



Waste Lamps and Ballasts

Idaho Department of Environmental Quality

This fact sheet offers guidance to those who generate and manage waste lamps and ballasts. For complete management regulations, see the Code of Federal Regulations, Title 40, Part 273 and 262 and Idaho's Rules and Standards for Hazardous Waste (IDAPA 58.01.05.016).

WASTE LAMPS

Typical waste lamps from businesses include fluorescent lamps and high-intensity discharge lamps, including mercury vapor, high-pressure sodium, and metal halide lamps.

Environmental Concerns

The waste lamps listed above can contain levels of mercury and lead that make them hazardous waste when disposed of. Mercury and lead are toxic metals that can accumulate in living tissue and damage health. Businesses and government in Idaho discard several million lamps each year, making these lamps the largest source of mercury in our solid waste stream. When a lamp is broken or placed in a landfill or incinerator, metals are released into the environment that may contaminate the air, surface water, or ground water.

Disposal of Waste Lamps Containing Mercury

If your business generates waste lamps that contain mercury, you have several choices in managing that waste. Depending on circumstances, waste lamps may be considered universal waste, very small quantity generator waste, solid waste, or hazardous waste. The category you fall under determines your options for disposing of waste lamps. The table below shows a summary. See the next page for more details.

Management Option	Conditions	Applicable Rules	Comments
Universal waste	If you manage waste lamps this way, you are subject to applicable universal waste management standards.	40 Code of Federal Regulations (CFR) 273	The federal Universal Waste Rule is designed to encourage recycling and proper disposal of common hazardous waste. When treated or disposed of as hazardous waste, waste lamps are subject to hazardous waste management requirements.
Hazardous waste	To manage waste lamps this way, you must follow applicable hazardous waste regulations.	40 CFR 260-266, 268	Most restrictive management requirements. Waste must be sent directly to a permitted hazardous waste facility.
Very small quantity generator waste	To manage waste lamps this way, you must be a very small quantity generator (generate less than 220 lbs. of hazardous waste per month).	40 CFR 262.14	You may dispose of waste lamps in solid waste landfills, if the landfill operator allows. You must count the number of waste lamps you generate each month. Recycling is encouraged.
Solid waste	To manage waste lamps this way, the lamps must not exhibit characteristics of hazardous waste.		Some fluorescent lamps do not exhibit hazardous waste characteristics. Check with the lamp manufacturer.

Universal Waste

If you generate waste lamps, the best option is to manage them as universal wastes. Under the federal Universal Waste Rule, you may manage certain hazardous wastes known as “universal wastes” under streamlined requirements. The rule is designed to encourage recycling of common hazardous wastes like waste lamps and to reduce the regulatory burden on businesses that generate these wastes. These are some advantages of the rule:

- **Longer storage times.** You can accumulate universal waste for up to 1 year before sending it for recycling.
- **Larger accumulation rates.** You do not have to include universal waste when calculating hazardous waste generator status and monthly accumulation totals. (See the Hazardous Waste Section in this fact sheet.)
- **Exemption from certain hauling requirements.** You do not need a manifest to ship universal wastes, and you are not required to use a registered waste hauler to transport universal wastes in Idaho.

Who does the Universal Waste Rule apply to?

The Universal Waste Rule applies to very small, small, and large quantity hazardous waste generators and transporters. Visit DEQ’s Web site at <http://www.deq.idaho.gov/waste-mgmt-remediation/hazardous-waste/generator-status/> for more information on how to determine your generator status.

What are the Universal Waste Rule requirements?

Generators and handlers must store universal wastes in an environmentally responsible manner to avoid spills or leaks and send them to an approved universal waste handler. You must also take these steps:

- Store lamps in containers such as cardboard boxes or fiber drums to keep them from breaking.
- Keep containers closed.
- Minimize lamp breakage and immediately clean up any broken or damaged lamps.
- Store broken lamps in a closed, structurally sound container.

How long can universal waste be stored?

Generators and handlers of waste lamps treated as universal waste can accumulate them for up to 1 year from the date the waste was generated. You may accumulate waste lamps for longer than 1 year from the date generated only if you need more time to gather enough for proper recycling. You must be able to demonstrate this need if inspected by DEQ. You must be able to demonstrate the length of time that the universal waste has been accumulated from the date it became a waste or was received. You can do this through labeling and marking.

How should universal waste be labeled and marked?

Generators or handlers must clearly label containers of waste lamps with one of these phrases: “Universal Waste—Lamps,” “Waste Lamps,” or “Used Lamps.” To demonstrate the date a waste lamp became a waste or was received, you should also take these steps:

- Mark or label each individual lamp or container with the date it became a waste or was received.
- Maintain an inventory system on-site that identifies the date each waste lamp became a waste or was received, or the earliest date that any waste lamp in a group of universal waste items became a waste or was received.
- Place the waste lamps in a specific accumulation area and identify the earliest date that any waste lamp in the area became a waste or was received.

