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# ENVIRONMENTAL Fact Sheet

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WMD-HW-18

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## “Universal Waste” Batteries: Management Requirements for Handlers and Transporters

Batteries are found in many of the electronic devices we have in our homes, businesses and public agencies. All of these batteries must eventually be disposed of and many batteries have to be managed as a universal waste because of their toxic or reactive properties.

Batteries currently contain one or more of the following eight metals: mercury, cadmium, lead, zinc, manganese, nickel, silver and lithium. When a battery is disposed of in a solid waste landfill or incinerator, the battery can leach its toxic constituents and contaminate air, soil, surface water and groundwater. Mercury and cadmium pose a special threat in incinerators because they are volatilized by the incineration process. When incinerated, battery contents can be released to the environment as inhalable emissions or as leachable elements from the ash. In New Hampshire, mercury has been detected in freshwater fish and a statewide fish consumption advisory has been issued by NHDES. For more information on mercury in New Hampshire’s environment, go to [www.des.nh.gov](http://www.des.nh.gov) and search “Mercury Reduction” in the A to Z List.

Batteries may be handled under Env-Hw 1100 Universal Waste Rule that went into effect October 13, 2001 and is further described in this fact sheet. NHDES believes that recycling is the preferred option for waste batteries and that the Universal Waste Rule will promote the recycling and proper management of batteries.

### Universal Waste

“Universal wastes” are wastes that meet the definition of hazardous waste in the Hazardous Waste Rules, but which during accumulation and transport pose a relatively low risk compared to other hazardous wastes. Wastes that the Department of Environmental Services (NHDES) has determined meet universal waste criteria include antifreeze, mercury-containing lamps and devices, cathode ray tubes (CRTs), certain types of batteries, and recalled or suspended hazardous waste pesticides regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

“Universal Waste Batteries” are waste batteries that meet the definition of hazardous waste in the Hazardous Waste Rules. These include nickel-cadmium (Ni-Cd), small sealed lead-acid and hazardous lithium batteries. Lead-acid motor vehicle batteries may be managed under Env-Hw 809 of the Hazardous Waste Rules or under the Universal Waste Rule. Please refer to the NHDES fact sheet WMD-SW-4 “Management of Used Motor Vehicle Batteries” for more information. See fact sheet WMD-HW-23 “All About Batteries” for battery identification and disposal information for each type of battery.

### Generator Status

If waste batteries and other universal wastes are managed in accordance with the Universal Waste Rule, Env-Hw 1100, such wastes do not need to be included in the calculation of hazardous waste generator’s status (see Env-Hw 503 of the Hazardous Waste Rules). Universal wastes, when recycled, are also not subject to the generator fee at Env-Hw 512.02.

## **Universal Waste Consolidation**

A facility may collect waste batteries from other sites or generators without a permit provided the facility meets the handler requirements covered in the Universal Waste Rule Env-Hw 1101-1114 and complies with other applicable federal, state, and local regulatory requirements.

### **Requirements for Handlers**

A “handler” of waste batteries means: (1) a generator of universal waste batteries; or (2) an owner or operator of a facility that receives universal waste batteries from other handlers, accumulates the waste batteries, and sends the waste batteries to another handler or to a destination facility. Handlers of universal waste batteries must either meet the following standards or comply with the generator and/or facility requirements of the Hazardous Waste Rules.

#### **1. Release Prevention**

Manage waste batteries in a way that prevents releases to the environment. See the section titled: “Best Management Practices for Universal Waste Batteries” in this fact sheet.

#### **2. Quantity Limits**

Universal waste handlers are either very large, large, or small quantity handlers:

- a. Small Quantity Handlers – accumulate less than 5,000 kilograms (approximately 11,000 pounds) of combined universal wastes on-site at any time. Approximately 220 five-gallon pails (about 50 pounds each) or 20 55-gallon drums (550 pounds each) of waste batteries would equal 11,023 pounds (approximately 5,000 kilograms).
- b. Large Quantity Handlers – accumulate 5,000 kilograms or more, but less than 20,000 kilograms, of combined universal wastes at any one time and must also comply with Env-Hw 1104 described in this fact sheet in the section titled, *Additional Requirements for Large Quantity Handlers*.
- c. Very Large Quantity Handlers – accumulate 20,000 kilograms or more of combined universal wastes at any one time and must also comply with Env-Hw 1104 and Env-Hw 1105 described in this fact sheet in the section titled, *Additional Requirements for Very Large Quantity Handlers*.

#### **3. Labeling**

Clearly label or mark each container of waste batteries with any one of the following phrases: “Universal Waste – Battery(ies),” or “Waste Battery(ies),” or “Used Battery(ies).”

#### **4. Containers**

Store both intact and broken batteries in containers that are compatible with the universal waste, in good condition, and closed at all times except when batteries are being added to, or removed from, the container. Containers stored outside shall be covered to prevent precipitation from coming in contact with the waste.

#### **5. Accumulation Time Limits**

- a. Accumulate waste batteries for no longer than one year from the date the batteries are generated or received from another handler.
- b. Demonstrate the length of time that the waste batteries have been accumulated from the date the batteries became waste or were received. The handler may make this demonstration by:
  - (1) Marking or labeling containers with the starting accumulation date; or
  - (2) Maintaining an inventory system on-site that identifies the earliest date that waste batteries were added to a container or received from off-site.

