



Managing Universal Wastes

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What are *universal wastes*?

Universal Wastes (UW) are certain hazardous wastes that can be handled through a simplified process intended to minimize paper work and encourage proper management. They are called “universal” wastes because almost every business generates them at some point. Universal Wastes include:

- Lamps – such as fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps (bulbs)
- Pesticides – includes recalled pesticides and those determined to be unusable, i.e. “waste”
- Batteries – both dry cell and lead-acid
- Mercury-containing equipment – such as thermostats, barometers, manometers, gauges and switches

Who is subject to this rule?

Businesses that generate universal wastes (UW), UW take-back programs and UW collection programs are subject to this rule and are all called “handlers.” There are two types of handlers:

- Small Quantity Handlers (SQH) – accumulate less than 5,000 kg (11,000 lbs) of universal waste at any one time.
- Large Quantity Handlers (LQH) – accumulate 5,000 kg (11,000 lbs) or more of universal waste at any one time.

Very Small Quantity Generators (VSQGs) may manage UW under the UW Rules or through the satellite accumulation rules or the full RCRA rules and in any case may take their waste to VSQG Collection

Programs. Small and large quantity hazardous waste generators may manage UW under either the UW rules or the full Resource Conservation and Recovery Act (RCRA) requirements.

UW transporters, destination facilities and handlers who export UW also have requirements under the Universal Waste rule. For more information, see <http://www.epa.gov/epaoswer/hazwaste/id/univwast/quickref.htm#transp>.

How do UW rules differ from regular hazardous waste requirements?

The universal waste rule has streamlined requirements for many of the hazardous waste rules. See Tables 1 and 2 for a summary of UW requirements. Table 1 lists general requirements; Table 2 gives requirements specific to handler size. Also see the section “Specific Waste Requirements.”

How do Minnesota Rules differ from Federal Rules?

Minnesota’s rules are the same as the Federal Universal Waste regulations with these three exceptions:

1. Minnesota’s rules can apply to very small quantity generators of hazardous waste (VSQGs) which may be exempt under the federal regulations.
2. Since Minnesota has an additional hazardous waste characteristic of lethality, some wastes, such as batteries, may be hazardous in

Minnesota but, not at the federal level. Wastes that are hazardous due to the lethality characteristic may still be managed as a universal waste in Minnesota.

3. Minnesota rules require financial assurance for certain handlers of more than 1,000 fluorescent lamps.

Table 1: General handler requirements (applies to both SQHs & LQHs)

Area	Requirement
Waste management	Manage universal waste in a way that prevents releases into the environment; specific standards apply to each type.
Marking / labeling	Mark or label each item of universal waste OR universal waste containers with waste type
Accumulation time limit	One year – unless more time is necessary for proper recovery, treatment or disposal of the UW (proof required) See <i>Accumulation Time Limits</i> section.
Response to releases	Immediately contain releases; evaluate and appropriately manage any residues or materials resulting from release.
Off-site shipments	Send universal waste only to other handlers, destination facilities, or foreign destination.
Transportation	UW may be transported by either the handler or a commercial transporter; a hazardous waste transporter is not required. However, if the universal waste meets the definition of a US Department of Transportation (USDOT) hazardous material, it is subject to USDOT requirements for shipping papers, packaging, marking and labeling, and load segregation and securement. For more information contact the Minnesota DOT, Office of Freight and Commercial Vehicle Operations at 651-215-6300.
Prohibitions	One may not dispose of, dilute, or treat universal waste except by responding to releases and performing certain other activities described in specific UW sections.
Liability	Since universal wastes are still hazardous wastes, entities that generate them remain liable for results of mismanagement or releases.
Land disposal restrictions	Only the destination facility is responsible for complying with LDR requirements.

UW Accumulation Time Limits

A generator may accumulate Universal Waste for no longer than a one-year period, beginning from the date the UW was generated. If UW is accumulated for more than a year, the handler must be able to prove that the extended accumulation period was necessary for the proper recovery, treatment, or disposal of the UW.

To identify the date the accumulation began:

- Mark or label UW containers with the earliest date any UW waste was added; or
- Mark or label each UW item within the containers with the date it became a waste or was received; or
- Keep an on-site inventory which identifies either the date each UW device became a waste or was received, or the earliest date any UW waste was added to a container.

Tracking Universal Waste

Small Quantity Handlers are not required to track their Universal Waste. However, because of the liability

associated with generating a hazardous waste, the MPCA strongly recommends that all generators (handlers) keep records of when and where wastes were transported.