Hazardous Waste

If you generate waste lamps, you may decide to manage them as hazardous waste instead of universal waste. Managing lamps as hazardous waste is more restrictive than as universal waste. Depending on the amount of hazardous waste you generate, disposing of waste lamps as hazardous waste may require these steps:

- Limiting the time that waste can be accumulated.
- Paying hazardous waste disposal fees.
- Attending additional training and developing emergency preparedness and contingency plans.
- Submitting annual reports of the waste you generate.

Very Small Quantity Generator Waste

If you are a very small quantity generator (VSQG), you may manage your waste lamps as very small quantity generator waste. VSQGs generate less than 220 pounds of hazardous waste per month. To qualify as a VSQG, you must count all hazardous waste (including any hazardous waste lamps) you generate during each calendar month. To remain subject to the less stringent hazardous waste management requirements, generators who produce less than 220 pounds of hazardous waste must take these steps:

- Ensure delivery of their waste to a hazardous waste disposal or recycling facility, a solid waste disposal facility if applicable, or a large quantity generator under the control of the same person as the VSQG.
- Accumulate no more than 2,200 pounds of hazardous waste at any one time.

Solid Waste

You may manage waste lamps as solid waste if they do not show characteristics of hazardous waste, including mercury. Waste lamps used in special situations such as photo processing, or larger high-intensity discharge lamps can also contain cadmium or lead, which are hazardous wastes. To manage waste lamps as solid waste, you must first determine that your lamps do not exhibit a hazardous waste characteristic. You may do this using one of these two methods:

- Test a representative sample of the waste, using the Toxicity Characteristic Leaching Procedure.
- Use process knowledge of the waste, which you may get from the manufacturer. Lamp manufacturers now offer low-mercury lamps that do not show hazardous waste characteristics. Be sure to have documentation from the manufacturer that the lamps you are using have been tested and are not hazardous waste. You must be able to demonstrate that the data used in your waste determination is for the type of lamps (in other words, the brand and model) you are disposing of.

Lamp Crushing

If you manage waste lamps as universal waste, you may not crush them or dilute them with other wastes. Crushing waste lamps is permitted if you manage them as hazardous waste instead of universal waste, or if the waste lamps are determined to be a solid waste. Lamps must be crushed in commercially-available crushing units designed to control mercury emissions.

In order to crush waste lamps, the generator of the lamp must take these steps:

- Crush lamps in a well-ventilated and monitored area to ensure compliance with applicable OSHA exposure limits for mercury.
- Ensure that employees crushing lamps are thoroughly familiar with proper handling and emergency procedures for waste mercury.
- Store crushed tubes in closed, non-leaking containers.

When deciding whether to crush lamps, be aware that crushing may add extra disposal costs. Crushing units also can create health and environmental risks because of the release of mercury vapors. Because of these reasons, environmental and public health agencies prefer that you recycle waste lamps under the Universal Waste Rule.

Waste Lamp Collection Services

Below is a partial list from DEQ's Online Recycling Directory of waste lamp collection services; other options may also be available. DEQ does not endorse specific recyclers or disposal services. Before choosing a waste lamp collection service, verify their practices and the practices of the universal waste destination facility they use. Also ask your lamp manufacturer if they provide a return service for waste lamps.

Company	Type of Service	Service Areas	Phone
Able Clean-up Technologies	Pick up	North and north central Idaho	(509) 466-5255
Ada County Landfill	Drop off	Boise, Idaho	(208) 577-4725
Ecolights Northwest	Mail in	All areas	(206) 343-1247
Emerald Services	Pick up	North and north central Idaho	(509) 928-6789
Environmental Management Solutions	Pick up	All areas	(208) 895-0326
Goodrich Road Landfill	Drop off	Council, Idaho	(208) 253-4561
Master Environmental	Pick up	All areas	(208) 888-7979
New Meadows Transfer Station	Drop off	New Meadows, Idaho	(205) 253-4561
Safety-Kleen Systems	Pick up	Eastern, south central, southeastern, and southwestern Idaho	(208) 342-8882
Safety-Kleen Systems Inc.	Pick up	North and North Central Idaho	(509) 928-8353
Specialty Environmental Services, Inc.	Pick up	Eastern, south central, southeastern, and southwestern Idaho	(208) 327-9977

LAMP BALLASTS

Light ballasts are the main electrical components of fluorescent light fixtures and are generally found inside the fixture under a metal cover plate.

Environmental Concerns

Lamp ballasts manufactured through 1979 contain chemicals known as polychlorinated biphenyls (PCBs). When released into the environment, PCBs persist for many years and accumulate in living tissue. PCBs can cause cancer and other negative health effects on the immune, reproductive, nervous, and endocrine systems.

Lamp Ballasts and PCBs

Prior to 1979, light ballasts contained PCBs inside small capacitors or as a tar-like substance surrounding the components of the ballast. The U.S. Environmental Protection Agency (EPA) banned the manufacture of PCBs in 1979.

When determining if your ballast contains PCBs, remember these facts:

- All lamp ballasts manufactured through 1979 contain PCBs.
- Lamp ballasts manufactured after 1979 that do not contain PCBs should be labeled "No PCBs."
- If a ballast is not labeled "No PCBs," assume it contains PCBs.

