

Mercury: What is it and why should I recycle it?

Mercury is a hazardous material that causes serious environmental and health problems. Although it is found naturally, problems arise from its release from man-made products and energy production. Once mercury is released into the environment, it cycles and converts to the toxic form, methylmercury, and is virtually impossible to remove.

Some of you may remember playing with mercury when you were a child. Its silvery white shimmer was entrancing, and the ability of its glistening mass to split and come back together again was magical. But scientists are now beginning to realize that there is another side to mercury's wily nature. In fact, it is some of mercury's most elemental qualities that make it a difficult substance to handle. Mercury is a common element that is found naturally in a free state or mixed in ores. It also may be present in rocks or released during volcanic activity. However, most of the mercury that enters the environment in Wisconsin comes from human uses. Because mercury is very dense, expands and contracts evenly with temperature changes, and has high electrical conductivity, it has been used in thousands of industrial, agricultural, medical, and household applications. It is estimated that half of the anthropogenic (caused or produced by humans) mercury releases in Wisconsin are the result of the purposeful use of mercury. The other half of mercury emissions originate from energy production. Major uses of mercury include dental amalgams, tilt switches, thermometers, lamps, pigments, batteries, reagents, and barometers. When these products are thrown in the trash or flushed down a drain, the mercury doesn't go away. Mercury is a bio-accumulative, persistent, toxic substance that threatens the health of humans and wildlife throughout North America.

The good news is that the majority of products that use mercury purposefully have acceptable alternatives. For example, electric vacuum gages, expansion or aneroid monitors are good alternatives to mercury blood pressure monitors. Mechanical switches, magnetic dry reed switches, and optic sensors can replace mercury tilt switches.

Replacing mercury-laden products with less toxic alternatives is referred to as source reduction. Source reduction allows us to eliminate the use of mercury in certain waste streams. This is especially beneficial considering the volatile nature of mercury, because mercury can so easily transfer from air to soil to water. Practicing source reduction in combination with recycling the mercury already in the waste stream can have a significant impact on reducing mercury levels in the environment.

What can residents of Watertown Do to help the Environment?

Recycling of Mercury containing products is the first step.

Below is a list of Mercury containing products that may be in your home.

- thermometers (looks like a silvery liquid)
- thermostats
- blood-pressure cuffs
- barometers
- fluorescent and high-intensity discharge (HID) lamps
 - tube- and compact-style fluorescent bulbs;
 - mercury vapor bulbs (high intensity lamps with blue-white, originally used as farmyard lights);
 - metal halide bulbs (newer, more efficient high intensity lights); and
 - high and low pressure sodium vapor bulbs (yellow light used for outdoor security lighting).
- mercurochrome
- auto switches
- float switches
- button-cell batteries
- old latex paint (pre-1990)
- some oil-based paints
- old alkaline batteries (pre-1996)
- old light-up tennis shoes (pre-1997 LA gear)
- chemistry sets
- old fungicides for seeds and turf
- dental amalgam
- some imported jewelry (glass ampules with silver liquid)
- weight/counterweight in grandfather clocks

Why recycle fluorescent lights?

All fluorescent bulbs contain mercury. Even though today's fluorescent tubes contain a small amount of mercury, the cumulative volume of mercury contained in lamps is still significant. Mercury released from broken lamps becomes atmospheric mercury that is then deposited in lakes and builds up in fish. High levels of mercury in fish have spurred fish consumption advisories throughout our state.

Some brands are marketed as low-mercury, and may be marked with green end caps. It is still a good idea to recycle these low-mercury tubes because they do contain some mercury, and the glass as well as other metals are recycled.

Even though fluorescent bulbs contain mercury, they are still a good choice for protecting the environment. Using fluorescent lamps saves energy.

Where can the Mercury containing products be taken for Recycling?

The Clean Sweeps that Jefferson County and the City of Watertown hold posted on the website when available.

Please go the City web site at www.ci.watertown.wi.us on top ribbon click Departments then click on Solid Waste & Recycling. Then on the left pane click clean sweep program.

Note **REGISTRATION IS REQUIRED! CALL 920-674-7430 to register!** There is a charge of \$10.00 per vehicle for households & farms. Businesses are charged based on weight. Bulbs are only accepted during the Clean Sweep.

Spiral Compact Fluorescent Bulbs can be recycled at the Watertown Ace Hardware at 401 Bernard Street Watertown, WI. There is a \$.50 fee per spiral bulb, a \$.75 fee per 4' fluorescent bulb and under a \$.95 fee per each 5' and on up fluorescent bulb and a \$.95 fee per each U shaped or circular fluorescent bulbs, and a \$2.00 fee for high pressure sodium or a metal halide bulb. All recycling fees will include tax .

Information in this article is from the Wisconsin Department Natural Resources. To learn more about mercury go to the Wisconsin DNR website at

<http://dnr.wi.gov> and search for Mercury