



- Board of Directors  
*Legislation Committee*

3/8/2011 Board Meeting

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**8-4**

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## **Subject**

Express support, if amended, for S. 78 (Boxer, D-CA) - Protecting Pregnant Women and Children From Perchlorate Act of 2011

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## **Description**

United States Senator Barbara Boxer (D-California) has introduced legislation regarding perchlorate. Following enactment, S. 78 ([Attachment 1](#)) the “Protecting Pregnant Women and Children from Perchlorate Act of 2011” would direct the U.S. Environmental Protection Agency (USEPA) to establish a health advisory within 90 days and a national drinking water regulation for perchlorate within one year. S. 78 is a reintroduction of similar legislation from 2007 by Senator Boxer.

## **Background**

Perchlorate is an inorganic compound used as an oxidizing agent in solid rocket fuel. There is the potential for perchlorate contamination if drinking water supplies are near aerospace, munitions, or fireworks facilities. Perchlorate also occurs naturally at low levels in some surface and groundwater environments. A U.S. Government Accountability Office study, published in 2006, found 395 sites nationwide where perchlorate contaminated drinking water, groundwater, sediment, or soil; about half were in California and Texas. Perchlorate has been detected in groundwater basins within the service areas of Metropolitan and its member agencies as well as groundwater basins adjacent to the Colorado River.

The primary human health concern related to perchlorate is its effect on the thyroid. Perchlorate interferes with the thyroid’s ability to produce hormones required for normal development, although the amount of perchlorate that causes harm and the extent of that harm is still debated. Perchlorate is currently not regulated under the federal Safe Drinking Water Act; however, USEPA Administrator Lisa Jackson recently announced the agency's decision to regulate perchlorate.

California aggressively sought regulation of perchlorate after its detection in water supplies in 1997. The California Department of Public Health (CDPH) set a primary drinking water standard (maximum contaminant level or MCL) of 6 ppb in October 2007. Because of new data on environmental exposure and possible health effects on susceptible populations, California’s Office of Environmental Health Hazard Assessment proposed revising the draft public health goal (PHG) for perchlorate downward from 6 ppb to 1 ppb. A PHG is a non-enforceable level derived solely on theoretical risk assessment and without consideration of the ability to either detect or remove the constituent. If this lower PHG is adopted, CDPH will be required to initiate a regulatory review to determine if the current California drinking water standard of 6 ppb would also need to be revised.

## **Legislative Analysis**

On February 2, 2011, Senator Boxer’s Environment and Public Works Committee convened the “Oversight Hearing on Public Health and Drinking Water Issues.” Testimony was provided by USEPA Administrator Jackson as well as representatives of the drinking water community and other public health officials. Regulation of perchlorate and hexavalent chromium was the primary focus of these proceedings. Administrator Jackson announced USEPA’s decision to establish a national drinking water standard for perchlorate. She also indicated

that the process will take up to two years, with an additional 18 months for public comment and finalization. It is unclear if S. 78 is still necessary given the USEPA's decision to regulate perchlorate. If the USEPA sets a drinking water standard for perchlorate that is lower than 6 ppb, then California would be required to adjust its standard.

### **Impacts to Metropolitan**

Perchlorate-contaminated groundwater seeped into Lake Mead through the Las Vegas Wash and affected the lower Colorado River. Prior to any control measures or remediation, perchlorate levels as high as 9 parts per billion (ppb) were detected at the Lake Havasu intake to Metropolitan's conveyance system in 1997. In the following years, agencies in Nevada, the USEPA, and Metropolitan all organized forces to successfully isolate and treat the sources of perchlorate loading. In 2010, source water levels of perchlorate entering Metropolitan's conveyance system have not exceeded 1.7 ppb.

### **Staff Recommendation**

Staff recommends that Metropolitan express support for S. 78 if amended to remove any date-specific deadlines for developing a national primary drinking water regulation for perchlorate. Additional amendments should also include assistance to states and cities to address existing perchlorate contamination.

Metropolitan staff consistently opposes legislating numeric standards or date-specific regulations because both of these alternatives contradict the existing regulatory framework of the 1996 Safe Drinking Water Act Amendments (SDWA). This well-established framework requires evaluating health risk using peer-reviewed science, monitoring source water supplies to estimate exposure, establishing analytical methods, defining best-available treatment technologies, and—most importantly—performing an economic analysis to determine whether the benefits of a new standard justify the costs. When numeric standards or regulatory timelines are prescribed in additional legislation, the SDWA framework may be circumvented.