Leaking Ballasts

PCB ballasts contain about 1 to 1½ ounces of PCBs. If the ballast fails, PCBs may drip out of the fixture. If you see clear or yellow oil on the surface of a ballast, it is probably leaking. If so, you should take these steps immediately to limit or avoid personal exposure to PCBs:

- Wear chemically resistant gloves and carefully handle the ballast to contain the PCB and prevent spills.
- Place the ballast in a heavy plastic bag with absorbent material.
- Properly dispose of the ballast as PCB waste at a facility regulated under the federal Toxic Substances Control Act. You must manage leaking PCB ballasts as PCB waste and dispose of them in a facility regulated under the federal Toxic Substances Control Act. The only such landfill in Idaho is U.S. Ecology.

Disposal of Non-Leaking PCB Ballasts

The best option for non-leaking PCB ballasts is to recycle them at a facility with EPA approval for recycling PCB ballasts (see table below). To transport them to the recycling facility, use a transporter with a PCB activity identification number from EPA. If you can't recycle non-leaking PCB ballasts, you must manage them as hazardous waste and dispose of them at an incinerator that complies with 40 Code of Federal Regulations (CFR) section 761.70, or in a chemical waste landfill that complies with 40 C.F.R. section 761.75.

PCB Ballast Transporters

Below is a partial list from DEQ's Online Recycling Directory of companies that transport PCB ballasts. DEQ does not endorse specific recyclers or disposal services. If you generate PCB ballasts, you are ultimately responsible for making sure they are properly handled and disposed of. Before choosing a transporter, then, you should verify that they follow EPA regulations and will recycle ballasts in a facility approved by EPA.

Company	Type of Service	Service Areas	Phone
Able Clean-up Technologies	Pick up	North and north central Idaho	(509) 466-5255
Ecolights Northwest	Mail in	All areas	(206) 343-1247
Emerald Services	Pick up	North and north central Idaho	(509) 928-6789
Environmental Management Solutions	Pick up	All areas	(208) 895-0326
Master Environmental	Pick up	All areas	(208) 888-7979
Safety-Kleen Systems	Pick up	Eastern, south central, southeastern, and southwestern Idaho	(208) 342-8882
Safety-Kleen Systems Inc.	Pick up	North and north central Idaho	(509) 928-8353
Specialty Environmental Services, Inc.	Pick up	Eastern, south central, southeastern, and southwestern Idaho	(208) 327-9977

The list below shows facilities with EPA approval (as of December 2008) to recycle fluorescent light ballasts.

Company	Location	Phone
Veolia ES Technical Solutions, LLC	Stoughton, MA	(781) 341-6080
Trans-Cycle Industries	Pell City, AL	(205) 338-9997
Clean Harbors (PPM)	Twinsburg, OH	(330) 425-3825
Superior Special Services	Phoenix, AZ	(800) 368-9095

ADDITIONAL INFORMATION

For more information on hazardous waste, log on to DEQ's Hazardous Waste Management Web page at www.deq.idaho.gov/waste/prog_issues/haz_waste/hazwaste.cfm or contact DEQ:

DEQ State Office
(208) 373-0502

Boise Regional Office
(208) 373-0550
Toll-free: (888) 800-3480

Coeur d'Alene Regional Office
(208) 769-1422
Toll-free: (877) 370-0017

Idaho Falls Regional Office
(208) 528-2650
Toll-free: (800) 232-4635

Lewiston Regional Office
(208) 799-4370
Toll-free: (877) 541-3304

Pocatello Regional Office
(208) 236-6160
Toll-free: (888) 655-6160

Twin Falls Regional Office
(208) 736-2190
Toll-free: (800) 270-1663

RESOURCES

Idaho Small Business Development Center Environmental Solutions Program

The Idaho Small Business Development Center offers free, confidential, environmental assistance. For direct assistance, please contact the Environmental Assistance Coordinator at (208) 426-1839 or visit their Web site at www.idahosbdc.org.

DEQ Pollution Prevention Program

Contact DEQ's pollution prevention coordinator for assistance on environmental issues related to air, waste, water, conservation, and sustainability at (208) 373-0502 or visit the Web site at www.deq.idaho.gov/pollutionprevention.

DEQ's Online Recycling Directory

Search DEQ's online directory to identify safe recycling and management options for business and household waste. www.deq.idaho.gov/waste/recycling/recycle_search_params.cfm

Steps to Managing Your Universal Waste Lamps in an Environmentally Safe Manner

Visit this page to learn the steps businesses can take to properly manage used universal waste lamps. www.epa.gov/epawaste/hazard/wastetypes/universal/lamps/recycle.htm

PCB Fluorescent Light Ballasts

This page discusses regulations and storage and disposal requirements for PCB fluorescent light ballasts. www.epa.gov/reg3wcmd/ts_pcb.htm#ballast

Recycling Used Lamps That Contain Mercury

This Web site provides links to companies that recycle fluorescent lamps. www.lamprecycle.org



Printed on recycled paper, July 2018. Costs associated with this publication are available from the Department of Environmental Quality in accordance with Section 60-202, Idaho Code.