Managing Used Fluorescent Lamps, High-Intensity Discharge Lamps & PCB Ballasts

Environmental Concerns
Fluorescent lamps and high-intensity discharge (HID) lamps, including mercury vapor, high-pressure sodium, and metal halide lamps from businesses (and households) are banned from solid waste disposal in Minnesota because they contain mercury. Even though new technology has reduced the amount of mercury in a fluorescent lamp and lamps may pass the Toxicity Characteristic Leaching Procedure (TCLP), this law still applies.

Ballasts from fluorescent lamps are assumed to contain polychlorinated biphenyls (PCBs) unless they are marked or tested to show they do not contain PCBs. Ballasts marked by the manufacturer stating they do not contain PCBs are not regulated as hazardous waste. They may be recycled or managed as an industrial solid waste. Because cost prohibits testing individual ballasts, the Minnesota Pollution Control Agency (MPCA) recommends managing non-leaking, non-marked ballasts according to the requirements in this fact sheet.

Note: Leaking PCB ballasts must be managed under state and federal hazardous waste rules. For more information, see If the Ballast Has Leaked, page 4.

Disposal Options
Minnesota businesses have two options for disposing of fluorescent and HID lamps and non-leaking PCB ballasts:

1. Manage as hazardous waste following all hazardous waste rules; or
2. Recycle fluorescent and HID lamps and manage PCB ballasts following the policy requirements outlined in this fact sheet.

Lamp Handling Requirements
Do not place used lamps in the trash. Do not break or crush lamps because mercury may be released, posing health and environmental risks. Because of the potential for mercury release, and because some crushing processes are considered treatment and require a facility permit, the MPCA strongly discourages the use of portable or barrel-top crushers at this time. Please contact MPCA staff if you are considering using a drum-top crusher.

Lamp Storage Requirements
1. Store lamps in a manner that will prevent them from breaking. Recycling facilities request that you do not tape lamps together for storage or shipment. Some do not accept lamps that are taped together.
2. Mark the lamp storage area or each container Used Lamps for Recycling or Hazardous Waste — Used Lamps.

3. Store lamps in an on-site waste storage area where they will not break. If you cannot store them on site, you may transport the lamps to a storage location following the applicable transportation requirements described on page 3.

If lamps are accidentally broken, store them in a non-metal closed container marked Broken Fluorescent Lamps. You may send broken lamps to a recycling facility (there is an extra charge for broken lamps) or manage according to full hazardous waste rules.

Choosing a Lamp Transporter and Collection Site

A collection site is any retail store or other business that collects and stores lamps for transport to a recycling facility. They must follow the requirements outlined below, Storing Lamps for Others. Transporters must notify the MPCA that they are transporting lamps and must have a contract with a recycling facility in order for the facility to accept the lamps. Each recycling facility must have a signed Compliance Agreement with the MPCA.

To help you determine where to send your lamps:

1. Ask the collection site who will be transporting your lamps and to which recycling facility they will be taken.
2. Call the facility to make sure the transporter has a contract with that facility.
3. Call the MPCA Permits Unit (see page 4) to make sure the recycling facility has a signed Compliance Agreement form filed with the MPCA.

Storing Lamps for Others

Collection sites or businesses that store lamps for others must follow the applicable storage requirements below:

If storing fewer than 1,000 lamps for others, contact the MPCA Customer Assistance Center (see page 4) for a Notification of Lamp Activity form and provide:

- the name and location of the collection site;
- how many lamps you intend to store; and
- the length of storage time.

If storing 1,000 lamps or more for others, contact the MPCA for a lamp Storage Compliance Agreement form and:

1. Obtain a written agreement with a lamp recycling facility certifying:
   - the facility will accept lamps from you; and
   - the rate at which the facility will accept lamps from you.
2. Enter into a storage compliance agreement with the MPCA. The compliance agreement requires you to:
   - Provide personnel training in the techniques and hazards of handling lamps.
   - Maintain a contingency plan that describes the appropriate environmental and human health safeguards in place and the procedures and equipment that will be used in case of an emergency.
   - Maintain records for three years documenting how many and from whom lamps are received and when and to where they are shipped for recycling.
   - Establish financial assurance for closure of the storage/collection site.