Large Quantity Handlers must maintain, for at least three years, records of each shipment received by and leaving the facility. These records must include each of the following:

For shipments received –

- The name and address of the handler from whom the UW was created or sent;
- The quantity of each type of UW received; and
- The date the shipment was received.

For shipments sent –

- The name and address of the UW handler to which the UW is being sent;
- The quantity of each type of UW received; and
- The date the shipment was sent.

Table 2: Requirements by universal waste handler size

Handler Size:	Small Quantity Handlers (SQH)	Large Quantity Handlers (LQH)
Definition	A universal waste handler who accumulates up to, but not including, 5,000 Kg (11,000 lb.) on-site at any one time	A universal waste handler who accumulates 5,000 Kg (11,000 lb.) or more on-site at any one time
Notification/ EPA identification number	No EPA identification number or notification required for those generating only universal wastes; an EPA ID number is still needed for HW generators	EPA identification number required; however, if a handler has previously notified EPA of its hazardous waste activities, it is not required to renotify
On-site accumulation limit	Less than 5,000 Kg	No limit
Tracking/ manifest	No manifest required; however, the generator must receive prior consent by a receiving facility (i.e., the destination facility) before the waste can be sent offsite	No manifest required; however, the generator must receive prior consent by a receiving facility (i.e., the destination facility) before the waste can be sent offsite and must keep basic shipping records (See <i>Tracking Universal Waste</i> section.)
	If the UW is a USDOT hazardous material, it is subject to USDOT requirements for shipping papers, including retention requirements.	
Employee training	Train employee in proper waste handling and emergency procedures	Ensure employee knows proper handling and emergency procedures; gear training to employee responsibilities
Record keeping	Small quantity handlers are not required to keep records of universal waste shipments	Large quantity handlers of universal waste must track universal waste shipments received and/or sent off-site from the facility. Keep records for at least three years. The regulations do not require a specific recordkeeping form; any standard business record (e.g., logs, invoices, bills of lading) will be sufficient.

Specific Waste Requirements

Lamps

Manage lamps to prevent releases. Avoid breakage to prevent mercury vapor from escaping. Place unbroken lamps in a structurally sound, closed and non-leaking container that is adequate to prevent breakage and is compatible with the contents of the lamps. Broken lamps can still be managed as a universal waste but place them in a separate container from the unbroken lamps.

Mark each lamp, each container or package of lamps with the words:

- Universal Waste – Lamp(s) or
- Waste Lamp(s) or
- Used Lamp(s)

You may either write directly on the storage container or use a pre-printed label. Free labels for fluorescent lamp

storage are available from the MPCA by contacting jennifer.jensen@pca.state.mn.us

Not all fluorescent and high-intensity discharge (HID) lamps meet hazardous waste criteria. However, in Minnesota, all are banned from solid waste disposal because they contain mercury. It may be more convenient to assume all lamps are hazardous and manage them as UW, than to evaluate and then find alternative disposal options for those that are nonhazardous.

The State of Minnesota requires UW handlers who accumulate more than 1,000 lamps that are not their own to have the finances to cover the cost of hiring a third party to properly dispose of discarded lamps. Contact Melissa Wenzel at melissa.wenzel@pca.state.mn.us for more information.

Batteries

The following batteries are hazardous and must be managed as UW or RCRA hazardous waste:

- Nickel-cadmium (Ni-Cd)
- Lead acid – both sealed and unsealed
- Mercuric oxide
- Silver oxide
- Lithium – more than 9 volts

These batteries, while generally non-hazardous, can still be recycled (see battery recycling information in the “More Information” section):

- Alkaline
- Carbon-zinc
- Nickel metal hydride (NiMH)
- Lithium ion – rechargeable
- Lithium – 9 volts or less
- Zinc air

Additional information is available on hazardous waste fact sheet #4.05 – “Managing Dry-cell Batteries” – at <http://www.pca.state.mn.us/publications/w-hw4-05.pdf>.

Manage hazardous batteries to prevent releases.

Batteries must remain intact. However, batteries with inadvertent damage that does not breach the cell casing can still be managed as UW.

Place batteries that show evidence of leakage, spillage or damage that could cause leakage in a structurally sound, closed and non-leaking container that is compatible with the contents of the battery and capable of enclosing potential releases.

