

Universal Wastes

What are universal wastes?

Universal wastes are a subset of hazardous wastes that may be accumulated and transported in Minnesota under reduced requirements. These wastes are referred to as *universal wastes* because almost every business and government agency generates them. Universal wastes in Minnesota are regulated by the Minnesota Pollution Control Agency (MPCA) and the metropolitan counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington (Metro Counties).

Universal wastes nationwide include:

- [Aerosols](#) page 3
- [Batteries](#) page 3
- [Lamps](#) page 4
- [Mercury-containing equipment](#) page 4
- [Pesticides](#) page 5

In Minnesota, three additional types of waste may also be managed as universal waste:

- [Dental amalgam being recycled](#) page 5
- [Disposable compressed gas cylinders](#) page 3
- [Pretreated dental wastewater](#) page 6

If you do not manage the above wastes as universal waste, you must manage them as fully regulated hazardous wastes. See MPCA fact sheet #w-hw1-00, Summary of hazardous waste requirements, at <https://www.pca.state.mn.us/sites/default/files/w-hw1-00.pdf>.

What are not universal wastes?

Some other wastes are commonly confused with universal waste. These wastes are not universal wastes but do have their own management allowances and requirements:

- **Non-hazardous batteries:** Batteries that are not hazardous when discarded are not universal waste. Common non-hazardous batteries include alkaline, carbon zinc, chloride zinc (commonly labeled as *heavy duty*), nickel metal hydride (NiMH), and zinc air. Although allowed to be disposed into the normal solid waste, the MPCA still encourages recycling of non-hazardous batteries if collection is available. In addition, many solid waste haulers in Minnesota ban non-hazardous batteries from their containers.
- **Electronic waste:** Wastes containing circuit boards or cathode ray tubes (CRTs) may be managed in Minnesota under the reduced requirements discussed in MPCA fact sheet #w-hw4-15, Managing electronic wastes, at <https://www.pca.state.mn.us/sites/default/files/w-hw4-15.pdf>.
- **Architectural paint:** Latex and oil-based architectural paint and related coatings generated by Very Small Quantity Generators (VSQGs) may be transported to paint collection sites as discussed in MPCA fact sheet #w-hw4-37a, Architectural paint, at <https://www.pca.state.mn.us/sites/default/files/w-hw4-37a.pdf>.
- **PCB-containing ballasts and small capacitors:** Lighting ballasts and small capacitors that may contain polychlorinated biphenyls (PCBs) must be managed under the requirements discussed in MPCA fact sheet #w-hw4-48f, Managing PCBs in Ballasts and Small Capacitors, at <https://www.pca.state.mn.us/sites/default/files/w-hw4-48f.pdf>.

Managing universal wastes

Anyone that generates, transports, or stores universal waste is called a *universal waste handler*. Sites that recycle, treat, or dispose of universal waste are *destination facilities*. Destination facilities must comply with the standard hazardous waste requirements for recycling, treatment, or disposal facilities.

Universal waste handlers are classified as *Small Quantity Handlers* or *Large Quantity Handlers*, depending on the amount of universal waste accumulated at any one time:

Table 1: Universal waste handler categories and requirements

Small Quantity Handlers (SQH)		Large Quantity Handlers (LQH)
Accumulate less than 5,000 kilograms (kg) (approximately 11,000 pounds) total universal waste at one site at any one time		Accumulate 5,000 kg (approximately 11,000 pounds) or more total universal waste at one site at any one time
And are required to		
Hazardous Waste Identification number (HWID)	Not required	Obtain a HWID from the MPCA. See MPCA fact sheet #w-hw1-03; Obtain a Hazardous Waste Identification Number, at https://www.pca.state.mn.us/sites/default/files/w-hw1-03.pdf .
Employee training	Provide universal waste handling and emergency procedure information. Training records are not required.	Ensure employees are thoroughly familiar with universal waste handling and emergency procedures. Training records are not required.
Broken or leaking universal waste	Place leaking or broken universal waste that may release hazardous constituents into a compatible closed container. Ensure the container can fully contain the hazardous constituents (i.e., is airtight for broken lamps and liquid-tight for broken batteries). Universal waste broken accidentally may still be managed as universal waste in Minnesota. Deliberate universal waste breakage is <i>prohibited treatment</i> . Debris contaminated by leaking universal waste, spill clean-up materials, and recovered or removed constituents, such as free liquid mercury, are <i>newly generated wastes</i> , not universal waste, and must be evaluated or assumed to be hazardous.	
Labeling	Label each universal waste or container with one of these phrases: <ul style="list-style-type: none"> • Universal Waste [type of universal waste], such as 'Universal Waste Batteries' • Waste [type of universal waste], such as 'Waste Thermometers' • Used [type of universal waste], such as 'Used Lamps' 	
Accumulation time	Accumulate universal waste for no more than one year from the date you generated or received the universal waste at your site. Mark the universal waste with the generated or received date or keep records to verify how long you have accumulated it.	
Off-site shipments	Ship only to a site that has agreed to accept the universal waste. If the universal waste is a hazardous material under the U.S. Department of Transportation (DOT) Hazardous Materials Regulations (HMR), ensure you meet all HMR shipping requirements. See MPCA fact sheet #w-hw2-53, Requirements for transporting waste to a VSQG Collection Program, at https://www.pca.state.mn.us/sites/default/files/w-hw2-53.pdf .	
Shipping records	Keeping shipping records is recommended, but not required.	Keep records of each universal waste shipment received or sent for at least three years from the shipment date. Ensure records include at least the: <ul style="list-style-type: none"> • Shipper and recipient of the shipment • Type and quantity of the universal waste • Date the shipment was sent or received
Prohibitions	Do not dispose, dilute, or treat universal waste except for those activities specifically allowed for each different universal waste discussed below. Do not crush, shred, or burn any universal waste.	
Hazardous waste generator size	Do not count universal waste towards your site's hazardous waste generator size.	
Reporting	The MPCA does not require reporting of universal waste from sites outside the Metro Counties. If your site is located in a Metro County, check with your county for reporting requirements.	
Responsibility	Universal waste is a subset of hazardous waste. You are ultimately responsible for ensuring the universal waste you handle is legitimately recycled or disposed to full hazardous waste standards.	

