

Berkeley City Council
District 5

CONSENT CALENDAR
October 2, 2012

To: Honorable Mayor and Members of the City Council

From: Councilmember Laurie Capitelli

Subject: Referral to the Community Health Commission Regarding the Use of Anthropogenic Mercury Within the City of Berkeley

RECOMMENDATION

Request that the Community Health Commission research major sources of anthropogenic mercury in the environment and strategies used by other municipalities to reduce its use; return to Council with a draft resolution regarding this pollutant and recommendations for reduction of use within the City of Berkeley.

FINANCIAL IMPLICATIONS

None.

BACKGROUND

The Community Health Commission is charged with the concern of health planning, education, and disseminating informational services to the community. To this end we are requesting an investigation into the use of anthropogenic mercury in the form of dental amalgam, a substance known to contain 50% mercury, a trace element put on the California Environmental Protection Agency's list of chemicals known cause cancer and/or reproductive toxicity since 1990, pursuant to California's State Proposition 65.

Mercury is a naturally occurring trace element found in air, water, and soil. Various human activities are widely dispersing larger amounts of mercury into the environment than would otherwise naturally occur. The United Nations Environmental Programme (UNEP) identifies dental amalgams as one of five products accounting for over 80% of human contributions of mercury into the environment.

Both the California and United States EPA recognize mercury as a dangerous neurotoxin that can render deleterious effects on human mental development and the nervous system. Mercury poses a particular threat to expectant mothers, unborn fetuses, and children because of the sensitivity of the developing nervous system, including increased risks of learning disabilities associated with in-utero exposure to methylmercury. In addition to environmental agencies, a number of California cities have already 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. In 2004 the City of San Francisco adopted a resolution supporting US Senate Bill 1939, the Mercury Health Advisory Act of 2003 (Leahy). In 2010 and 2011 the cities of Costa Mesa and Malibu respectively adopted resolutions

opposing the use of dental mercury, requesting that all dental practices located within city limits voluntarily cease use of dental amalgam in advance of state and federal action and to switch to modern alternative filling materials already widely in use.

CONTACT PERSON

Councilmember Laurie Capitelli, District 5, 981-7150

ATTACHMENTS:

City of San Francisco resolution supporting US Senate Bill 1939, July 14, 2004

City of Costa Mesa resolution opposing dental amalgam, October 19, 2010

City of Malibu resolution opposing dental amalgam, September 22, 2011

1 Resolution No. 004-04-COE

2

3 ["Mercury Health Advisory"]

4 URGING THE MAYOR AND THE BOARD OF SUPERVISORS OF THE CITY

5 AND COUNTY OF SAN FRANCISCO TO SUPPORT US SENATE BILL 1939,

6 THE MERCURY HEALTH ADVISORY ACT OF 2003 (LEAHY) ~~TO SUPPORT~~

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7 ~~THE CALIFORNIA STATE ATTORNEY GENERAL BILL LOCKYER IN THE~~

8 ~~LAWSUIT FILED AGAINST CALIFORNIA GROCERS AND RESTAURANTS~~

9 ~~(4/2003) AND THE RECENTLY FILED LAWSUIT AGAINST PRODUCERS OF~~

10 ~~CANNED TUNA FOR FAILURE TO ADEQUATELY WARN CONSUMERS~~

11 ~~ABOUT THE HEALTH RISKS OF MERCURY IN CANNED TUNA, AND TO~~

12 ~~ADOPT AN ORDINANCE REQUIRING THAT ALL BUSINESSES IN THE CITY~~

13 ~~AND COUNTY OF SAN FRANCISCO THAT SELL FRESH, FROZEN OR~~

14 ~~CANNED FISH AND SEAFOOD WHERE THE POTENTIAL FOR MERCURY~~

15 ~~EXPOSURE MAY EXIST TO CONSPICUOUSLY POST AN ADVISORY~~

16 ~~DETAILING THE EFFECTS OF EXPOSURE TO MERCURY.~~

17

18 Whereas: mercury is a persistent, bio-accumulative and toxic heavy metal
19 that poses a significant risk to human health, wildlife, and the environment; and,

20

21 Whereas: mercury and methyl mercury and their compounds are
22 identified on the California Environmental Protection Agency June 11, 2004 list of
23 chemicals known to the state to cause cancer or reproductive toxicity; and,

24

Resolution No. 004-04-COE
Mercury Health Advisory

1 Whereas: there is increasing evidence linking the increased risk of
2 coronary heart disease to mercury exposure, presented in 2 peer reviews; and,

3
4 Whereas: both the US Federal Food And Drug Administration (FDA) and
5 the US Environmental Protection Agency (EPA) concluded that pregnant and
6 nursing women and young children should eat only limited amounts of canned
7 albacore "white" tuna because of potential hazards from mercury in the fish.
8 They further suggest this population avoid shark, swordfish, king mackerel and
9 tilefish because of high mercury levels; and,

10
11 Whereas: according to the FDA, between 30 and 50 percent of women
12 of childbearing age are not aware of the methyl-mercury exposure risks from
13 ingestion of mercury contaminated fish. According to the US Census 2000, just
14 more than 25% of the city's population is women between the ages of 15 and 44
15 or what is known as childbearing age; and,

