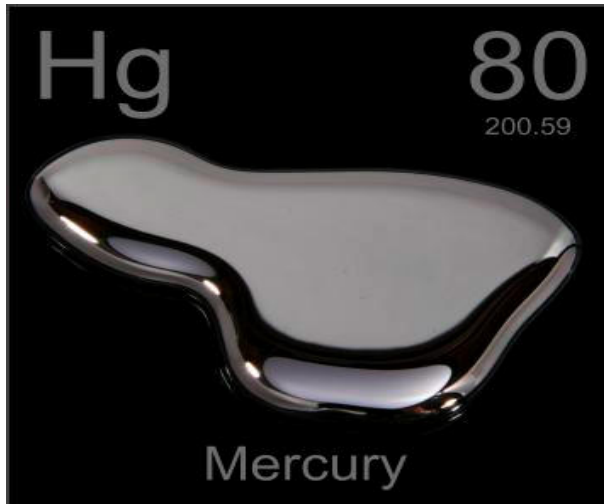


BACKGROUND



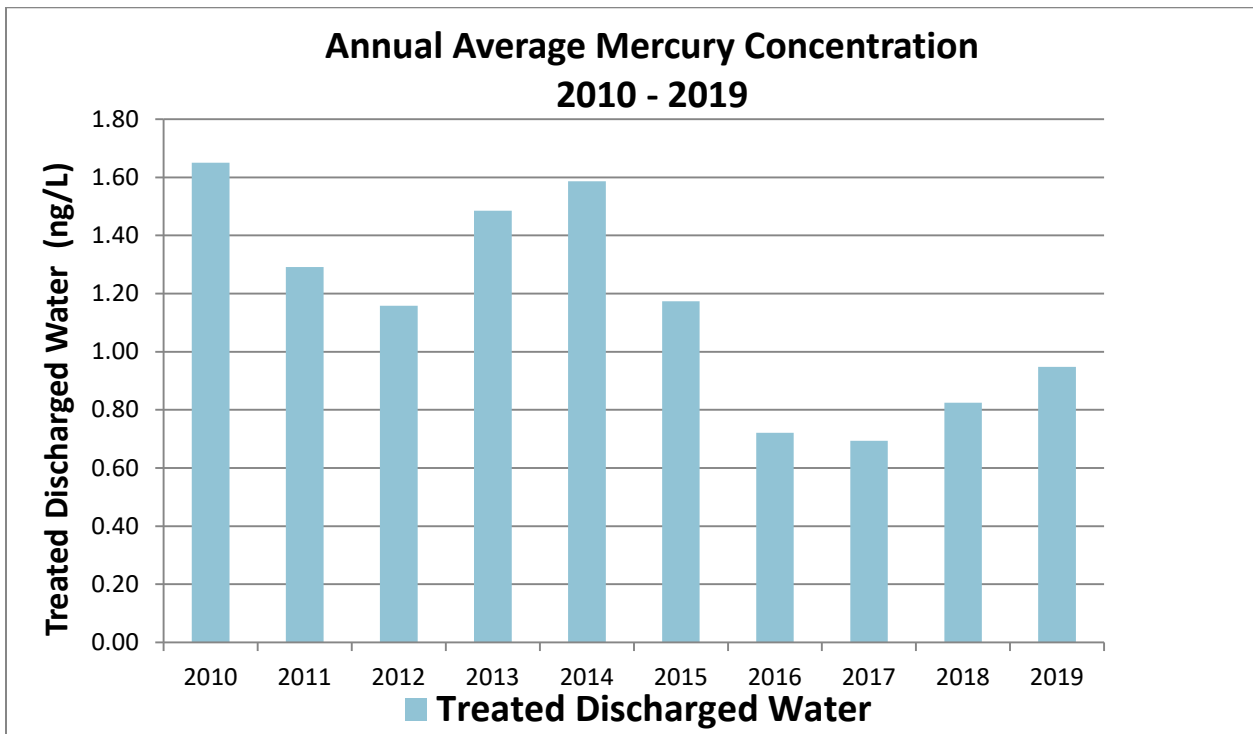
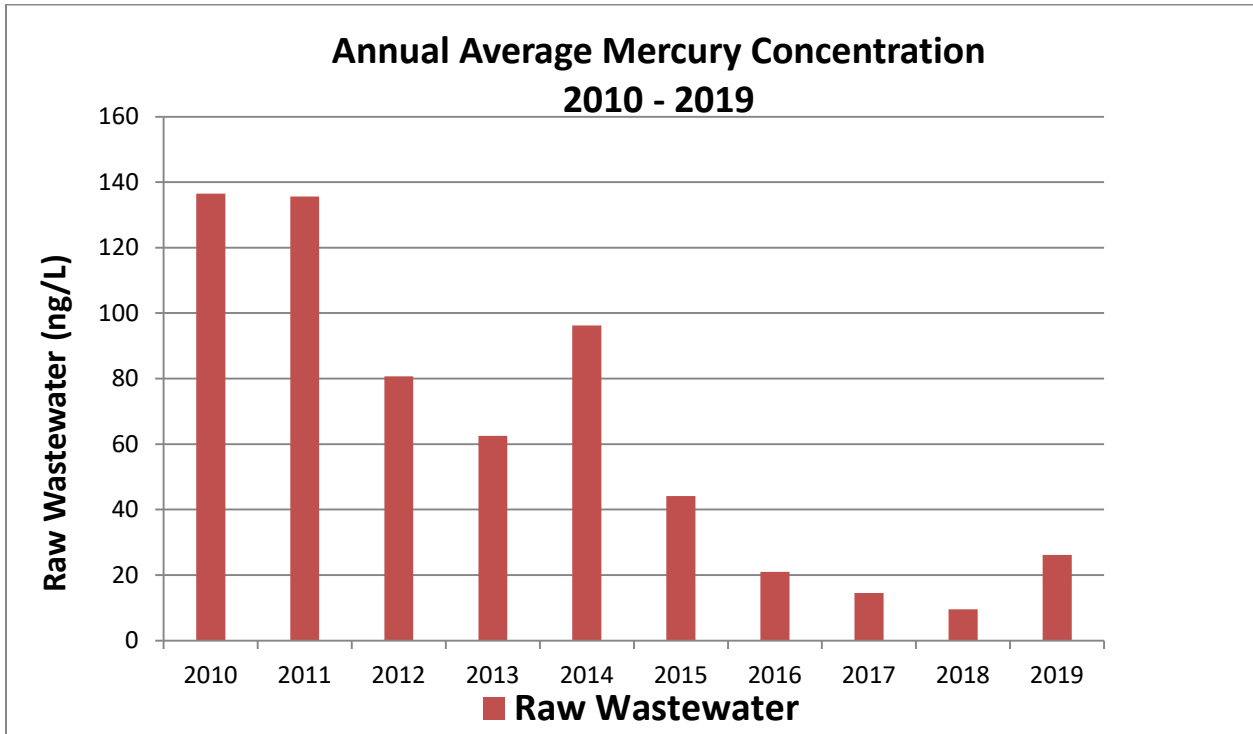
Mercury is a hazardous material that causes serious environmental and health problems. Although it is found naturally, problems arise from its release from human made products and energy production. Once mercury is released into the environment, it cycles and converts to the toxic form, methylmercury,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

Mercury pollution in the Great Lakes states is a significant public health and economic issue. Mercury is a persistent, bioaccumulative pollutant. Due to its bioaccumulating effects, the water quality criteria for mercury are extremely low.

