

Mercury-Containing Lights Product Stewardship Program Status Report 2011 Report to the Washington State Legislature

Introduction

In 2010, the Washington State Legislature passed a law requiring producers of mercury-containing lights sold in or into Washington State for residential use to fully finance and participate in a product stewardship program to take effect on January 1, 2013 ([Chapter 70.275 Revised Code of Washington](#) [RCW], *Mercury-containing lights – proper disposal*). Pages 6 and 7 of this report summarize the basics of this law. Producers of mercury-containing lights must also fund the Washington State Department of Ecology’s (Ecology) administration and enforcement costs. Ecology’s Waste 2 Resources Program implements this program.

RCW 70.275.140: By December 31, 2010, and annually thereafter until December 31, 2014, the department shall report to the appropriate committees of the legislature concerning the status of the product stewardship program and recommendations for changes to the provisions of this chapter.

This report explains the progress on implementation of the mercury-containing lights law. The report also details revenue collection through producer fees, and estimates the cost to collect and recycle mercury-containing lights in Washington. Changes to the statute are not requested.

Mercury-Containing Lights

Mercury is an essential component for production of light in some energy-efficient lamps. Fluorescent tubes, high-intensity discharge (HID) lamps, and compact fluorescent lamps (CFLs) are the most common types of mercury-containing lights. Fluorescent tubes provide lighting for most schools, office buildings, and stores. HID lamps, which include mercury-vapor, metal halide and high-pressure sodium lamps, are used for streetlights, floodlights, and industrial lighting. CFLs are increasingly used in commercial buildings and homes.

RCW 70.275.020: “Mercury-containing lights” means lamps, bulbs, tubes, or other devices that contain mercury and provide functional illumination in homes, businesses, and outdoor stationary fixtures.

Because mercury is very toxic to the human nervous system and persistent in the environment, it is extremely important to properly handle and dispose of mercury-containing lamps. Proper lamp recycling can reduce human exposure to mercury and the overall amount of mercury entering the environment. In addition to capturing mercury, the metal, glass and other

components of the spent lamps can be safely recycled. The 2003 Mercury Chemical Action Plan estimated that approximately 437 to 505 pounds of mercury are released annually by discarded fluorescent bulbs¹. Using this estimate, lamps account for about 10 percent of the total estimated human-caused mercury releases in Washington.

Approximately 3.8 billion mercury-containing lamps reach the end of their life in the United States each year². As energy-efficient lighting becomes increasingly common, these numbers will increase. The lighting industry estimates 23 percent of end-of-life fluorescent lamps are being recycled in the United States. The remaining 77 percent end up in the trash³. The Association of Lighting and Mercury Recyclers estimated the government and business sector recycled 29 percent of their lamps, while households recycled only 2 percent of theirs. Significant effort is needed to expand the environmentally sound recycling of these lamps.

Mercury-Containing Lights Product Stewardship Program

The mercury-containing lights product stewardship law was passed in 2010 (Chapter 70.275 RCW). The law requires producers of mercury-containing lights sold in or into the state to fully finance and participate in a product stewardship program, including financing the department's costs for administration and enforcement. Product stewardship programs for residential mercury-containing lights must be fully implemented by January 1, 2013.

Producers have the option to create their own product stewardship program or participate in a state contracted program. An independent producer funded program plan must be submitted to Ecology one year before startup. Ecology will put a state contracted program in place if Ecology does not receive an independent plan by January 2012.

The state contracted program will be initially funded by a one-time \$10,000 per producer fee paid to Ecology in January 2012. Ecology will use that funding to hire a product stewardship organization to set up the state contracted program. After initial startup under Ecology's oversight, producers will directly fund the program. Producers will pay all administrative and operational costs of the program directly to the product stewardship organization including collection, transport, and recycling of mercury-containing lights. Producers in the contracted program will also pay a fee to offset Ecology's costs to administer the mercury-containing lights product stewardship program

RCW 70.275.090: As of January 1, 2013, no producer, wholesaler, retailer, electric utility, or other person may distribute, sell, or offer for sale mercury-containing lights for residential use to any person in this state unless the producer is participating in a product stewardship program under a plan approved by the department.

¹ Washington State Department of Ecology and Washington State Department of Health, *Mercury Chemical Action Plan*.

² Freedonia Group, *Lamps to 2013*, January 2009.

³ Association of Lighting and Mercury Recyclers, *National Mercury-Lamp Recycling Rate and Availability of Lamp Recycling Services in the U.S.*, Calistoga, Calif., November 2004, <http://www.lamprecycle.org>.