Ballast Storage Requirements

Non-leaking PCB ballasts are classified as a special hazardous waste and may be managed under the reduced requirements of the Pilot Project for Special Hazardous Waste. Management under the Pilot Project requires:

1. Store waste ballasts in a container that will hold the waste at all times. For on-site storage, a coffee can or plastic ice cream pail with a tight-fitting cover may be sufficient for a small number of ballasts. For shipment off site, place ballasts in a Department of Transportation (DOT)-approved container. Mark both storage and shipping containers with the words: PCB Ballasts for Recycling or Hazardous Waste PCB Ballasts.
2. Inspect the storage area regularly to ensure ballasts/containers are not leaking. (Inspections do not need to be documented.) If ballasts are leaking, repackage them and manage according to the section entitled If the Ballast Has Leaked.
3. Ship the waste off site within 180 days of reaching the 500 kilogram Pilot Project accumulation limit.
**Lamp/Ballast Transportation Requirements**

Transportation fees for lamps usually include a pickup charge. If a number of businesses in an area can store their lamps and coordinate to have one truck sent out and routed to pick up all lamps, the charge may be substantially reduced. Many counties are organizing such routes. Look for an opportunity in your area or call your county solid waste office.

Both lamps and non-leaking ballasts may be transported by the generator to a Minnesota recycling facility or collection site. The waste must be transported in a business vehicle following applicable DOT hazardous material requirements and the requirements below:

**When shipping within Minnesota:** Use a waste-tracking invoice containing this information:

- date of shipment;
- location from which the waste was shipped;
- destination location; and
- amount of waste shipped (number of lamps; number or pounds of ballasts).

A hazardous waste manifest and a licensed hazardous waste transporter are not required for shipments to a recycling facility or storage location within Minnesota.

**When shipping out of Minnesota:** Use a hazardous waste manifest and a licensed hazardous waste transporter if you are shipping to a hazardous waste disposal facility. If you are shipping to a recycling or storage facility and the lamps do not pass through a state requiring a manifest, you may use a waste-tracking invoice as outlined above.

**When shipping into Minnesota:** You may use a waste-tracking invoice containing the information outlined above unless you are passing through a state that requires a hazardous waste manifest; then you must use a hazardous waste manifest.

**Lamp/Ballast Record Keeping Requirements**

Keep these records for a minimum of 3 years:

1. the number of lamps removed from service during each calendar year; and
2. waste-tracking invoices for ballasts and lamps.

If lamps are stored off site, also keep a record of the storage location of the lamps.

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**Lamp/Ballast License Requirements**

A hazardous waste generator license is not required for non-leaking PCB ballasts. A hazardous waste generator license is not required in Greater Minnesota for lamp generators. For more information about lamp generator license requirements in a metropolitan county, call your county hazardous waste office.

**If a Light Fixture Fails**

1. Turn off the light immediately to prevent PCBs from leaking. Shut off power to the light by disconnecting the electricity at the fuse box.
2. If the ballast has leaked, evacuate and ventilate the area until the ballast unit cools (about 30 minutes).
3. Wear protective clothing: goggles, gloves, apron (and boots, if needed) made from neoprene, butyl or nitrile, and a chemical cartridge respirator with an organic vapor cartridge.
4. Remove the lamp fixture and metal covering to access the ballast. (Is the power off?) Cut the electrical wires to the ballast and remove it.

**If the Ballast has Leaked**

Waste from leaking ballasts is regulated by the Toxic Substances Control Act (TSCA).

1. Wear protective clothing (see *If a Light Fixture Fails*).
2. Clean all nonabsorbent surfaces:
   - Remove spilled PCB oil with a rag, paper towel or by scraping with a putty knife.
   - Wipe twice with a rag containing mineral spirits, kerosene, turpentine or rubbing alcohol.
   - Wipe once with a full-strength solution of a trisodium phosphate-based cleaner such as Soilex™ or Spic’n Span™.
3. Wrap all PCB-contaminated materials (the leaking ballast, rags, gloves, absorbent materials like drapes or carpet) in newspaper. Place in double plastic bags.
4. Store in DOT-approved containers.
5. Using a 6-inch yellow PCB label, label as PCB-contaminated hazardous waste and ship via hazardous waste transporter to a hazardous waste facility within one year.

**NOTE:** If one pound or more of PCBs (the amount in 12-16 ballasts) is released within 24 hours, notify the National Response Center.
More Information

Your metropolitan county and the Minnesota Pollution Control Agency have staff available to answer waste management questions. For more information, contact your metropolitan county hazardous waste office or the MPCA office closest to your county.

The Minnesota Technical Assistance Program (MnTAP) is a nonregulatory program whose staff can help you find ways to prevent or reduce waste.