Preserving the water quality of Lake Michigan is essential to the Sheboygan area's economy and quality of life. The Sheboygan Regional Wastewater Treatment Plant (WWTP) plays a vital role in protecting the water quality of Lake Michigan. However, current wastewater treatment processes cannot remove sufficient mercury to meet the exceptionally low Lake Michigan water quality standard of 1.3 ng/L (1.3 parts per trillion or 1.3 parts per 1,000,000,000,000) of mercury. The wastewater treatment processes required to remove mercury to these ultra low levels would be prohibitively expensive to build and operate.

The Wisconsin DNR has recognized these expenses and has required the Sheboygan Regional WWTP to implement a Mercury Pollutant Minimization Plan (PMP). The Mercury PMP focuses on the discharges to the WWTP from the sectors which have historically used and/or continue to use mercury containing products in their day to day processes which can impact wastewater discharges.

SOURCE



Common Sources of Mercury in DOMESTIC PRODUCTS
(from Wisconsin DNR website)

Switches – mercury used as an electrical conductor in a variety of switches.

- Thermostats / non-digital thermostats - usually round, contain 3-6 grams of mercury.

Note: Programmable thermostats are a good alternative to the traditional, non-digital thermostats. Not only do the programmable thermostats reduce mercury use, they also save energy and money from heating bills.

- Wall light switches that were silent and manufactured before 1991
- Chest freezer lights and automobile hood and truck lights
- Irons / Space Heaters - safety shut-off switch in case the iron or space heater falls over
- Washing machine - safety shut-off switch under the lid so the spin cycle stops when the lid opens
- Outboard motor - safety shut-off
- Lap-top computer - screen shuts off when closed
- Sump pumps / Septic systems - floater switch to turn on pumps when water reaches certain levels
- Lawn mower - fuel level indicator
- Security systems - switch used to activate alarm when movement is sensed
- Phones - mute switch when phone is a horizontal position

Thermometers - mercury used in fever, basal, weather, and candy/deep fry thermometers

***** Use alcohol or digital thermometers instead. *****

Lights - mercury used in fluorescent lights, neon lights (window advertising), high pressure sodium vapor lights (outdoor security and street lighting), high intensity discharge lights (headlights). Fluorescent lights are very energy and cost efficient so they should still be used and then recycled at end of their life cycle.

Batteries

- Button batteries – small amount of mercury contained in mercuric oxide, silver oxide, and zinc air button batteries which are used in watches, hearing aids, toys, and other devices requiring small batteries
- Cylindrical and rectangular cell batteries - alkaline batteries sold before 1996 and zinc carbon batteries sold before 1994 contain mercury
- Old ovens, water heaters, furnaces - thermostat probe, which opens and closes the gas-control valve, used as a safety feature in gas-fired appliance

Agricultural chemicals/lawn chemicals/latex paint/wood treatment - mercury used as a pesticide, fungicide, or mildewcide. Use of mercury in latex paint was banned in 1991 and in the other products by 1995. **Contact lens solutions (thimerosal), nasal sprays, diuretics, disinfectants, eye cosmetics - mercury used as a preservative**

Cameras - position sensor used in still, video, and film cameras to protect CCD from sunlight





Light-up shoes - switch

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MERCURY SURVEYS

As one of the initial steps in the Sheboygan Regional WWTP's Mercury PMP, the City of Sheboygan (City) is requiring all facilities that discharge to the WWTP and fall within one of the initially targeted sectors listed below, complete a survey regarding the facility's mercury uses and practices. The surveys are intended to identify the targeted facility's existing Best Management Practices (BMPs), as well as, additional BMPs the organization has planned for future implementation.

Targeted sectors required to complete a mercury survey. Click on the link to download the designated survey.

-  [Medical Facilities](#)
-  [Dental Facilities](#)
-  [Significant Industrial Users](#) (as defined in the City's Municipal Code Chapter 122, Article VII. Division 1, Section 122-466)
-  [Educational facilities with science laboratories](#)

Any facility that is in one of the targeted sectors listed above that did not receive and complete a mercury survey, needs to download the appropriate survey and submit it to the Sheboygan Regional WWTP via mail, or fax.

