

# Town of

## Recycling Resources for Difficult-to-Manage Items



### Mercury Containing Products:

Covanta SEMASS sponsors take back and recycling programs for mercury containing products including:

- Fluorescent light bulbs – All kinds including tubes and CFL's
- Old dial style thermostats
- Thermometers
- Button batteries
- Old barometers
- Old plumbing and marine switches
- Old blood pressure cuffs
- Liquid (elemental) mercury

### Town Information:

Where to recycle Mercury Containing Products:

Hours: \_\_\_\_\_

Contact: \_\_\_\_\_

Notes (How do they have to be prepared? Who may participate?):

For further information, please contact \_\_\_\_\_ at the  
(Board of Health/DPW) at \_\_\_\_\_.

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Covanta SEMASS works hard with its communities to keep mercury and hazardous materials out of the waste stream. There are many household products that require special handling. Diverting these materials from the trash not only makes our communities cleaner, but it makes it safer for your household and all the people that handle and process your trash.

Worker safety is a priority for Covanta SEMASS. By helping to eliminate hazardous waste from the trash, you help protect your neighbors that work for SEMASS. Although it is quite automated, humans are still part of the process. Everyone from the haulers to the floor staff to the maintenance staff and inspectors are exposed to this waste. Hazardous waste, such as chemicals and mercury and dangerous waste like used syringes and propane tanks bring great risks to the hard working staff that manages our regions trash. Please help us keep them safe by properly disposing the materials discussed in this booklet.

**Please read the following pamphlet to learn more about what materials cannot be disposed of in the trash, and how to properly handle those items.**

1. Fluorescent Light Bulbs
2. Mercury Thermometers and Thermostats
3. All Other Mercury-Containing Devices
4. Sharps
5. Medications
6. Propane Tanks



This booklet was created by the Center for EcoTechnology (CET) with funding and direct guidance from Covanta SEMASS



<http://www.cetonline.org>

# *Safe Handling of Household Hazardous Waste*

## **Introduction – What should not be in the trash?**

Many residences, businesses and municipalities have active recycling programs for materials such as cardboard, paper, bottles and cans and composting programs for leaf and yard waste.

Mercury and other common household hazardous wastes should be kept out of the trash in order to protect waste and recycling workers at risk of exposure and to keep toxic substances from adversely affecting our environment.

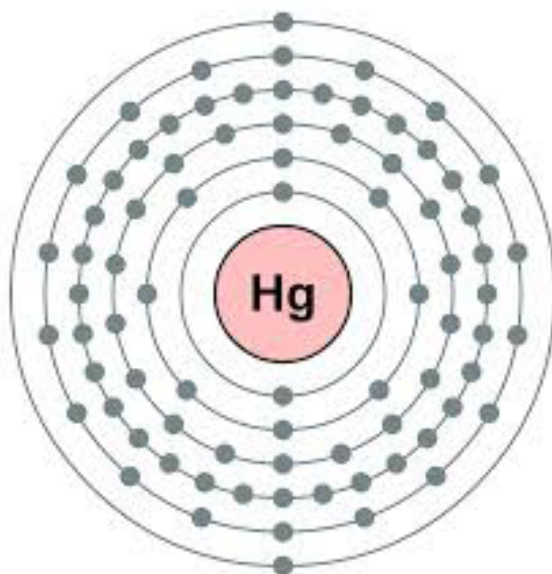
Covanta SEMASS educates communities in its territory to divert recyclables and hazardous waste for proper disposal. Together we can create a safer environment for both workers and residents.



# 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, Mass, 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 your mercury containing devices. Options for disposal of each mercury-containing device are explained on the following pages.

# Light Bulbs

All fluorescent light bulbs contain mercury and must be recycled. This includes compact fluorescent's (CFL's), straight tubes, the "green tip" tubes with lower mercury levels, U-tubes, circular tubes and HID lamps. Incandescent, halogen and LEDs do not contain mercury and must be recycled. If your bulb contains a  symbol on it, it contains 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. Please call the store ahead to confirm prior to bringing your bulbs in for recycling. The Home Depot and Lowe's chains have compact fluorescent bulb "take-back" programs. Lowes accepts fluorescent tubes as well.

You can find mercury drop off locations in Massachusetts on the MassDEP website at:

<http://www.mass.gov/eea/docs/dep/toxics/stypes/hg-recycle-list.pdf>



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

# Light Bulb Recycling Guide

There are many light bulb options on the market today. Only certain ones are recyclable. The following light bulbs contain mercury, and should be recycled.

## Compact Fluorescent Lamps (CFLs)



These come in many shapes and some have covers to mimic traditional bulbs.

## Fluorescent Straight Tubes



These come in all lengths up to 8ft. Ones with green tips need to be recycled as well.

## Circline Fluorescent Lamps



These lamps are in the shape of a circle and are commonly used in ceiling fixtures.

## U-Bend Fluorescent Lamps



These lamps are in the shape of a U and can be up to two feet in length.

## Metal Halide Lamps



Mainly commercial uses.

## Mercury Vapor Lamps



Mainly commercial uses.

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The following light bulbs **should not** be recycled. They do not contain mercury.

## Incandescent Bulbs



These traditional screw-in bulbs should be disposed of as trash. Do not include in any recycling program.

## Halogen Lamps



This form of incandescent bulb should be disposed of as trash. Do not include in any recycling program.