Mercury-Containing Light Program Implementation Status

Ecology's product stewardship program implementation efforts completed in 2010 and 2011 include:

- Outreach to mercury-containing light producers, and explanation of the upcoming program and their responsibilities and duties.
- Identification of producers selling mercury-containing lights for residential use in or into Washington State.
- Collection of the 2011 annual fee of \$5,000 from 25 of 40 possible responsible producers to fund agency administration and oversight.
- Development of the [Mercury-Containing Lights Product Stewardship website](#).
- Creation of the [Mercury-Containing Lights Product Stewardship listserv](#).
- Publication of *Guidelines for Mercury-Containing Light Product Stewardship Plan* content (document link at the [website home page](#)).

The mercury-containing lights product stewardship program must be fully implemented on January 1, 2013. Ecology implementation efforts through 2012 will include:

- Collect annual fees of \$5,000 per producer to fund agency administration and oversight.
- Continued identification and education of producers selling mercury-containing lights in or into Washington State for residential use.
- Collect one-time startup fees of \$10,000 from producers not submitting an independent product stewardship plan to Ecology. Use these fees to fund a product stewardship organization to develop the state-contracted product stewardship plan.
- Publish the request for proposals and contract for a product stewardship organization to develop the state-contracted product stewardship plan, and coordinate the collection and recycling infrastructure across the state.
- Manage startup of the state contracted product stewardship program. Oversee transfer of the state contracted program to a producer funded program.
- Adopt rules for the mercury-containing light product stewardship program.

Program Funding Status

As of August 2011, 25 producers paid the first annual fee of \$5,000 for agency administration and oversight of the mercury-containing lights product stewardship program. The *List of Producers of Mercury Lights* is posted at the bottom of the [producers webpage](#).

Ecology continues to pursue collection of the annual fee from other producers selling mercury-containing lights in or into Washington for residential use. A discussion of producer fee assumptions from 2009 is provided on page 8 of this report.

Mercury-Containing Lights Product Stewardship Program Cost Estimate

There are approximately four million mercury-containing lights sold for residential use in Washington each year. The estimated cost to collect and recycle all four million residential lights sold in the state is \$2 million (about \$0.50 per light)⁴. Funding the program on the sales of all 35 million mercury-containing lights⁵ sold in the state could increase the price of each light by \$0.15.

It is expected that during the first few years, a product stewardship program will not recover all lights available for recycling, resulting in lower program startup costs. For comparison, the mercury-containing light product stewardship program in British Columbia reported a 15 percent capture rate during the first six months⁶.

Mercury-Containing Lights Program Schedule

Date	Event	Law
October 27, 2011	Ecology begins the rule-making process for the mercury-containing lights product stewardship program.	RCW 70.275
January 1, 2012	Mercury-containing lights producers submit a product stewardship plan to Ecology for review and approval.	RCW 70.275.040
January 1, 2012	Ecology begins the process for a state contracted product stewardship program, if no producer plan(s) are received and approved by Ecology.	RCW 70.275.030
June 30, 2012	The sale or purchase of bulk mercury is prohibited.	RCW 70.95M.050
January 1, 2013	Mercury-containing lights product stewardship program fully implemented.	RCW 70.275.030
January 1, 2013	No producer may distribute, sell, or offer for sale mercury-containing lights for residential use in Washington unless they are participating in an approved product stewardship program.	RCW 70.275.090
January 1, 2013	All users must recycle mercury-containing lights.	RCW 70.275.080
January 1, 2020	Achieve statewide goal of recycling all end-of-life mercury-containing lights.	RCW 70.275.010

⁴ Ecolights NW recycling costs are \$0.40 per CFL and \$0.07 per linear foot.

⁵ Summary of USA Mercury-Containing Lamp Market, Fredonia Group Study 2265, November 2007.

⁶ LightRecycle, 2010 Annual Report, BC Fluorescent Light Recycling Program, Product Care, December 2010.

Internet Links Provided in this Document as URLs

- Chapter 70.275 RCW, Mercury-containing lights – proper disposal - <http://apps.leg.wa.gov/rcw/default.aspx?cite=70.275>
- Mercury-Containing Lights Product Stewardship website <http://www.ecy.wa.gov/programs/swfa/mercurylights/index.html>
- Mercury-Containing Lights Product Stewardship listserv <http://listserv.wa.gov/cgi-bin/wa?A0=ECOLOGY-MERCURY-CONTAINING-LIGHT>
- Guidelines for Mercury-Containing Light Product Stewardship Plan <http://www.ecy.wa.gov/programs/swfa/mercurylights/pdf/WashingtonStateMercuryLightsProductStewardshipPlanGuidelines.pdf>
- The list of paid and unpaid producers is posted on the program website at <http://www.ecy.wa.gov/programs/swfa/mercurylights/pdf/ProducersListMercuryLights.pdf>

Appendix A

Mercury-Containing Lights

Product Stewardship Program Requirements

The following subsections summarize how the law defines producers and impacts producers, retailers, wholesalers, utilities, consumers, and residents.

