

# ***Safe Handling of Household Hazardous Waste***

## **Introduction – What shouldn't be in the trash?**

Many residences, businesses and municipalities have active recycling programs for materials such as cardboard, paper, and bottles and cans and composting programs for leaf and yard waste. Waste Bans enforced by the Massachusetts Department of Environmental Protection exist for these materials in order to conserve capacity at existing waste disposal facilities and to provide recycling markets with large volumes of material on a consistent basis. In addition, bans exist for construction and demolition materials and other bulky goods, while a food waste ban will start in July 2014 for large generators.

Other waste ban materials, such as computer monitors and televisions containing cathode ray tubes, are also prohibited from disposal. These and other materials outlined below, namely mercury and other common household hazardous wastes, are kept out of the garbage in order to protect waste and recycling workers at risk of exposure and to keep certain toxic substances from adversely affecting our environment.

Covanta SEMASS is working with communities in their territory to divert recyclables and hazardous waste for proper disposal. Together we can create a safer environment for both workers and residents.

## **Mercury**

The Massachusetts Mercury Management Act prohibits the disposal of mercury-containing products in the trash. SEMASS, owner of the waste-to-energy facility in West Wareham, MA where your trash goes, is committed to help prevent mercury from entering the waste stream.

Mercury is a neurotoxin that is found in some common household items. When items that contain mercury are thrown in the trash, that mercury enters our air and water and accumulates up the food chain, most notably in fish. Mercury is especially harmful to children and pregnant women. One way to keep mercury out of the environment is to properly dispose of items that contain mercury.

Covanta SEMASS is working with your community to provide access to recycling opportunities for all of your mercury containing devices. Options for disposal of each mercury-containing device are explained below:

## **Light Bulbs**

All fluorescent light bulbs contain mercury and must be recycled. This includes compact fluorescent's (CFL's), straight tubes, even the "green tip" tubes with lower mercury levels, U-tubes, circular tubes and HID lamps. In addition to fluorescent light bulbs, most lamps besides incandescent, halogen or LED's contain mercury and must be recycled.

Your town may have lamp recycling at the recycling center/transfer station. Check with your local recycling department for more details. In addition to town-sponsored collection, local hardware stores may have a SEMASS-sponsored collection program in your area. Please call the store ahead to confirm prior to bringing your bulbs in for recycling. The Home Depot and Lowes chains of stores have fluorescent bulb take back programs.

You can find mercury drop off locations in Massachusetts on the MassDEP website at: <http://www.mass.gov/eea/agencies/massdep/toxics/sources/understanding-mercury-and-handling-it-safely.html#2>

Remember, fluorescents use 25% of the energy traditional bulbs use. Mercury is what makes them so efficient, but they do need to be recycled.

## **Thermostats**

Dial thermostats (not digital thermostats) often contain mercury. Remove the thermostat from the wall and keep it whole (do not remove mercury bulb). Check with your local recycling department, DPW or Health Department for more details on where to bring thermostats for recycling. Replacing your old dial thermostat with a programmable digital thermostat will help you save energy and money at your home.

## **Thermometers**

It is suggested that all mercury containing thermometers be replaced, and those that are replaced must be recycled. These include those for medical use as well as those for reading outdoor temperature. Contact your Health Department for recycling options.

The amount of mercury in a small thermometer, 1 gram, is enough to make 1 ton of fish unfit to eat. It is also enough to contaminate a 20 acre lake.

## **Batteries**

Rechargeable batteries and button batteries contain mercury, as well as other heavy metals. Check with your local recycling department, DPW or Health Department for more details on if they accept batteries for recycling.

## Other Mercury Containing Devices

- Barometers may contain liquid mercury and should be recycled.
- Old plumbing switches may contain mercury and must be recycled.
- Old blood pressure cuffs (sphygmomanometers) contain a significant amount of liquid mercury and must be recycled.