16
17 Whereas: data from the National Health And Nutrition Examination
18 Survey Centers and the EPA indicate that 7.8 percent of women of childbearing
19 age have blood mercury levels in their bodies above what is considered safe for
20 the developing fetus, translating into over 300,000 babies born each year in the
21 United States at risk of mercury poisoning. New EPA data (Mahaffey, 2004) has
22 found that fetal blood levels are typically significantly higher (as much as 1.7
23 times) than their mother's blood levels, indicating that the correct number of
24 babies at risk is about 630,000; and,

1 Whereas: many San Franciscans are dependent upon healthy and
2 diverse ocean ecosystems for livelihood, recreation, nutrition, medicines, raw
3 materials, quality of life, and valuable natural processes; and,
4

5 Whereas: in particular, San Francisco has a number of minority
6 communities some of which are non-English speaking that are dependent upon
7 both fish as a dietary staple; and,
8

9 Whereas: San Francisco has adopted the Precautionary Principle as the
10 foundation for its Environment Code, mandating anticipatory action to prevent
11 harm; and,
12

13 Whereas: San Francisco has been a national trendsetter in efforts to
14 educate and protect its residents and visitors of the potentially serious health
15 hazards of mercury exposure enacting the Mercury Thermometer Ban in 2001,
16 developing appropriate warning signage of mercury contamination in the San
17 Francisco Bay in 2003, and by leading a citywide voluntary compliance campaign
18 to install dental mercury amalgam separators in all San Francisco dentist offices
19 in 2004; and,
20

21 Whereas: if enacted, US Senate Bill 1939, The Mercury Health Advisory
22 Act of 2003 (Leahy), will require adequate notice and education on the effects
23 and exposure to mercury through the development of health advisories and
24 requiring that such appropriate advisories be posted or made readily available at
25 all business that sell fresh, frozen or canned fish and seafood where the potential
26 for mercury exposure may exists; and,
27

Resolution No. 004-04-COE
Mercury Health Advisory

1 Be it therefore resolved: the San Francisco Commission on the
2 Environment does hereby urge the ~~mayer~~-Mayor and the ~~beard~~-Board of
3 ~~supervisers~~-Supervisors to support US Senate Bill 1939, The Mercury Health
4 Advisory Act of 2003 (Leahy); now, therefore, be it

5
6 I hereby certify that this resolution was adopted by the Commission on the
7 Environment at its special meeting on _____ (date) _____
8 _____ July 14, 2004.

9
10 *Emily Rogers, Commission Secretary*

11 Vote: Approved

12 Ayes: Crowder, Desser, Mok, Pelosi, and Rodriquez Noes: None

13 Absent: Wald

RESOLUTION NO.10-

A RESOLUTION OF THE CITY OF COSTA MESA OPPOSING THE USE OF DENTAL MERCURY

THE CITY COUNCIL OF THE CITY OF COSTA MESA HEREBY RESOLVES AS FOLLOWS:

WHEREAS, Dental Amalgam contains about 50% mercury; and

WHEREAS, 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,"; and

WHEREAS, Amalgam is the second-largest selling mercury product in the United States where more mercury resides in human teeth than in all other mercury products combined; and

WHEREAS, the mercury from dental fillings pollutes our water via dental clinic releases and household waste; and

WHEREAS, the mercury from dental fillings pollutes our air via cremation, clinic emissions and sludge incineration; and

WHEREAS, the mercury from dental fillings pollutes our land via landfills, burials and fertilizer; and

WHEREAS, Amalgam is by far the greatest contributor of mercury to wastewater; and

WHEREAS, Amalgam, once in the environment, converts to methylmercury and contaminates the fish we eat; and

WHEREAS, the environmental health effects of mercury are well established – according to the U.S. Environmental Protection Agency – mercury in the environment can cause neurological damage, especially to the developing brains and nervous systems of children and fetuses; and

WHEREAS, dental workers, mostly females of childbearing age, are often exposed to mercury in their work environments; and

WHEREAS, many dental consumers, deceived by the term "silver fillings," are unaware of Amalgam's mercury content and its resulting environmental impact; and

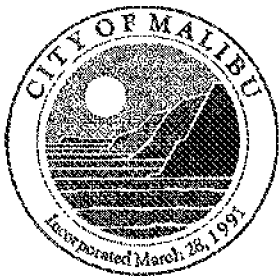
WHEREAS, interchangeable, modern alternatives to Amalgam exist and are readily

BE IT RESOLVED, that the City Council opposes the use of Dental Amalgam and hereby requests that State and Federal agencies with the legal authority to eliminate the use of mercury in dental practices take the necessary steps to effect this needed change immediately and;

BE IT FURTHER RESOLVED, that the City Council hereby requests that all dental practices located in Costa Mesa voluntarily cease use of Dental Amalgam in advance of State and Federal action and switch to interchangeable, modern alternative filling materials that are already widely in use and;

BE IT FINALLY RESOLVED, that the City Council hereby directs that copies of this resolution be disseminated to the City's State and Federal representatives and to the other 33 cities in Orange County with a request that they adopt similar resolutions.


PASSED AND ADOPTED this 19th day of October, 2010



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