


Council Agenda Report

To: Mayor Sibert and Honorable Members of the City Council

Prepared by: Jennifer Brown, Senior Environmental Programs Coordinator

Approved by: Jim Thorsen, City Manager 

Date prepared: September 22, 2011 Meeting date: October 10, 2011

Subject: Reduction of Anthropogenic Mercury to the Environment (Mayor Sibert)

REQUESTED ACTION: At the request of Mayor Sibert, adopt Resolution No. 11-44 committing to address major sources of anthropogenic mercury to the environment through reduction and stewardship, and supporting efforts to reduce this pollutant worldwide.

FISCAL IMPACT: None.

DISCUSSION: Mercury is a naturally occurring trace element found in air, water and soil. However, various human activities are widely dispersing larger amounts of mercury into the environment than otherwise would occur naturally. Mercury is volatile and can be transported thousands of miles by air currents before being deposited. Thus, mercury in the environment is a national, as well as international, issue. Thousands of household, commercial and industrial processes can release mercury into the environment. Mercury can enter waterbodies through direct discharge, non-point runoff or from atmospheric deposition, which is the most significant source. Mercury in aquatic systems when converted by microorganisms into its organic form, methylmercury, is toxic. Methylmercury bio-accumulates in the aquatic food chain and poses significant threats to humans and animals that consume the fish. Once released, mercury can persist in the environment where it circulates between air, water, sediments, soil and biota in various forms.

Mercury is a dangerous neurotoxin that can render deleterious effects on human mental development and the nervous system. Mercury poses a particular threat to new and expectant mothers, children and the unborn fetus because of the sensitivity of the developing nervous system, including increased risk of learning disabilities associated with in utero exposure to methylmercury. In the human body, mercury damages the

central nervous system, thyroid, kidneys, lungs, immune system, eyes, gums and skin. Neurological damage to the brain caused by mercury cannot be reversed. There is no known safe exposure level for elemental mercury in humans and effects can be seen even at very low levels. Over the past 50 years, mercury's toxicity has been well documented and many countries have taken steps to reduce its uses and releases in order to protect their citizens from mercury exposure. In the United States, 49 states and the Food and Drug Administration have adopted public health advisories, in particular for fish consumption, throughout the country due to mercury contamination.

Currently, states are required to address pollutants of concern in their watersheds and then take steps to control and limit these pollutants. This is required by the Clean Water Act through development of total maximum daily loads (TMDLs). The State Water Resources Control Board has placed Santa Monica Bay on the 303 (d) list of impaired waterbodies for sediment toxicity and fish consumption advisories (both of which mercury can contribute to), and therefore will require TMDLs to which the City will likely be required to comply.

There are worldwide efforts to explore and pursue methods for reducing mercury in the environment. The United Nations Environmental Programme (UNEP) is in the process of adopting an international treaty on mercury that includes the phasing out the top five sources of pollution. In this country, the Environmental Protection Agency (EPA) is planning to publish the draft federal dental amalgam rulemaking regulations late in 2011 to address mercury in wastewater. The Environmental Council of the States formed the Quicksilver Caucus in 2001 to pool resources and collaboratively explore ways to reduce mercury pollution, reduce mercury use in products and better manage mercury in products. In California, the City of Costa Mesa adopted a dental amalgam ban in October 2010 and San Francisco took action to support U.S. Senate Bill 1939, the Mercury Health Advisory Act Of 2003 (Leahy), which required adequate notice and education on the effects and exposure to mercury through the development of health advisories in 2004.

By adopting Resolution No. 11-44, the City will again take a proactive stand on environmental issues and declare its commitment to addressing major sources of anthropogenic mercury to the environment through reduction and stewardship and support worldwide efforts to do the same, including the UNEP mercury treaty and their implementation of an international plan to phase out use of mercury-containing batteries, dental amalgam, electric switches and relays, lamps and measuring devices.

ATTACHMENT: Resolution No. 11-44

RESOLUTION NO. 11-44

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MALIBU COMMITTING TO ADDRESS MAJOR SOURCES OF ANTHROPOGENIC MERCURY TO THE ENVIRONMENT THROUGH REDUCTION AND STEWARDSHIP AND SUPPORTING EFFORTS TO REDUCE THIS POLLUTANT WORLDWIDE

The City Council of the City of Malibu does hereby find, order and resolve as follows:

SECTION 1. Recitals.