Aerosols and compressed gas cylinders

Universal waste aerosols include any pressurized containers used to dispense liquid or gaseous products with a propellant or product that would be hazardous waste when discarded.

Universal waste aerosols must be accumulated to prevent accidental activation of the dispensing valves, such as by ensuring caps are attached or all stored upright in a single layer. Leaking universal waste aerosols must be accumulated in compatible, liquid-tight, labeled containers.

Universal waste compressed gas cylinders in Minnesota include any non-refillable (disposable) compressed gas cylinder with a product that would be hazardous waste when discarded.

You may puncture universal waste aerosols and compressed gas cylinders at your site if you meet certain conditions, including collecting and managing all liquids, safeguarding employee safety and health, and complying with the Minnesota State Fire Code. However, be aware that some aerosols and compressed gas cylinders may present unusual safety risks when punctured and are inadvisable for on-site management.

See MPCA fact sheet #w-hw4-00, Waste aerosols and compressed gas cylinders, at <https://www.pca.state.mn.us/sites/default/files/w-hw4-00.pdf>.

Batteries

Universal waste batteries include any electrochemical storage device that consists of an anode, cathode, and electrolyte and that would be hazardous waste when discarded, including both disposable and rechargeable categories of: lead-acid, nickel-cadmium (Ni-Cd, or NiCad), lithium, lithium-ion, silver-containing, and mercury-containing batteries.

You may drain electrolyte from your universal waste batteries, however the drained electrolyte is a newly generated waste and not a universal waste. Manage the drained electrolyte as a hazardous waste unless you evaluate it as non-hazardous. For more information on evaluating wastes, see MPCA fact sheet #w-hw1-01, Evaluate Waste, at: <https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf>.

You may also discharge universal waste batteries to make them safer to handle if you can do so safely using either the method recommended by the battery manufacturer or a complete discharge device (CDD). Do not simply short-circuit batteries to discharge them; it may cause a fire or battery explosion. Discharged batteries remain regulated universal wastes unless individually evaluated as non-hazardous.

Universal waste handlers may disassemble multi-cell universal waste batteries or packs into individual cells for refurbishment or disposal, however this activity may cause a high risk of short-circuit, battery damage, electrolyte leakage, and fire or explosion. Use great caution if disassembling universal waste batteries.

You may accumulate different types of universal waste batteries together as long as you ensure they will not short-circuit or cause a fire during accumulation. When you ship any universal waste batteries off site, ensure you comply with applicable HMR requirements to prevent short circuits during transport. You may need to enclose each battery in a non-conducting bag or wrap, insulate terminals, or pack batteries to prevent them from touching each other or any conductive materials.

In addition, lithium batteries may be subject to specific transport packaging requirements under the HMR. See DOT publication #PHH50-0186-0921, Lithium Battery Guide for Shippers, available on the DOT's website at <https://www.transportation.gov/>.

Damaged or short-circuited lithium batteries present an extreme fire risk, and must be contained while at your site and for transport in non-combustible packaging that will confine the battery and minimize fire risk, commonly called Damaged, Defective, or Recalled (DDR) battery packaging.