## LED Lamps



These are the new highly energy efficient bulbs being used more and more. Check the original packaging for recycling options.

# Thermostats



Dial thermostats (not digital thermostats) often contain mercury. Remove the thermostat from the wall and keep it whole (do not remove mercury ampoule). 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.

# Glass Thermometers

There are reliable mercury-free thermometers available for medical and non-medical uses. Please consider choosing a replacement. Contact your Health Department or DPW for recycling options.



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



# 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.



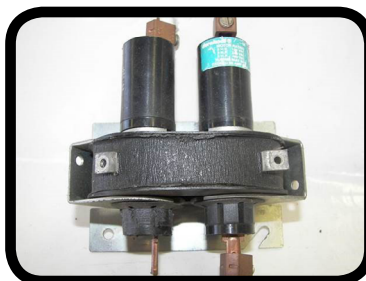
Alkaline batteries may be disposed of in the trash. Covanta will divert and recycle those metals as part of its reclamation operations at SEMASS. SEMASS is the most efficient metals reclamation facility in Covanta's entire fleet of plants.

## Other Mercury Containing Devices

- Barometers may contain liquid mercury and must be recycled. Caution: the mercury may be unsealed. If so, please call for Elemental (Liquid) Mercury on-site pickup.



- Old plumbing and mercury displacement relay switches contain significant amounts of elemental mercury and must be recycled. Any switch that feels oddly heavy for its size should be evaluated to see if it contains mercury and then properly disposed of.



- 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 original packaging or the packaging from the replacement device. If that is not available, store in a resealable bag and place in a plastic or glass container with a tight fitting lid.
- Keep out of reach of children or pets.
- Wear safety 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 20th 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 in the SEMASS communities 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.

Visit CRS at <http://www.crsrecycle.com/>



# 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/toxics/sources/guidance-for-cleaning-up-broken-fluorescent-light-bulbs.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.

**Emergency Response Spill Line:** 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.

# 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 cellar, 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:

### From The Yard/Garden:

- Pesticides, Fungicides
- Herbicides
- Insect Sprays
- Rodent Killers
- Muriatic Acid
- Flea Powder
- No-Pest Strips
- Chemical Fertilizers
- Lighter Fluid
- Moth Balls



### From The Workbench:

- Rust Proofers
- Wood Preservatives
- Wood Strippers & Stains
- Paint Thinners
- Lead & Oil-Based Paint
- Varnish
- Full Aerosol Cans
- Sealants
- Adhesives
- Solvents



### From The Garage:

- Fuels/Gasoline/Kerosene
- Brake & Transmission Fluids
- Car Wax, Polish
- Engine Degreaser
- Swimming Pool Chemicals
- Driveway Sealer
- Antifreeze
- Used Motor Oil
- Car-Lead Acid Batteries



### From The House:

- Drain Cleaners
- Oven Cleaners
- Floor Cleaners
- Metal Polish
- Arts & Crafts Supplies
- Photo Chemicals
- Chemistry Kits
- Rechargeable Batteries

### Mercury Products:

- Thermometers
- Thermostats
- Other mercury items or liquid
- Button Batteries



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:

## 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.

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

Paint hardener products can be purchased to solidify waste latex paint for disposal directly in the can.

Cans of oil-based paints, stains and solvents cannot be thrown out as trash and 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 local collection sites including municipal offices, hospitals, medical practices and pharmacies, contact your local Board of Health Office.



# Unused Medications

All unused medications, including prescription and over-the-counter, should be handled carefully in order to avoid accidental ingestion or abuse. There are several ways to properly dispose of unused medications.

1. Many community Boards of Health have take-back programs for medications.
2. Covanta SEMASS partners with the Drug Enforcement Agency(DEA) for public take back events.
3. Several police stations have drop off kiosks in their lobbies for unused medications.

**\*\*Be sure to check with your local community for take back events and official drop off locations.**

If disposal as trash is the only method, please consider that aquatic life and water quality can be negatively affected by flushing medication down the drain.

**Instead, unused medications should be put in the trash using the following tips from the Cape Cod Cooperative Extension to ensure safe disposal.**

1. Pour medication into a sealable plastic bag and crush. Add a little water to dissolve.
2. Add coffee grounds or a similar material that will render the medication unrecognizable.
3. Seal the plastic bag and put it in the trash.
4. Remove and destroy information labels from all containers before recycling them.



[Download](#) a printable version of these guidelines, developed by the Cape Cod Cooperative Extension.

## Household 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. If you generate infectious waste, consult with your doctor or visiting nurse on how to properly dispose of this waste.

## 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>

Several companies allow you to exchange tanks in lieu of owning your own propane tank. We suggest that you utilize propane tank trade in services that allow you to swap empty tanks for full ones. Companies have displays at retail chains around Massachusetts.

## Smoke Detectors

Certain smoke detectors contain a radioactive sensing device. Anyone with large quantities of smoke detectors needing disposal should contact their local Board of Health for guidance. Large quantities can be serviced by CRS (Complete Recycling Solutions) or certain electronics recycling vendors.

The radioactivity in smoke detectors is known to be so low that it can technically be disposed of as trash at the end of its useful life. Batteries should be removed for recycling before disposal. (See page 9.)

Smoke detector manufacturers may have fee-based take back programs. Please follow up with the manufacturer noted on the label of the device.



Covanta SEMASS does not recommend disposing of smoke detectors as trash as they may trip up the radiation sensors at the facility causing the load to be rejected.