- A. Mercury is a national and international concern because it is transported by air currents across political boundaries, and mercury exported by the United States (U.S.) returns to this country by atmospheric transport to land and surface waters, through contaminated fish and in manufactured products.
- B. The environmental health effects of mercury are well established – according to the U.S. Environmental Protection Agency (EPA), mercury in the environment can cause neurological damage, especially to the developing brains and nervous systems of children and fetuses.
- C. The use of mercury in the U.S. has decreased significantly, and the recycling of mercury continues to increase, resulting in a significant excess of commodity mercury beyond domestic demand.
- D. The global use and release of mercury significantly contributes to mercury impacts in the U.S.
- E. Many common household products, such as electrical switches (including thermostats) and relays, measuring and control equipment, energy-efficient fluorescent light bulbs, batteries and dental amalgam, contain mercury, and mercury is also sometimes used in laboratories, cosmetics, pharmaceuticals (including vaccines as a preservative), paints and jewelry.
- F. Amalgam is the second-largest selling mercury product in the U.S. where more mercury resides in human teeth than in all other mercury products combined.
- G. Mercury emissions from steel manufacturing plants that process scrap steel from end-of-life vehicles (i.e., cars, light duty trucks and SUVs) are the fourth largest source of mercury emissions in the U.S. due to the mercury-containing convenience light switches in the hoods and/or trunks and the anti-lock brake (ABS) switches used in some models of vehicles until Model Year 2003 when the auto manufacturers voluntarily phased-out their use.
- H. The United Nations Environmental Programme (UNEP) identifies five products as accounting for over 80% of the product contributions of mercury in the environment, which are batteries, dental amalgam, electric switches and relays, lamps, measuring devices and mercury-containing lamps, and UNEP's draft treaty suggests phasing out all five of them.
- I. The U.S. Federal Mercury Export Ban Act was signed into law in 2008.

- J. The U.S. EPA is expected to publish draft federal dental amalgam rulemaking regulations late in 2011 and has been working with stakeholders since before 2009 to develop a nationwide program to reduce mercury emissions from steel manufacturing facilities to the environment by removing all accessible mercury switches from end-of-life vehicles and managing them in a manner that minimizes releases of mercury to the environment.
- K. State environmental agencies and some U.S. cities, individually and collectively, have recognized mercury as a significant source of risk to human health and impairment to the nation's environment due to its properties as a persistent, bio-accumulative toxic substance that impacts children's health.
- L. Many states have mercury reduction and collection programs and laws designed to reduce unnecessary uses of mercury and limit mercury releases to the environment.
- M. The State of California recognizes in Proposition 65 that "Dental Amalgam causes exposure to mercury, a chemical known to the State of California to cause birth defects or other reproductive harm" and the State recognizes in the Watson Law that "mercury may harm the developing brain of a child or fetus."
- N. The State Water Resources Control Board has placed Santa Monica Bay on the 303 (d) list of impaired waterbodies for sediment toxicity and fish consumption advisories.
- O. The City of Malibu implements an outreach program to inform the community about household hazardous waste, pollution prevention and proper disposal and recycling of wastes.
- P. The City of Malibu provides an Electronics Waste Collection Program with quarterly drop off events, which accept compact fluorescent light bulbs and other electronics that may contain hazardous metals.

SECTION 2. The City Council of the City of Malibu does hereby support national and worldwide efforts to reduce anthropogenic sources of mercury to the environment, including development of products using non-hazardous alternatives to mercury, and efforts by UNEP to adopt an international treaty to phase out each of the above five major mercury pollutants.

SECTION 3. The City Council of the City of Malibu encourages local dentists to educate patients about alternatives to mercury amalgam for fillings, to install dental amalgam separators in their operations and to properly dispose of the mercury-containing materials collected.

SECTION 4. The City Council of the City of Malibu resolves to reduce local environmental impacts due to mercury and hereby directs staff to continue educating the community regarding stewardship of household hazardous materials and proper disposal or recycling of them, including pollution prevention and increased information on the hazards of mercury.

Resolution No. 11-44
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SECTION 5. The City Clerk shall certify to the passage and adoption of this resolution and enter it into the book of original resolutions.

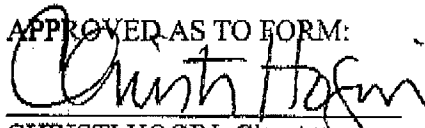
PASSED, APPROVED, and ADOPTED this 10th day of October, 2011.

JOHN SIBERT, Mayor

ATTEST:

LISA POPE, City Clerk
(seal)

APPROVED AS TO FORM:



CHRISTI HOGIN, City Attorney