Metro County Hazardous Waste Offices
Anoka County .................... (763) 422-7093
Carver County .................... (952) 361-1800
Dakota County .................... (952) 891-7020
Hennepin County ............... (612) 348-8100
Ramsey County .................. (651) 773-4466
Scott County ...................... (952) 496-8177
Washington County ........... (651) 430-6655

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

Minnesota Technical Assistance Program
Toll free ......................... (800) 247-0015
............................................ (612) 624-1300
Web Site ................ http://www.mntap.umn.edu

Notification of Lamp Activity
MPCA .............................. (651) 296-5763
............................................ (800) 657-3724

Storage Compliance Agreement
MPCA .............................. (651) 296-5763
............................................ (800) 657-3864

Leaking Ballasts
TSCA Hotline ................. (202) 554-1404

Releases of one pound or more
National Response Center .. (800) 424-8802
Fluorescent Lamp Recyclers/Processors & Ballast Recyclers

The Minnesota Pollution Control Agency maintains the following list of fluorescent lamp recyclers and processors and ballast recyclers solely as a service to Minnesota generators of used lamps and ballasts. The information was voluntarily supplied by the companies and is not necessarily a complete list of available services. Recyclers distill mercury powder on site. Processors ship the mercury powder off site for distillation. The list does not endorse specific companies. The MPCA, by providing the list, does not imply that the companies are in compliance with applicable laws. The MPCA cautions generators to personally evaluate the services and compliance status of any company they use to manage their waste. The MPCA periodically updates this list.

**Minnesota Lamp Recyclers**

**Green Lights Recycling**
1701 93rd Lane NE
Blaine, MN 55449-4327
Contact: John Crudo
Phone: (763) 785-0456
FAX: (763) 785-0453

**Mercury Technologies of Minnesota Inc**
Pine City Industrial Park
PO Box 13
Pine City, MN 55063-0013
Phone: (320) 629-7888
(800) 864-3821

**Mercury Waste Solutions**
2007 County Road C2
Roseville, MN 55113
Phone: (651) 628-9370

**Superior Special Services**
401 West 86th Street
Bloomington, MN 55420
Phone: (952) 948-0626
(800) 831-2852

**Out of State Lamp Recyclers**

**A-Tech Recycling Inc**
PO Box 7391
Des Moines, IA 50309-7391
Phone: (800) 551-4912
FAX: (515) 263-6970

**EnviroCycle, Inc.**
PO Box 5367
High Point, NC 27262

**HID Recycling Inc**
32000 Aurora Rd
Solon, OH 44139
Phone: (800) 200-9716
FAX: (800) 865-2677

**Lamp Recyclers, Inc**
PO Box 12027
Green Bay, WI 54307-0794
Phone: (267) 592-1166
(800) 558-1166
FAX: (414) 592-1161

**Lighting Resources Inc**
1522 East Victory Street #4
Phoenix, AZ 85040
Phone: (800) 572-9253
Sales: (800) 866-6818

**Mercury Recovery Services, Inc.**
2021 South Myrtle
Monrovia, CA 91016
Phone: (818) 301-1372
### Ballast Recyclers/Disposal Companies

#### ALTA Resource Management Services
88-B Industry Avenue  
Springfield, MA 01104  
Contact: Joe Coles  
Phone: (413) 734-3399  
FAX: (413) 734-3475

#### EnviroLCycle, Inc.
PO Box 5367  
High Point, NC 27262

#### FulCircle Ballast Recyclers
509 Manida Street  
Bronx, NY 10474  
Phone: (718) 328-4667  
(800) 775-1516  
FAX: (718) 328-4462

#### Green Lights Recycling
1701 — 93rd Lane NE  
Blaine, MN 55449-4327  
Contact: John Crudo  
Phone: (763) 785-0456  
FAX: (763) 785-0453

#### Midwest Recycling & Mercury
860 White Street, PO Box 667  
Dubuque, IA 52001  
Phone: (800) 311-9572  
FAX: (319) 582-3072

#### Northern States Power
1518 Chestnut Avenue North  
Minneapolis MN 55403  
Contact: Roger Heuer  
Phone: (612) 347-9516  
FAX: (612) 347-9597

#### Recylights
4972 Woodville Hwy  
Tallahassee, FL 32311  
(800) 831-2852

#### Retrofit Recycling
2960 Yorkton Blvd.  
Little Canada, MN 55117  
Contact: Dan Herrington  
Phone: (651) 641-1309  
(800) 274-1309  
FAX: (651) 641-1422

#### Retrofit Companies
3855 Highway 14 West  
Owatonna, MN 55060  
Contact: Eric Kyllo  
Phone: (507) 455-2181  
(800) 795-1230  
FAX: (507) 455-2192

#### Superior Special Services
401 W 86th Street  
Bloomington, MN 55420-2707  
Phone: (800) 831-2852

#### Superior Special Services
4220 Perimeter Drv  
Columbus, OH 43228  
Phone: (614) 276-3000  
(800) 831-2852

#### Wisconsin Ballasts Inc
6817 Hillendale Drive  
Muskego, WI 53150  
Contact: John or Brad Karonshage  
Phone: (800) 345-4437  
Phone/FAX: (414) 679-4748