#### **6. Training**

Ensure that all employees who handle or have responsibility for managing waste batteries are thoroughly familiar with the handling and emergency procedures.

## **7. Response to Releases**

- a. Immediately contain and clean up all releases of from broken, leaking or damaged batteries.
- b. Place any broken or damaged batteries and any residues resulting from breakage or damage in a secure container.
- c. The container must be closed and sealed, structurally sound and compatible with the broken batteries. Ensure the container is clean because if it is contaminated with other chemicals, those substances may react with the batteries.
- d. Residues from broken batteries that exhibit a characteristic of hazardous waste must be handled in accordance with the Hazardous Waste Rules. The residues may be sent to a recycling facility or a hazardous waste treatment, storage, or disposal facility authorized to accept the waste. A New Hampshire reregistered hazardous waste transporter and a uniform hazardous waste manifest must be used. Transporters who are transporting residues must meet the requirements of the Hazardous Waste Rules. All applicable US DOT packaging and shipping requirements for broken batteries must be met.

Any releases that pose a threat to human health or the environment must be reported immediately to NHDES at (603) 271-3899, Monday through Friday, 8 am to 4 pm or to New Hampshire Department of Safety at (603) 223-4381, 24 hours/day and to the municipality in which the release occurred.

## **8. Off-Site Shipments**

- a. Handlers are prohibited from sending or taking waste batteries to a place other than another universal waste handler, a battery recycling facility, or an authorized hazardous waste facility.
- b. Prior to sending a shipment of waste batteries to another handler or destination facility, the originating handler must ensure that the receiving handler agrees to receive the shipment.
- c. Shipments must meet all applicable United States Department of Transportation (US DOT) and DOS regulations for waste batteries.
- d. If a waste battery shipment is rejected by an intermediate handler or destination facility, arrangements must be made by the originating handler to:
  - (1) Receive the waste back when notified that the shipment has been rejected, or
  - (2) Send the device shipment to an alternate facility.

## **9. Exports**

A handler of waste batteries who sends the waste batteries to a foreign destination must comply with the requirements for international shipments as set forth in Env-Hw 1102.08 of the Universal Waste Rule.

### **Additional Requirements for Large Quantity Handlers**

A handler who accumulates 5,000 kilograms or more of combined universal wastes must comply with Env-Hw 1104. These requirements include:

1. Prior to collecting 5,000 kilograms or more of combined universal wastes, notify NHDES of this activity and obtain an EPA Identification Number if one has not already been obtained.
2. Keep records for three years on each shipment of waste received or sent. These records must include:
  - a. The date of each shipment.
  - b. The quantities of each shipment.
  - c. The name and address of the handler or facility from which universal waste lamps were received or shipped to.

### **Additional Requirements for Very Large Quantity Handlers**

A handler who accumulates 20,000 kilograms or more of combined universal wastes must comply with Env-Hw 1104 and Env-Hw 1105. These requirements include:

1. Submit a notification form for each on-site location where universal waste is accumulated.
2. Ensure universal waste is not stored within a 100-year floodplain.
3. Complete and document weekly inspections of all universal waste storage areas.
4. Establish and post contingency plans and emergency procedures and provide emergency response equipment.
5. Post emergency response information at each universal waste storage area and provide access security measures to universal waste storage areas.
6. Provide closure plans and sufficient financial assurance for closure.

### **Requirements for Transporters**

1. Transporters are not required to obtain a New Hampshire hazardous waste transporter registration or use a hazardous waste manifest for waste batteries, but must meet all applicable US DOT and DOS regulations.
2. Transporters are prohibited from sending or taking waste batteries to a place other than:
  - a. another handler;
  - b. a battery recycling facility; or
  - c. an authorized hazardous waste facility.
3. Staging During Transportation
  - a. Transporters who remove waste batteries from their vehicles and stage them temporarily are not required to obtain a hazardous waste transfer facility permit, but are subject to US DOT and DOS regulations.
  - b. Transporters who stage waste batteries for more than 10 days must also meet universal waste handler requirements.
  - c. Transporters must not stage more than a combined total of 5,000 kilograms (approximately 11,000 pounds) of waste batteries and other universal wastes on-site at any time.

### **Best Management Practices for Universal Waste Batteries**

Batteries can be potentially harmful when stored improperly; there have been fires in New Hampshire due to improperly stored batteries. Because of this risk, the following additional storage practices are recommended.

1. Store rechargeable batteries that are not fully discharged so that their electrodes do not come in contact with the electrodes of another battery or metal object (*e.g.*, the inside of a metal drum).
2. Do not tightly seal battery containers. This is to avoid the build up of hydrogen gas.
3. Keep batteries dry. Storage of batteries under a cover or in a building works best, especially since some batteries can react with water.
4. Store batteries away from sources of sparks or flames.
5. Do not store leaking batteries with non-leaking ones; acids from the insides of some batteries may corrode the other batteries.

### **For more information**

For more information, contact NHDES at (603) 271-2942, toll free within New Hampshire at 866-HAZWAST, or NHDES' Household Hazardous Waste Program at (603) 271-2047. For a complete description of the requirements, refer to the Hazardous Waste Rules, Env-Hw 100-1200, at [www.des.nh.gov](http://www.des.nh.gov).