## Safe Handling of Mercury Containing Devices

- To prevent breakage, store the device you are replacing in the packaging it came in or the packaging from the replacement device. If that is not available, store in a resealable bag and place in a plastic or glass jar with a tight fitting lid.
- Keep out of reach of children or pets.
- Wear glasses when handling lamps.

## Elemental/Liquid Mercury

Elemental mercury is a silvery, odorless liquid metal that is very toxic and must be recycled. The impact of mercury on human health wasn't widely documented until the 20<sup>th</sup> century. Large quantities of elemental mercury associated with laboratory or plumbing work are occasionally discovered, and amounts exceeding two tablespoons present significant risk to environmental health if spilled.

Due to high risk in moving liquid mercury, Covanta SEMASS will provide a free pick up of elemental mercury through Complete Recycling Solutions (CRS). Do not move or handle elemental mercury. Call CRS @ 866-CRS-9797 to arrange for an on-site pick up of elemental mercury and Covanta SEMASS will pay the bill.

**(Light Bulb Recycling Guide [HERE](#))**

## Mercury Clean-Up

**MassDEP Clean-up Procedures for Broken Fluorescent Lamps: (hard surfaces: wood, linoleum, etc.)**

**DO NOT USE A VACUUM OR BROOM TO CLEAN UP A BROKEN BULB!**

1. Cordon off the area where breakage occurred so that nobody steps in broken glass, phosphor powder or mercury. This should be done as soon as possible.
2. If there is a window or door that opens to the outside, open it to ventilate the area and wait about 15 minutes. If the bulb broke outside, or in an inside area where there is no window or door to the outside, do not wait to clean up.
3. Wearing disposable gloves, use stiff paper or cardboard to carefully push the glass and powder to a central point where you can scoop it up, being careful not to get it on your clothing.
4. Place the collected fragments into a rigid plastic or glass container. If no rigid container is available, a double-bagged set of resealable freezer bags should suffice. If you need to further break the glass to fit it into the container, do this outside, being careful not to cut yourself.
5. Use sticky tape, such as duct tape, to pick up any visible glass shards, powder or mercury and place it in the container.
6. Then, using wet wipes or moist paper towels, wipe the area thoroughly. Place used towels and disposable gloves into the container and close it tightly. Once closed, do not re-open it to put more material in.
7. Label the container "Universal Waste – Broken fluorescent lamp" and date it. Place the container in the same place you store unbroken bulbs.

For More information about broken bulb cleanup please visit:

<http://www.mass.gov/eea/agencies/massdep/recycle/hazardous/mercury-devices-and-liquid-mercury.html>

For further information, you may also contact MassDEP at 617-292-5500.

### **MassDEP Clean-up Procedures for an Elemental (liquid) Mercury Spill:**

When mercury is spilled, it evaporates and gives off hazardous vapors that are invisible and odorless. If you spill mercury or break a product that contains mercury, it is important that it be cleaned up immediately.

**DO NOT USE A BROOM OR A VACUUM TO CLEAN UP A MERCURY SPILL!**

1. Get all people not involved in cleanup out of the area to minimize tracking mercury into other areas.
2. Delineate the area that may have mercury droplets with string, tape or other materials. Be careful not to step in the mercury droplets.
3. Move all objects (e.g., furniture, boxes) away from the spill.
4. If possible, open a window or door to ventilate with outside air.
5. If the spill involves one pound of mercury (about two tablespoons) or more, you must report the spill to the Massachusetts Department of Environmental Protection (MassDEP) within two hours

from the time when you became aware of the release. To report a spill, call the MassDEP Emergency Response spill line at 1-888-304-1133.