Drinking water trade association groups, such as the American Water Works Association, the Association of California Water Agencies, and the Association of Metropolitan Water Agencies, have yet to adopt positions on S.78. However, these agencies have historically joined Metropolitan in opposing date-specific regulations.

### **Policy**

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Source Water Protection, M.I. 39929 - November 10, 1992; Added to by M.I. 40878 - June 14, 1994; Added to by M.I. 41222 - January 10, 1995, Added to by M.I. 42820 - February 10, 1998 Drinking Water Quality, M.I. 46191-April 12, 2005

Consistent with Board's prior expression of support for bills S. 24 (Boxer), S.150 (Boxer), and H.R. 1747 (Solis), M.I. 46191 - June 12, 2007

### **California Environmental Quality Act (CEQA)**

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CEQA determination for Options #1 and #2:

The proposed action is not defined as a project under CEQA because it involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, where it can be seen with certainty that there is no possibility that the proposed action in question may have a significant effect on the environment, the proposed action is not subject to CEQA (Section 15061(b)(3) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action is not subject to CEQA pursuant to Sections 15378(b)(2) and 15061(b)(3) of the State CEQA Guidelines.

CEQA determination for Option #3:

None required

**Board Options**

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**Option #1**

Adopt the CEQA determination and authorize the General Manager to express Metropolitan’s support for S. 78, if amended.

**Fiscal Impact:** None

**Business Analysis:** Protects Metropolitan from costs associated with an unwarranted standard setting process

**Option #2**

Adopt the CEQA determination and authorize the General Manager to express Metropolitan’s support for S. 78.

**Fiscal Impact:** None

**Business Analysis:** Protects Metropolitan from costs associated with an unwarranted standard setting process

**Option #3**

Take no position on S. 78 at this time.



**Fiscal Impact:** None

**Business Analysis:** Potential for costs due to regulating constituents without thorough scientific review

**Staff Recommendation**

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Option #1

	3/1/2011
<hr style="width: 100%;"/>	<i>Date</i>
Linda Waade Deputy General Manager, External Affairs	
	3/2/2011
<hr style="width: 100%;"/>	<i>Date</i>
Jeffrey Kightlinger General Manager	

**Attachment 1 – S. 78 (Boxer, D - CA)**

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112TH CONGRESS  
1ST SESSION

# S. 78

To amend the Safe Drinking Water Act to protect the health of pregnant women, fetuses, infants, and children by requiring a health advisory and drinking water standard for perchlorate.

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## IN THE SENATE OF THE UNITED STATES

JANUARY 25 (legislative day, JANUARY 5), 2011

Mrs. BOXER introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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## A BILL

To amend the Safe Drinking Water Act to protect the health of pregnant women, fetuses, infants, and children by requiring a health advisory and drinking water standard for perchlorate.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Protecting Pregnant  
5 Women and Children From Perchlorate Act of 2011”.

6 **SEC. 2. FINDINGS AND PURPOSES.**

7 (a) FINDINGS.—Congress finds that—

8 (1) perchlorate—

1 (A) is a chemical used as the primary in-  
2 gredient of solid rocket propellant; and

3 (B) is also used in fireworks, road flares,  
4 and other applications;

5 (2) waste from the manufacture and improper  
6 disposal of chemicals containing perchlorate is in-  
7 creasingly being discovered in soil and water;

8 (3) according to the Government Accountability  
9 Office, perchlorate contamination has been detected  
10 in water and soil at almost 400 sites in the United  
11 States, with concentration levels ranging from 4  
12 parts per billion to millions of parts per billion;

13 (4) the Government Accountability Office has  
14 determined that the Environmental Protection Agen-  
15 cy does not centrally track or monitor perchlorate  
16 detections or the status of perchlorate cleanup, so a  
17 greater number of contaminated sites may already  
18 exist;

19 (5) according to the Government Accountability  
20 Office, limited Environmental Protection Agency  
21 data show that perchlorate has been found in 35  
22 States and the District of Columbia and is known to  
23 have contaminated 153 public water systems in 26  
24 States;

1           (6) those data are likely underestimates of total  
2           drinking water exposure, as illustrated by the find-  
3           ing of the California Department of Health Services  
4           that perchlorate contamination sites have affected  
5           approximately 273 drinking water sources and 86  
6           drinking water systems in the State of California  
7           alone;

8           (7) Food and Drug Administration scientists  
9           and other scientific researchers have detected per-  
10          chlorate in the United States food supply, including  
11          in lettuce, milk, cucumbers, tomatoes, carrots, canta-  
12          loupe, wheat, and spinach, and in human breast  
13          milk;