Mark A. Wittstock
Industrial Wastewater Supervisor
Sheboygan Regional WWTP
3333 Lakeshore Drive
Sheboygan, WI 53081
P: 920-459-3464
F: 920-459-3463
[Click here to email us.](#)

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MERCURY SPILLS AND CLEAN UP (from the Wisconsin DNR website)

Report all spills on the 24-hour, toll free hotline at 1-800-943-0003. Possible mercury poisoning? Call the toll free poison hotline at 1-800-222-1222.

When mercury is spilled, it shatters into tiny beads and spreads in many directions. These tiny droplets can accumulate in the smallest places. The droplets emit toxic, odorless vapors, which can be very dangerous when inhaled by people or pets.

Remember: Any object that touches mercury will become contaminated!

For step by step information on mercury spills and clean up click on the following link <http://dnr.wi.gov/org/caer/cea/mercury/spills.htm>

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MERCURY DISPOSAL

All mercury and mercury-containing items should be recycled. Never pour mercury down a drain or sewer, flush down a toilet, or throw in the trash. As long as mercury is recycled, it will stay in the recycling loop, going into new products rather than into the environment.

Mercury Recyclers and/or Collection Sites

- Sheboygan County Hazardous Waste Collection

<http://sheboygancounty.com/government/departments-f-q/planning-and-conservation/programs-associations/household-hazardous-waste>

- North Shore Environmental (Business)

<http://nsecinc.com/environmental-management-services-wisconsin-milwaukee/mercury-spill-cleanup/>

- Veolia Environmental Services

<http://www.veoliaes.com/content/veolia/en/services/all/recycling.html>

- Compact Fluorescent Light Bulbs

http://www.focusonenergy.com/Residential/Lighting/cfl_recycling.aspx

- Advanced Waste Services (Business)

<http://www.advancedwasteservices.com/solutions-waste.html>

- Lamp Recyclers (Business, including Dental & Medical Waste)

<http://www.lamprecyclers.com/>

- Werner Electric Supply (Business)

http://www.wernerelectric.com/Public/index.asp?page_ID=76

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ADDITIONAL INFORMATION

Additional information regarding mercury regulations and BMPs can be found at the websites listed below.

Medical Facilities

U.S. Environmental Protection Agency: www.epa.gov/mercury/healthcare.htm
Wisconsin DNR: www.dnr.state.wi.us/org/caer/cea/mercury/index.htm
Green Health Organization: www.practicegreenhealth.org

Dental Facilities

U.S. Environmental Protection
Agency: www.epa.gov/mercury/dentalamalgam.html
Wisconsin DNR: www.dnr.state.wi.us/org/caer/cea/mercury/index.htm
Solid and Hazardous Waste Education
Center: www4.uwm.edu/shwec/index.cfm
<http://www3.uwm.edu/Dept/shwec/publications/cabinet/pdf/DentalAmalgam2.pdf>

Industrial and Commercial Facilities

U.S. Environmental Protection Agency: www.epa.gov/mercury
Wisconsin DNR: www.dnr.state.wi.us/org/caer/cea/mercury/index.htm

Educational Facilities

U.S. Environmental Protection Agency: www.epa.gov/mercury/schools.htm
Wisconsin DNR: www.dnr.state.wi.us/org/caer/cea/mercury/index.htm
Solid and Hazardous Waste Education
Center: www4.uwm.edu/shwec/index.cfm
www.mercuryinschools.uwex.edu

Residential and General Information

Wisconsin DNR: <http://dnr.wi.gov/org/caer/cea/mercury/household/page1.htm>
Light Bulbs: <http://dnr.wi.gov/org/aw/wm/recycle/newpages/lightbulbs.htm>
US Environmental Protection Agency: <http://www.epa.gov/mercury>
Center for Disease Control: <http://www.atsdr.cdc.gov/mercury/>

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