to additional county-specific requirements. If you are located in a metropolitan county, contact your county regulatory program (see *More information*, page five).

Reduce waste

Minimizing the amount of E-waste you generate can lower not only your regulatory requirements, but also your costs. Working and usable electronic equipment that is of use to another party may be sold or donated rather than disposed of. For more information about selling or donating usable electronic equipment, visit the MPCA at <http://www.pca.state.mn.us/publications/w-hw3-36a.pdf> to view MPCA hazardous waste fact sheet #3.36a, [Reverse Distribution of General Merchandise](#).

The [Minnesota Technical Assistance Program](#) (MnTAP) can help you reduce the amount of E-waste you generate and identify available reuse or recycling options. For more information, contact MnTAP (see *More information*, page four).

Regulatory requirements for E-waste generators

The MPCA allows businesses and government agencies that generate hazardous E-wastes to manage them either as fully-regulated hazardous waste or under the reduced requirements described below.

1. Accumulation and storage

Generators may accumulate any amount of E-waste, as long as at least 75% of the weight of the E-waste you generate each year is shipped off site for recycling. Ensure you keep records verifying this. Protect E-waste from precipitation by storing it indoors or in impervious containers. Store any E-waste that might release hazardous constituents, such as cracked monitors or crushed components, in a closed container that is impermeable to the waste. Label or mark the container with the words *Electronics for Recycling* or *E-waste*.

The MPCA does not require that E-waste be counted towards hazardous waste generator size or reported. If you generate only E-waste, or E-waste and wastes that are also exempt from reporting, such as Universal Wastes and used oil, you do not need to obtain a Hazardous Waste Identification (HWID) number. Metropolitan county regulations may differ for counting, reporting and obtaining a HWID.

If you have a spill of hazardous constituents from E-waste, ensure you contain and completely clean up the spill. Manage the spill debris as a newly generated waste and either evaluate it or assume it is hazardous waste.

2. Transporting

You or any transporter may carry your E-waste to a collector for recycling. The collector must have a HWID from the MPCA (if located in Minnesota) or be properly authorized by the state in which it is located. Only use a uniform hazardous waste manifest for E-waste shipments if you are managing them as fully regulated hazardous waste.

3. Recordkeeping

Keep records showing that you ship off site at least 75% of the E-waste you generate each year. Keep these records for at least three years. The MPCA also strongly recommends you obtain shipping receipts from your transporter for each shipment.

Regulatory requirements for E-waste collectors

You are a *collector* if you receive E-waste for recycling from businesses, government agencies, or households, and then send that E-waste to a recycling facility. The MPCA allows collectors and recyclers to manage E-waste under the reduced requirements described in this fact sheet in lieu of obtaining a Hazardous Waste Storage Permit from the MPCA.

1. Accumulation and storage

You may accumulate any amount of E-waste, as long as you ship at least 75% of the weight you receive each year off site for recycling. Protect E-waste from precipitation by storing it indoors or in impervious containers. Store any E-waste that might release hazardous constituents, such as cracked monitors or crushed components, in a closed container that is impermeable to the waste. Label or mark the container with the words *Electronics for Recycling* or *E-waste*.

If you have a spill of hazardous constituents from E-waste, ensure you contain and completely clean up the spill. Manage the spill debris as a newly generated waste and either evaluate it or assume it is hazardous waste.

2. Recordkeeping and reporting

If you do not already have an HWID, obtain one by visiting the MPCA at <http://www.pca.state.mn.us/publications/w-hw7-09.pdf> to complete MPCA hazardous waste form #7.09, [Notification of Regulated Waste Activity](#). Affirm that you are still an active collector by submitting a Hazardous Waste License Generator Application every three years or whenever you receive one from the MPCA. Keep a record of all shipments of E-waste from your site for three years.

3. Additional requirements for collectors of household E-waste

If you collect E-waste from households, register with the MPCA using the [Collector Registration Form](#) at <http://www.pca.state.mn.us/index.php/view-document.html?gid=4833>. Annually report the weight in pounds of household electronic devices. Household E-waste includes computers and peripherals, such as keyboards, mice, and monitors; televisions; eBook readers; digital picture frames; DVD players; VCRs; and fax machines. It does not include appliances, cellular telephones and personal data assistants, or strictly audio equipment. Report using the [Collector Reporting Form](#) at <http://www.pca.state.mn.us/publications/w-gen2-60.xls>.

Regulatory requirements for E-waste recyclers

You are an E-waste *recycler* if you do any of the following:

- Recover usable materials from E-waste
- Reuse E-waste constituents in a manufacturing process
- Prepare E-waste for either material recovery or manufacturing reuse
- De-manufacture or disassemble E-waste components
- Shred or crush E-waste components

You are *not* an E-waste recycler if you only:

- Disassemble electronic equipment for repair (see instead *Regulatory requirements for generators* in this fact sheet)
- Remove E-waste components from other equipment or wastes, such as extracting E-wastes from appliances, vehicles, or commercial or industrial equipment. If you disassemble appliances, see the requirements for appliance recyclers in MPCA hazardous waste fact sheet #3.02, Appliance Recycling, at <http://www.pca.state.mn.us/publications/w-hw3-02.pdf>.