Lamps

Universal waste lamps include any hazardous waste bulb or tube portion of an electrical lighting device, including: fluorescent, high intensity discharge (HID), mercury vapor, low and high pressure sodium (LPS and HPS), metal halide, and neon lamps ('neon' lamps also include those containing other noble gases such as argon, krypton, or xenon).

'Green tip' fluorescent lamps

Some fluorescent lamps are designed to pass the hazardous waste test for mercury and are labeled as 'low mercury' or have green-colored metal end caps, known as 'green tips'. These lamps do still contain mercury, and in Minnesota must be recycled and are prohibited from solid waste.

LEDs

Although the bulb portions of most light-emitting diodes (LEDs) lamps are not hazardous and thus not universal waste lamps, the attached circuit boards are regulated [electronic wastes](#) in Minnesota. Some LED lamps closely resemble fluorescent tubes, but may be labeled as 'LED' or have wiring or a string of LEDs visible in the tube portion when brightly backlit. Manage LED lamps as discussed in MPCA fact sheet #w-hw4-15, Managing Electronic Wastes, at <https://www.pca.state.mn.us/sites/default/files/w-hw4-15.pdf>.

On-site crushing or cracking

In Minnesota, universal waste handlers may not crush universal waste lamps unless they can demonstrate that no mercury will be released to the environment from the entire crushing process, including filter changes. The MPCA is not aware of any commercially available lamp crushing equipment that can currently meet this standard at universal waste handler sites. A hazardous waste permit or compliance agreement from the MPCA is required for dedicated facilities to crush universal waste lamps.

The MPCA discourages cracking the shell of a universal waste lamp to attempt to remove the hazardous portion of the lamp. The hazardous portion of many universal waste lamps is contained in an inner sealed arc tube or capsule. Heat and chemical reactions in the arc tube may cause the glass to become brittle. This creates a high risk for damage and mercury release if you attempt to extract the tube from the lamp.

Accumulation

If you accumulate more than 1000 universal waste lamps that you did not generate yourself, you must file financial assurance with the MPCA. Complete and submit MPCA form #w-hw7-20, Lamp Accumulation Financial Assurance Form, at <https://www.pca.state.mn.us/sites/default/files/w-hw7-20.doc>.

Mercury-containing equipment

Universal waste mercury-containing equipment is any discarded device that contains liquid mercury integral to its function, including: thermometers, thermostats, barometers, pressure gauges, switches, relays, and pump seals. Lamps that contain gaseous or powdered mercury are [universal waste lamps](#), not mercury-containing equipment. Batteries that contain powdered or amalgamated mercury are [universal waste batteries](#), not mercury-containing equipment.

Most mercury-containing equipment holds mercury in sealed ampoules or pellets. Do not pour or drain liquid mercury from any mercury-containing equipment. You may remove sealed mercury ampoules and open housings holding mercury from mercury-containing equipment only if you do all of the following:

- Perform the removal over a containment pan large enough to catch and contain any mercury that could spill from the equipment.
- Provide appropriate mercury spill clean-up materials.
- Ensure that the mercury remains contained in the original sealed ampoules or that any originally open housings are sealed airtight immediately after removal.

- Perform air monitoring to ensure Minnesota Occupational Safety and Health (MNOSHA) exposure levels are not exceeded. For questions, contact MNOSHA. See [More information](#) on page 6.

Manage spilled mercury, clean-up materials and debris, and any free liquid mercury or mercury in containers such as flasks or vials, as fully regulated D009 hazardous waste. These wastes are not universal waste.

Note: Sales and donations of mercury and mercury-containing equipment in Minnesota are strictly regulated. If you plan to donate or sell liquid mercury or mercury-containing equipment instead of disposing of it, see MPCA fact sheet #w-hw4-26, Selling mercury items, at <https://www.pca.state.mn.us/sites/default/files/w-hw4-26.pdf>.

Pesticides

Wastes included

Pesticides in Minnesota include fungicides, herbicides, insecticides, nematocides, and rodenticides.

Universal waste pesticides are pesticides that would be hazardous waste when discarded and that either:

- Will be collected at a Minnesota Department of Agriculture (MDA)-authorized waste pesticide program. See [Using an MDA-authorized program](#) below; or
- Will be collected at a waste pesticide program authorized in an adjoining state; or
- Have been recalled and will be collected by the manufacturer.

Universal waste pesticides do not include pesticides used for their intended purpose in accordance with their label instructions and MDA standards. Universal waste pesticides also do not include medical sterilant products or waste treated seeds. For guidance on waste treated seeds, see MPCA fact sheet #w-hw4-51, Treated seeds, at <https://www.pca.state.mn.us/sites/default/files/w-hw4-51.pdf>.

Labeling

In addition to the standard [universal waste labeling](#) on page 2, ensure your universal waste pesticide containers also either:

- Retain their original manufacturer label; or
- Display complete DOT labeling and marking applicable under the HMR; or
- Bear an alternate label specified by the receiving waste pesticide collection program.