14          (8)(A) perchlorate can harm human health, es-  
15          pecially in pregnant women and children, by inter-  
16          fering with uptake of iodide by the thyroid gland,  
17          which is necessary to produce important hormones  
18          that help control human health and development;

19          (B) in adults, the thyroid helps to regulate me-  
20          tabolism;

21          (C) in children, the thyroid helps to ensure  
22          proper mental and physical development; and

23          (D) impairment of thyroid function in expectant  
24          mothers or infants may result in effects including

1 delayed development and decreased learning capa-  
2 bility;

3 (9)(A) in October 2006, researchers from the  
4 Centers for Disease Control and Prevention pub-  
5 lished the largest, most comprehensive study to date  
6 on the effects of low levels of perchlorate exposure  
7 in women, finding that—

8 (i) significant changes existed in thyroid  
9 hormones in women with low iodine levels who  
10 were exposed to perchlorate; and

11 (ii) even low-level perchlorate exposure may  
12 affect the production of hormones by the thy-  
13 roid in iodine-deficient women; and

14 (B) in the United States, about 36 percent of  
15 women have iodine levels equivalent to or below the  
16 levels of the women in the study described in sub-  
17 paragraph (A); and

18 (10) the Environmental Protection Agency has  
19 not established a health advisory or national primary  
20 drinking water regulation for perchlorate, but in-  
21 stead established a “Drinking Water Equivalent  
22 Level” of 24.5 parts per billion for perchlorate,  
23 which—

24 (A) does not take into consideration all  
25 routes of exposure to perchlorate;

1 (B) has been criticized by experts as fail-  
2 ing to sufficiently consider the body weight,  
3 unique exposure, and vulnerabilities of certain  
4 pregnant women and fetuses, infants, and chil-  
5 dren; and

6 (C) is based primarily on a small study  
7 and does not take into account new, larger  
8 studies of the Centers for Disease Control and  
9 Prevention or other data indicating potential ef-  
10 fects at lower perchlorate levels than previously  
11 found.

12 (b) PURPOSES.—The purposes of this Act are—

13 (1) to require the Administrator of the Environ-  
14 mental Protection Agency to establish, by not later  
15 than 90 days after the date of enactment of this  
16 Act, a health advisory for perchlorate in drinking  
17 water that—

18 (A) is fully protective of, and considers,  
19 the body weight and exposure patterns of preg-  
20 nant women, infants, and children;

21 (B) provides an adequate margin of safety;  
22 and

23 (C) takes into account all routes of expo-  
24 sure to perchlorate;



1           (2) to require the Administrator of the Environ-  
2           mental Protection Agency to establish not later than  
3           1 year after the date of enactment of this Act a na-  
4           tional primary drinking water regulation for per-  
5           chlorate that fully protects pregnant women, infants,  
6           and children, taking into consideration body weight,  
7           exposure patterns, and all routes of exposure to per-  
8           chlorate.

9 **SEC. 3. HEALTH ADVISORY AND NATIONAL PRIMARY**  
10 **DRINKING WATER REGULATION FOR PER-**  
11 **CHLORATE.**

12           Section 1412(b)(12) of the Safe Drinking Water Act  
13 (42 U.S.C. 300g-1(b)(12)) is amended by adding at the  
14 end the following:

15           “(C) PERCHLORATE.—

16           “(i) HEALTH ADVISORY.—Notwith-  
17           standing any other provision of this sec-  
18           tion, not later than 90 days after the date  
19           of enactment of this subparagraph, the Ad-  
20           ministrator shall publish a health advisory  
21           for perchlorate that is fully protective, with  
22           an adequate margin of safety, of the health  
23           of vulnerable persons (including pregnant  
24           women, infants, and children), taking into

1 consideration body weight, exposure pat-  
2 terns, and all routes of exposure.

3 “(ii) PROPOSED REGULATIONS.—Not-  
4 withstanding any other provision of this  
5 section, the Administrator shall propose  
6 (not later than 180 days after the date of  
7 enactment of this subparagraph) and shall  
8 finalize (not later than 1 year after the  
9 date of enactment of this subparagraph) a  
10 national primary drinking water regulation  
11 for perchlorate—

12 “(I) that based on the factors in  
13 clause (i) and other relevant data, is  
14 protective, with an adequate margin  
15 of safety, of vulnerable persons (in-  
16 cluding pregnant women, infants, and  
17 children); and

18 “(II) the maximum contaminant  
19 level of which is as close to the max-  
20 imum contaminant level goal for per-  
21 chlorate, and as protective of vulner-  
22 able persons, as is feasible.”.

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