If you are an E-waste recycler, you must comply with the following requirements:

1. Storage

Protect the E-waste from precipitation by storing it indoors or in impervious containers. Before processing, store any E-waste that might release hazardous constituents – such as cracked monitors or crushed components – in a closed container that is impermeable to the waste. Label or mark the container with the words *Electronics for Recycling* or *E-waste*.

If you have a spill of hazardous constituents from E-waste, ensure you contain and completely clean up the spill. Manage the spill debris as a newly generated waste and either evaluate it or assume it is hazardous waste. Also assume all wastes generated from your recycling process are hazardous wastes until you have evaluated and documented them to be non-hazardous.

2. Recordkeeping and reporting

If you do not already have an HWID, obtain one by visiting the MPCA at <http://www.pca.state.mn.us/publications/w-hw7-09.pdf> to complete MPCA hazardous waste form #7.09, [Notification of Regulated Waste Activity](#). Annually submit a Hazardous Waste Generator License Application.

Submit an E-waste Management Plan to the MPCA that describes your recycling process, the environmental and health safeguards you use in your process, the methods you use to evaluate the wastes or other materials your recycling process generates, and how you or another facility will dispose or reuse all of the wastes and other materials generated from your recycling process. Submit an updated plan to the MPCA whenever you change your E-waste recycling process.

Keep records of all shipments of E-waste to and from your recycling facility for the past three years. Also, obtain and keep records of the final recycling or disposal of all E-waste and other wastes sent from your site for the past three years. Ensure that all sites to which you ship E-waste and other waste are authorized by the state in which they are located and compliant with local requirements.

3. Liability insurance

Obtain and maintain liability insurance of at least \$1,000,000 (one million) dollars coverage for environmental releases, accidents, and emergencies. Ensure that all sites to which you ship E-waste and other wastes have equivalent coverage.

4. Partial exemptions for recyclers of only business-generated circuit boards

If the only E-wastes you recycle are circuit boards generated by businesses, you need not comply with the management plan or the insurance requirements discussed above. If all mercury switches, relays, and batteries have already been removed from the circuit boards, you are further exempted from the HWID and record keeping requirements above.

5. Additional requirements for recyclers of household E-waste

If you recycle E-waste from households, register with the MPCA using the [Recycler Registration Form](#) at <http://www.pca.state.mn.us/index.php/view-document.html?gid=4835>.

Annually report the weight in pounds of household electronic devices. Household E-waste includes computers and peripherals such as keyboards, mice, and monitors; televisions; eBook readers; digital picture frames; DVD players; VCRs; and fax machines. It does not include appliances, cellular telephones and personal data assistants, or strictly audio equipment. Report using the [Recycler Reporting Form](#) at <http://www.pca.state.mn.us/publications/w-gen2-61.xls>.

You, and any downstream recyclers to whom you send E-wastes, are prohibited from using prison labor to recycle household video display devices (monitors, televisions, eBook readers, digital picture frames, and cellular telephones with screens larger than 9 inches diagonally).

More information

Guidance and requirements in this fact sheet were compiled from multiple Minnesota Statutes and Rules, including Minn. Stat. §115A and Minn. R. Chapters 7001 and 7045, and incorporates regulatory interpretation decisions made by the MPCA on June 21, 2011. Visit the Office of the Revisor of Statutes at <https://www.revisor.mn.gov/pubs> to review the Minnesota Statutes and Rules directly.

Your metropolitan county and the MPCA have staff available to answer waste management questions. For more information, contact your metropolitan county hazardous waste office or your nearest MPCA regional staff. For information about E-waste reduction and alternatives, contact the Minnesota Technical Assistance Program (MnTAP).

Metro County Hazardous Waste Offices

Anoka	763-422-7093
Carver	952-361-1800
Dakota	952-891-7557
Hennepin	612-348-3777
Ramsey	651-266-1199
Scott	952-496-8475
Washington.....	651-430-6655
Websites	http://www.co.[county].mn.us

Minnesota Technical Assistance Program

Toll free.....	1-800-247-0015
Metro	612-624-1300
Website	http://www.mntap.umn.edu

Minnesota Pollution Control Agency

Toll free (all offices).....	1-800-657-3864
Brainerd.....	218-828-2492
Detroit Lakes.....	218-847-1519
Duluth	218-723-4660
Mankato	507-389-5977
Marshall	507-537-7146
Rochester.....	507-285-7343
St. Paul	651-296-6300
Willmar	320-214-3786
Website	http://www.pca.state.mn.us

Small Business Environmental Assistance

Toll free.....	1-800-657-3938
Metro	651-282-6143
Website	http://www.pca.state.mn.us/sbeap/