6. Remove all jewelry from your hands and wrists, since mercury bonds with most metals. Put on disposable gloves. Do not touch the mercury with your bare hands.
7. Use index cards or other stiff paper to push the mercury beads you can see together. Lift the mercury beads into a glass jar or rigid plastic container (two index cards may be used together to lift the beads). If a glass or rigid plastic container is not available, use a sealable plastic bag in the interim.
8. If there are small beads that you cannot get up with the stiff paper, you can pick them up with sticky tape.
9. Wipe the entire delineated area with a damp paper towel or wet wipe.
  - a. If you have a mercury spill kit with a treated sponge, use that to wipe the area, or
  - b. If you have a mercury spill cleanup product, such as zinc or sulfur powder, follow the specific instructions from the manufacturer for its use.
10. Place all used materials used to clean up (e.g., powder or paste, used sponge, tape, used paper towel or wet wipes and used disposable gloves) in the glass jar, plastic container or sealable plastic bag.
11. If you are using a sealable plastic bag, try to find a glass jar with screw-on metal lid or rigid plastic container with tight fitting lid as soon as possible to contain the plastic bag and contents. Mercury vapors will pass through a sealed plastic bag or loosely closed container and will contaminate the air of the room the container is in.
12. Label your container with "Hazardous Waste - Mercury Contaminated Spill Cleanup Materials" and the date.
13. Dispose of the container with spill cleanup materials through a licensed hazardous waste management firm. If you are a business and this is your only hazardous waste, contact the Department of Public Works or Health Department in your community to see if a household hazardous waste collection event has been scheduled. Many municipalities will allow you to pay a small amount to include your waste with theirs. If no collection event is scheduled for the near future, visit:

<http://www.mass.gov/eea/agencies/massdep/recycle/hazardous/hazardous-waste-transportation.html>

For More information about mercury spill cleanup please visit:

<http://www.mass.gov/eea/agencies/massdep/recycle/hazardous/mercury-devices-and-liquid-mercury.html>

For further information, you may also contact MassDEP at 617-292-5500.

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## Household Hazardous Waste/Hazardous Items

### Household Hazardous Waste Collection Days

Homes often have unwanted, unsafe materials that cannot be thrown in the trash. Look in your cellars, sheds, bathrooms and kitchen and bring these materials to a Household Hazardous Waste Event in your community for proper disposal. Take advantage of these opportunities to rid your home of household hazardous waste. The following items are accepted at HHW events:

<p><b>From The Yard/Garden:</b></p> <ul style="list-style-type: none"><li>•Pesticides, Fungicides</li><li>•Herbicides</li><li>•Insect Sprays</li><li>•Rodent Killers</li><li>•Muriatic Acid</li><li>•Flea Powder</li><li>•No-Pest Strips</li><li>•Chemical Fertilizers</li><li>•Lighter Fluid</li><li>•Moth Balls</li></ul> <p>From The Workbench:</p> <ul style="list-style-type: none"><li>•Rust Proofers</li><li>•Wood Preservatives</li><li>•Wood Strippers &amp; Stains</li><li>•Paint Thinners</li><li>•Lead &amp; Oil-Based Paint</li><li>•Varnish</li><li>•Full Aerosol Cans</li><li>•Sealants</li><li>•Adhesives</li><li>•Solvents</li></ul>	<p><b>From The House:</b></p> <ul style="list-style-type: none"><li>•Drain Cleaners</li><li>•Oven Cleaners</li><li>•Floor Cleaners</li><li>•Metal Polish</li><li>•Arts &amp; Crafts Supplies</li><li>•Photo Chemicals</li><li>•Chemistry Kits</li><li>•Rechargeable Batteries</li></ul> <p><b>From The Garage:</b></p> <ul style="list-style-type: none"><li>•Fuels/Gasoline/Kerosene</li><li>•Brake &amp; Transmission Fluids</li><li>•Car Wax, Polish</li><li>•Engine Degreaser</li><li>•Swimming Pool Chemicals</li><li>•Driveway Sealer</li><li>•Antifreeze</li><li>•Used Motor Oil</li><li>•Car-Lead Acid Batteries</li></ul> <p><b>Mercury Products:</b></p> <ul style="list-style-type: none"><li>•Thermometers</li><li>•Thermostats</li><li>•Other mercury</li><li>•Button Batteries</li></ul>
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For specific information on materials accepted and the dates of HHW collection events in your community, check with the local Board of Health. Events are commonly held in the spring and fall.

