

The Northwest Product Stewardship Council endeavors to integrate product stewardship principles into the policy and economic structures of the Pacific Northwest. This is the second of a series of bulletins to brief you about policy issues of importance to Council members. For more information, please visit our website at [www.productstewardship.net](http://www.productstewardship.net)

## **The Mercury Trail**

1. When coal, oil, or natural gas are burned in power plants, or when products containing mercury are broken, crushed or burned, mercury becomes a gas that rises into the air.
2. Mercury gas attaches to water droplets and returns to earth's waterways in rain and snow.
3. Bacteria in the water and other processes convert mercury into methylmercury, its most toxic form, which is absorbed by plankton.
4. Methylmercury builds up in the tissue of fish and wildlife and eventually humans who eat the flesh.
5. Mercury in the body affects the brain, spinal cord, kidneys and liver. It is especially dangerous to unborn babies and small children.

## **Mercury - A Highly Toxic and Costly Challenge** *One Solution is Product Stewardship*

Even though it has many useful qualities, mercury is extremely toxic to our health and environment. Both Oregon and Washington have made reducing exposure to mercury one of their top pollution priorities.

- Mercury is pervasive in the environment as a result of mining, industrial emissions, and disposal of consumer products. Once released mercury circulates easily between air, water and soil, exposing humans and other species to serious health risks.
- The Oregon Department of Human Services recommends that people limit their consumption of resident fish from the Willamette River and ten other water bodies in the state. For details see: <http://www.ohd.hr.state.or.us/esc/fishadv.htm>
- The Washington State Department of Health advisory for Lake Whatcom recommends that "women of childbearing age and children under six not eat smallmouth bass, and limit consumption of yellow perch to one meal a week." Similar warnings exist for three other water bodies. For details see: [www.doh.wa.gov/fish/FishAdvWomen.htm](http://www.doh.wa.gov/fish/FishAdvWomen.htm)
- The Transalca Centralia steam plant in Washington reported releases of 436 pounds of mercury in 2000.
- At the Black Butte Mine in Lane County, OR an estimated 300,000 tons of tailings containing elevated levels of mercury and arsenic remain at the site.
- King County, WA estimates that about 30-40% of the total mercury detected at its wastewater treatment plant is from dentists' offices.
- The burden of cleanup and safe disposal typically falls on taxpayers, solid waste ratepayers, and a few industries.

### **Product Stewardship**

Working groups in Washington and Oregon are proposing measures to reduce mercury exposures and permanently "retire" existing mercury stockpiles. An important element of these strategies is product stewardship, calling on everyone who makes, sells, buys or handles products containing mercury to minimize environmental impacts at all stages of the products' life. That means asking producers to:

- Avoid using mercury in extraction and production.
- Design products that are mercury free.
- Take back products containing mercury.
- Support environmentally sound collection systems.
- Support the development of a stewardship approach for the safe, long-term storage of mercury.
- Incorporate the costs for these practices in product prices.

Some manufacturers and retailers are addressing the issue. The mercury content in some products, including fluorescent lamps, has been reduced. Mercury is no longer added to alkaline batteries or wall paint. Cost-effective mercury-free alternatives are readily available for many products, including thermometers, thermostats, medical devices, and automotive and other switches. Some manufacturers of thermostats offer a take back program.

### **Actions for Governments**

#### **1. Use your jurisdiction's purchasing power to influence markets.**

- Require vendors and contractors to replace mercury-added switches and thermostats with mercury-free alternatives, and properly dispose of the mercury containing products.
- Specify the use of mercury-free products such as thermostats, gauges, headlights, and switches in your jurisdiction's building and remodeling projects and new vehicle purchases.

#### **2. Promote manufacturer take-back programs.**

- Publicize companies that take back mercury containing products. For example, the Thermostat Recycling Corporation's (TRC) program collects used thermostats. This program is coordinated by mercury-switch thermostat

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manufacturers through the National Electrical Manufacturers Association.

For details see: [www.nema.org/index\\_nema.cfm/664/](http://www.nema.org/index_nema.cfm/664/)

- Require manufacturer take back of unused dental amalgam.
- Watch for results from the Oregon Compact Fluorescent Lamp (CFL) Recycling Project, a private/public partnership that is piloting the collection and recycling of CFLs. Contact Zero Waste Alliance: [rmarquardt@zerowaste.org](mailto:rmarquardt@zerowaste.org) or 503-279-9383.

### 3. Promote energy conservation.

- Burning fossil fuels releases mercury to the environment. Promote car pooling and other transportation alternatives to reduce fossil fuel combustion.
- Use and recycle fluorescent lamps in your jurisdiction's buildings. A national list of lamp recyclers can be found at <http://www.metrokc.gov/hazwaste/fluor/>

### 4. Clean up abandoned mines.

- Clean up abandoned mercury and gold mine sites and prevent further pollution from tailing piles.

### 5. Support and help implement legislation.

- Ten states including Oregon and California have adopted legislation restricting sales of mercury-added products, phasing out the use of mercury, requiring labeling of mercury-added products, and/or requiring proper disposal, recovery and management of products containing mercury. For Oregon's Mercury Reduction Act of 2001 (HB 3007) see: [www.leg.state.or.us/01reg/measures/hb2800.dir/hb2816.intro.html](http://www.leg.state.or.us/01reg/measures/hb2800.dir/hb2816.intro.html)
- Seven other states, including Washington, considered similar legislation during 2002. Washington's bill (SB 6533), likely to be reintroduced in 2003, would have established manufacturer responsibility for products containing mercury.
- Maine recently became the first state to pass a law (LD 1921) requiring manufacturers to pay for removal of toxic components from their products and banning the sale of autos containing mercury switches by the end of 2002. Similar bills are pending in several other states. For details see: [www.cleancarcampaign.org/mercury.html](http://www.cleancarcampaign.org/mercury.html)
- Ashland, WI, on the shores of Lake Superior, recently became the first city to ban the sale and distribution of all products containing more than 50 milligrams of mercury. Furthermore, all devices containing mercury must be removed prior to building demolition. Contact City of Ashland Water/Wastewater Superintendent, Craig Nordgren, 715-682-7194, [cnordgre@coawi.org](mailto:cnordgre@coawi.org)
- Some jurisdictions, including Seattle, Snohomish County and Kitsap County (WA) prohibit household hazardous and small quantity generator wastes from garbage disposal. Seattle's ordinance (SMC 21.36.025,026,029) and resolutions can be found at: <http://www.clerk.ci.seattle.wa.us/~public/code1.htm>

### 6. Give input to statewide mercury action plans and inform your constituents and customers about what's being done.

- The Oregon Environmental Council convened a broadly based Mercury Solution Team, whose comprehensive report sets a goal of zero emissions by 2020. For details see: <http://www.orcouncil.org/reports/OEC%20Mercury%20Report.pdf>
- Washington's Department of Ecology is developing a mercury chemical action plan to reduce mercury exposure and provide recommendations for further action. For details see: <http://www.ecy.wa.gov/programs/eap/pbt/pbtfaq.html>

Printed on recycled and recyclable paper. 7/02

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