Using an MDA-authorized program

To use an MDA-authorized program, you must be a pesticide *end user* as defined by the MDA. End users include farmers and others who use or intend to use pesticides themselves, and do not include dealers, manufacturers, formulator, or packagers.

Contact the MDA if you are unsure if you are an end user or eligible to use an MDA-authorized program. See [More information](#) on page 6.

- If you accumulate less than 300 pounds (about 35 gallons) of waste pesticide on your site at any time, you may assume those waste pesticides are universal waste unless the MDA rejects them.
- If you accumulate 300 pounds or more of waste pesticide on your site at any time, must manage them as fully regulated hazardous wastes until you have notified the MDA of the type and volume of your waste pesticides and the MDA has agreed to accept them. After the MDA has agreed to accept your waste pesticides, you may manage them as universal waste.

Dental amalgam being recycled

Dental amalgam being recycled is mercury-containing amalgam generated by dental care providers from which mercury will be reclaimed, such as amalgam capsules, extracted teeth, filter-trap waste and amalgam-separator sludge. Document that your dental amalgam wastes will be recycled and not disposed. Dental amalgam wastes that will not be recycled are fully regulated hazardous wastes.

Extracted teeth containing dental amalgam are not infectious wastes in Minnesota; however, your amalgam-recycling vendor may require that you disinfect the teeth before accepting them for amalgam recycling.

Pretreated dental wastewater

Pretreated dental wastewater is mercury-containing dental wastewater that has been pretreated using an amalgam separator approved by the MPCA. For a list of approved amalgam separators, see the MPCA's Managing mercury in dental wastewater webpage, at <https://www.pca.state.mn.us/business-with-us/managing-mercury-in-dental-wastewater>.

Transport pretreated dental wastewater as a universal waste to a publicly owned treatment works (POTW) or a Very Small Quantity Generator Collection Program that has agreed to accept the waste. Do not discharge pretreated dental wastewater to a septic system or any other subsurface treatment system (SSTS).

Find a list of delegated POTWs in MPCA fact sheet #wq-wwtp7-49b, Communities served by a delegated POTW, at <https://www.pca.state.mn.us/sites/default/files/wq-wwtp7-49b.pdf>.

For a list of VSQG Collection Programs, see MPCA fact sheet #w-hw2-51, Very Small Quantity Generator Collection Programs, at <https://www.pca.state.mn.us/sites/default/files/w-hw2-51.pdf>.

More Information

Guidance and requirements in this fact sheet were compiled from the Code of Federal Regulations, Part 40, Section 273; Minnesota Statutes, Chapters § 18B and § 115A; Minnesota Rules, Chapters 1509, 7001, and 7045; and incorporate regulatory interpretation decisions made by the MPCA on September 9, 2008; October 27, 2008; December 31, 2008; April 27, 2011; June 10, 2015; and January 11, 2023. Visit the U.S. Government Publishing Office at <https://www.govinfo.gov/> to review the Code of Federal Regulations. Visit the Office of the Revisor of Statutes at <https://www.revisor.mn.gov/pubs> to review Minnesota Statutes and Rules.

Contact your Metropolitan County or the MPCA with questions. The MPCA's Small Business Environmental Assistance Program can also provide free, confidential regulatory compliance assistance. Notify the Minnesota Duty Officer immediately following any universal waste or hazardous waste incident.

Metro County Hazardous Waste Offices

Anoka	763-422-4260
.....	https://www.anokacounty.us/
Carver	952-361-1800
.....	http://www.co.carver.mn.us/
Dakota	952-891-7557
.....	https://www.co.dakota.mn.us/
Hennepin	612-348-3777
.....	http://www.hennepin.us/
Ramsey	651-266-1199
.....	https://www.ramseycounty.us/
Scott	952-496-8177
.....	http://www.scottcountymn.gov/
Washington	651-430-6655
.....	https://www.co.washington.mn.us/

Minnesota Occupational Safety & Health

Toll free	877-470-6742
Toll free	651-284-5050
.....	http://www.dli.mn.gov/mnosha.asp

Minnesota Pollution Control Agency

Toll free (all offices)	800-657-3864
All offices	651-296-6300
.....	https://www.pca.state.mn.us/

Minnesota Duty Officer

Toll free	800-422-0798
Metro	651-649-5451

Small Business Environmental Assistance Program

Toll free	800-657-3938
Metro	651-282-6143
.....	smallbizhelp.pca@state.mn.us

Minnesota Technical Assistance Program

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

Minnesota Department of Agriculture

Toll free	800-967-2474
Metro	612-201-6000
.....	http://www.mda.state.mn.us/