## Other Hazardous Wastes

The following materials may not be accepted at HHW events but should be recycled as noted or handled a certain way before disposing of as trash. See below for detailed guidance on these materials:

## Recycling Paint

Some communities have "Used Paint Sheds" where residents may bring usable paint to swap. Please check with your community to see if this option is available in your area.

Empty or dried up cans of latex paint can be disposed with the regular trash. Empty cans of oil based paint, stains and solvents can be disposed with the regular trash as well.

Cans with leftover oil-based paints, stains and solvents must be disposed of at household hazardous waste events.

## Sharps

On July 1, 2012, a statewide ban on the disposal of needles, syringes and lancets (referred to collectively as "sharps") in household trash took effect. Keep sharps in secure containers out of the reach of children. Do not use glass. For information on disposal of medical sharps such as needles, syringes and lancets, as well as a listing of mail-back programs and local collection sites in Massachusetts - including municipal offices, hospitals, medical practices and pharmacies - see the Department of Public Health Guidelines:

<http://www.mass.gov/eohhs/gov/departments/dph/programs/id/hiv-aids/providers/needle-and-syringe-purchase-sale-use-and.html>

## Unused Medications

Unused medications should be disposed in order to avoid accidental ingestion or abuse. Traditionally, medications have been flushed down the toilet or poured down a drain. Unfortunately, this negatively affects aquatic life that absorbs these drugs. Unless the information sheet that came with your medication tells you to flush it down the drain, unused medications should be put in the trash. If you don't have the information sheet, visit the [U.S. Food and Drug Administration website](http://www.fda.gov), which lists drugs that should be flushed down the drain, and provides advice about how to dispose of other medications. MassDEP recommends including unused medications in your trash and lists several tips to ensure safe disposal:

- Keep medications in their original containers. Leave drug names visible to help identify the contents if they are accidentally swallowed. Cross out other personal information on labels to make it unreadable.
- Disguise the medications in their containers:
  - For pills: add some water or soda to dissolve them.
  - For liquids: add inedible material like cat litter, coffee grounds or dirt.

- Close the lids and secure with tape.
- Hide containers in the trash. DO NOT put them in your recycle bin!
- DO NOT put drugs in the trash without first disguising them - scavengers may find and eat them.
- DO throw your unwanted medications away safely!

<http://www.mass.gov/eea/agencies/massdep/toxics/sources/disposal-of-waste-medications-at-private-residences.html>

## **Medical/Infectious Waste**

In order to protect people who may come into contact with trash, place disposable sheets, medical gloves, soiled bandages and any other associated medical waste in plastic bags and securely close before you put them in the trash.

## **Propane Tanks**

Propane tanks containing fuel under pressure may explode if tank integrity is altered, causing severe injury or death. This is of particular concern for waste-to-energy facilities like Covanta SEMASS. Do not dispose of propane tanks in the trash; instead, take tanks to municipal collection programs or household hazardous waste collections if available. Additionally, check your Yellow Pages for local companies that accept tanks for reuse or scrap metal yards who may accept empty tanks. Do not attempt to remove the valve from the tank. Special safety equipment is required to prevent explosion. Before disposal, use up all of the residual gas and close the valve to avoid a fire hazard and air pollution. For more information, see MassDEP's hazardous waste webpage for propane tanks:

<http://www.mass.gov/eea/agencies/massdep/recycle/hazardous/propane-tanks.html>

## **Smoke Detectors**

Certain smoke detectors contain a radioactive sensing device, but the radioactivity is so low that it is considered harmless. Batteries should be removed for recycling before disposing smoke detectors. If a municipality has collected a large quantity of smoke detectors, they should contact MassDEP for disposal guidance.