Chapter 70.275 RCW defines a “producer” of mercury-containing lights as a person that:

- a. Has or had legal ownership of the brand, brand name or co-brand of a mercury-containing light sold in or into the state, except for persons whose primary business is retail sales;
- b. Imports or imported mercury-containing lights branded by a producer that meet the requirements of (a) and have no physical presence in the U.S.;
- c. Makes or made an unbranded mercury-containing light sold in or into the state; or
- d. Sells or sold a mercury-containing light at wholesale or retail, does not legally own the brand, and elects to fulfill the producer responsibilities.

Mercury-containing light producers must:

- Fully fund and participate in an approved product stewardship program that is in place by January 1, 2013, in order to continue to sell mercury-containing lights in or into Washington.
- Pay annual fees of \$5,000 to fund Ecology’s administration and enforcement.
- Inform consumers on how and where to return their lights, and provide collection sites in every county in the state and every city with a population more than 10,000.
- Charge no fees when anyone drops off up to 15 mercury-containing light bulbs in a 90-day period.
- Fund the collection, transport and recycling of collected lights.
- Participate in an approved product stewardship program in one of two ways:
 - Submit an individual or collective independent product stewardship plan before January 2012 for review and approval by Ecology, or
 - Pay a fee of \$10,000 to Ecology to finance a state-contracted product stewardship program. If needed, this fee will be collected in January 2012.

Retailers, wholesalers, and utilities must:

- After January 1, 2013, check the list on Ecology’s website to verify mercury-containing light producers are participating in an approved product stewardship program. The list of producers of mercury lights is located at the bottom of the [producer webpage](#).
- Not distribute or sell mercury-containing lights from producers who are not participating in a product stewardship program.

Residents and Consumers must:

- Recycle mercury-containing lights. Beginning January 1, 2013, a producer funded recycling program will be available at no charge to anyone dropping off up to 15 mercury-containing light bulbs in a 90-day period. Any business that normally handles mercury-containing lights as hazardous waste must continue to follow those requirements.
- Not put mercury-containing lights in the trash. Mercury-containing lights can release toxic mercury vapor to the air during collection, transport and disposal.
- Find recycling options by:
 - Visiting 1800recycle.wa.gov, Earth911.org, or lamprecycle.org.
 - Calling 1-800-CLEANUP (1-800-253-2687).
 - Calling 1-800-RECYCLE (1-800-732-9253).
 - Search the list of [lamp drop-off sites](#).

Appendix B Producer Fee Discussion

Each producer selling mercury-containing lights in or into Washington is required to pay Ecology an annual fee of \$5,000 for administration, enforcement and oversight. Producers not participating in an approved independent plan must fund the state contracted program. A \$10,000 fee per producer paid to Ecology will initially fund the state contracted program.

During the 2009 Legislative Session, the fiscal note for the bill estimated a total of \$975,000 in revenue would be collected in each fiscal year. This estimate assumed:

- There are 65 producers selling mercury-containing lights in or into Washington.
- Producers would annually pay \$5,000 to generate \$325,000 for Ecology's administration and enforcement costs.
- Producers would annually pay \$10,000 to generate \$650,000 for Ecology to contract out for a product stewardship program plan.

Through research and analysis, Ecology has become aware there are less than 65 producers selling mercury-containing lights in or into Washington. Maine has implemented a similar product stewardship law for mercury-containing lights. There are 41 producers identified in the product stewardship plan operated in Maine.

Ecology estimates up to 40 producers sell residential mercury-containing lights in or into Washington. Twenty-five producers paid the 2011 annual fee of \$5,000 to Ecology for administration and oversight.

Based on the lower than expected participation rate in the 2009-11 Biennium, Ecology estimates that annual fees of \$5,000 from 30 producers will fund Ecology's administration, enforcement, and oversight in the 2011-13 Biennium. Furthermore, Ecology estimates that 30 producers will pay the one-time fee of \$10,000 to fund startup of the state contracted product stewardship program.

Publication and Contact Information

This report is available on the Department of Ecology's website at www.ecy.wa.gov/biblio/1107030.html

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