Mark each battery or each container with the words:

- Universal Waste – Battery(ies) or
- Waste Battery(ies) or
- Used Battery(ies)

Handlers may perform these activities provided the casing of each individual battery cell remains intact and closed:

- Sort batteries by type
- Mix battery types in one container
- Discharge batteries to remove electric charge
- Regenerate used batteries
- Disassemble batteries or battery packs into individual cells or batteries
- Remove batteries from consumer products
- Remove electrolyte from batteries (Cell may be opened only while removing electrolyte and must be closed immediately after removal.)

Evaluate any waste generated from these activities and manage it appropriately.

Note: Although not required by universal waste rules, MPCA and Metropolitan County hazardous staff strongly recommend storing all lead-acid batteries on a reasonably impervious surface to prevent a release and costly hazardous waste cleanup.

Mercury-containing equipment

Manage mercury-containing equipment waste to prevent releases. Place equipment containing elemental mercury in a structurally sound, closed and non-leaking container that is adequate to prevent the escape of mercury into the air and is compatible with the contents of the mercury-containing equipment.

If mercury is contained in an ampule within the equipment, the handler may remove the ampule in a well-ventilated area and over a containment device that will collect any spilled mercury. Store unbroken ampules in a structurally sound, closed and non-leaking container that is adequate to prevent breakage and is compatible with the contents of the ampules. Clean up any spills resulting from removing ampules from the equipment. Evaluate and appropriately manage any waste resulting from this activity.

Mark each item or container with the words:

- Universal Waste – Mercury-containing Equipment or specific name of item, e.g. *Universal Waste – Mercury Thermostat*
- Waste Mercury-containing Equipment or specific name of item, e.g. *Waste Mercury Thermostat*
- Used Mercury-containing Equipment or specific name of item, e.g. *Used Mercury Thermostat*

Pesticides

Only recalled pesticides and pesticides collected under a waste pesticide collection program, such as the Minnesota Department of Agriculture program, are eligible to be managed as universal waste. Waste pesticides not meeting these criteria must be managed as hazardous wastes or under the requirements of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

Manage universal waste pesticides to prevent releases. Place pesticide in a structurally sound, closed, non-leaking container compatible with the pesticide. In some cases, an original container that has a readable label may be adequate. If not, overpack it in a container that meets these requirements. For large quantities that may need to

be contained in a tank or transport vessel, see CFR 40 §273.13 (SQH) or §273.33 (LQH) for requirements.

Mark pesticides with

- The label that was on or accompanied the product as sold or distributed and
- The words Universal Waste – Pesticide(s) or Waste *Pesticide(s)*

If you do not have the original label, you may use the appropriate U. S. Department of Transportation (DOT) label. If you are using the Minnesota Department of Agriculture (MDA) Pesticide Collection Program, follow its labeling requirements. For more information about the MDA Pesticide Collection Program, see this Web site: <http://www.mda.state.mn.us/appd/wastepest/>

More information

Your metropolitan county and the MPCA have staff available to answer questions. For more information, contact your metropolitan county hazardous waste office of the MPCA office closest to your county.

Metro County Hazardous Waste Offices

Anoka County.....	763-422-7093
Carver County.....	952-361-1800
Dakota County.....	952-891-7557
Hennepin County.....	612-348-3777
Ramsey County.....	651-266-1199
Scott County.....	952-496-8475
Washington County.....	651-430-6655

Minnesota Department of Transportation

Office of Freight and Commercial Vehicle Operations	651-215-6300
E-mail	motorcarrier@dot.state.mn.us
Web site	http://www.dot.state.mn.us
USDOT Office of Hazmat Safety.....	800-467-4922

Minnesota Pollution Control Agency

Toll free	800-657-3864
Brainerd	218-828-2492
Detroit Lakes	218-847-1519
Duluth	218-723-4660
Marshall	507-537-7146
Rochester	507-285-7343
St. Paul.....	651-297-2274
Willmar.....	320-214-3786
Web site	http://www.pca.state.mn.us

Other information on the Web

- Find battery recycling services at <http://www.earth911.org/master.asp>
- Minnesota Rules § 7045.1400 – found at <http://www.revisor.leg.state.mn.us/>
- EPA Web site: <http://www.epa.gov/epaoswer/hazwaste/id/univwast/>
- Universal Waste Recycling: <http://www.epa.gov/epaoswer/hazwaste/id/univwast/recyclg.htm>
- EPA Universal Waste Guidance Documents: <http://yosemite.epa.gov/osw/rcra.nsf/topics!OpenView&Start=1&Count=1000&Expand=102#102>
- Federal Insecticide, Fungicide and Rodenticide Act (FIFRA): <http://www.epa.gov/compliance/civil/fifra/fifraenstatreq.html>