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June 11, 2013

Chairwoman Anne M. Gobi
Joint Committee on Environment, Natural Resources and Agriculture
State House, Room 473F, Boston, MA 02133

Chairman Marc R. Pacheco
Joint Committee on Environment, Natural Resources and Agriculture
State House, Room 312-B, Boston, MA 02133

Re: Testimony in Support of S400, Protecting Children from Bisphenol-A (BPA)

Dear Chairwoman Gobi, Chairman Pacheco, and Honorable Members of the Committee,

Thank you for providing this opportunity to offer our comments on S400, Protecting Children from Bisphenol-A (BPA). We wish to express our strong support in favor of S400.

The Sierra Club is the oldest and largest non-profit, non-partisan environmental organization in the country. With over a forty year history in this state, the Massachusetts Sierra Club represents about 22,000 members throughout the state and nearly one million nationwide. We fight for clean air, clean water, the preservation of the Commonwealth's most precious natural spaces, and healthy, vibrant communities.

This proposed legislation would prohibit the manufacture, sale, or distribution of any toy or child care article containing BPA or any infant formula or baby food that is stored in a plastic container, jar or can that contains BPA; require manufacturers to use the least toxic alternative to BPA; and prohibit a manufacturer from replacing BPA with certain carcinogens and reproductive toxicants.

Passage of this bill remains important despite the recent administrative regulation that removed BPA-containing bottles and food containers. BPA represents a serious threat to public health. BPA use is widespread and has been linked to reproductive disorders, endocrine disorders, cancer, brain development and fat metabolism. It's found in the 5-gallon water bubbler bottles. It's found in food can lining, plastics, and non plastic products such as thermal printer paper from ATMs, cash registers, and credit card processing equipment. BPA is absorbed directly through the skin, and regularly handling BPA-containing paper poses a serious health threat.

Studies show that the groups most at risk are infants and women of childbearing age. A recent study found the highest reported BPA concentrations in pregnant women and associated abnormalities in infants.¹

This bill would reduce human exposure to this toxic substance.

The Sierra Club believes that the intentional introduction of toxics into our environment is a significant environmental and health issue and appropriately within the scope of our advocacy agenda.

- BPA is a high-volume production chemical used to make epoxy resin and polycarbonate plastic. Each year 8 billion pounds of BPA are manufactured worldwide.² BPA is commonly found in many clear plastic, polycarbonate containers and other such household products including baby bottles, water bottles and re-usable beverage containers, water cooler bottles, liners for food cans, dental sealants, and printed text on thermal register receipt paper.³
- BPA has been found in humans and the environment. BPA has been detected in over 93% of Americans tested.⁴ Peer reviewed scientific studies have confirmed that BPA leaches out of plastics and linings of metal cans and into the foods and drinks in contact with them, especially when heated. As a result, BPA is ingested through BPA-tainted items. Also, anyone who has accepted a thermal register receipt from a store clerk has transferred BPA from the receipt to their skin, where it is absorbed. BPA also has been found in environmental samples such as groundwater, landfill leachate, sewage sludge, waste water discharge, indoor and outdoor air samples, and dust.⁵
- Concerns over continued exposure to BPA have been further compounded by the growing body of scientific evidence linking the chemical to a long list of negative health effects, for both wildlife and humans.⁶ The hazards of BPA pose a special danger to infants and young children.⁷ BPA behaves as a synthetic estrogen. It is an endocrine disrupter that can negatively impact brain and thyroid gland development. Research indicates that exposure to BPA during critical windows of development may result in health problems not just during infancy, but into adulthood as well. For example, studies suggest that BPA may be a factor in increased incidences of infertility, genital tract abnormalities, obesity, attention deficit hyperactivity disorder, infertility, and prostate and breast cancer.⁸
- A recent study indicates that BPA exposure may be higher than previously thought.⁹ Two previous studies that show minimal effects of BPA have recently been found to be flawed.¹⁰ A study published in the Journal of the American Medical Association found that BPA might be harmful at extremely low doses, as adults with higher urinary concentrations of the chemical had higher rates of heart disease, diabetes and liver enzyme concentrations. Low dose exposure to BPA has also been linked to developmental delays, behavioral changes, reproductive disorders, cancer, impaired immune systems, and cardiovascular conditions.¹¹
- The Food and Drug Administration recently announced its agreement with the National Toxicology Program that BPA is of “some concern” for developing infants and supports industry development of alternatives to BPA.¹² But the current regulatory framework that the Food and Drug Administration works within limits their ability to restrict the use of BPA.¹³ Lacking strong federal action, it is incumbent on the states to protect the public and environment from this hormone disrupting toxin.
- Massachusetts needs to regulate BPA to protect our health as have many states and countries including Minnesota, Connecticut, Washington, Maryland, Wisconsin, Maine, Canada, and the Europe Union (supported by several European countries). Canada also has declared BPA a toxic substance.¹⁴

Massachusetts businesses will not be negatively impacted by the passage of S400 because BPA-free alternatives are readily available.¹⁵ Due to consumer demand, companies such as Nalgene, Playtex, and Eden foods have all started using BPA-free alternatives. Other companies have pledged to phase the chemical out of their products including Wal-Mart and Toys “R” Us which have largely discontinued selling baby bottles made with BPA. Major baby bottle manufacturers including Avent, Disney, First Years, Gerber, Dr. Brown, Playtex, and Evenflow sell BPA-free baby bottles. Nalgene and CamelBak now offer only BPA-free water bottles.

In view of the toxic effects of BPA on our health and the environment, the Sierra Club strongly suggests amending the bill to further prohibit manufactures from using BPA in any product including polycarbonate containers, water bottles, water cooler bottles, re-usable beverage containers, liners for food cans, dental sealants, and thermal register receipt paper. In addition, the Sierra Club proposes noting the presence and toxicity of BPA on product contents lists.

In conclusion, we respectfully ask this Committee to report S400 favorably, discontinuing the use of BPA in all products, and require its replacement with the least toxic alternatives. This proposed legislation would have a significant impact on our health and environment.

Respectfully,



Ryan Black
Director
Massachusetts Sierra Club

¹ Environmental Health Perspectives: A Case Study of High Prenatal Bisphenol A Exposure and Infant Neonatal Neurobehavior, May 2011, Dr. Sheela Sathyanarayana, MD, Seattle Children's Research Institute. Available at Environmental Health Perspectives. <http://tinyurl.com/455psoa>

² Vandenberg, L. *et al.*, "Urinary, Circulating, and Tissue Biomonitoring Studies Indicate Widespread Exposure to Bisphenol A", Environmental Health Perspectives, vol. 118, no. 8, p. 1055, <http://tinyurl.com/6gv96qb> (Aug. 2010).

³ NRDC, Chemicals in Plastic Bottles: How to Know What's Safe for Your Family, <http://www.nrdc.org/health/bpa.pdf> (May 2008); U.S. Dept. of Health and Human Services Bisphenol A (BPA) Information for Parents, <http://www.hhs.gov/safety/bpa/>; CDC Fact Sheet Bisphenol A (BPA), http://www.cdc.gov/exposurereport/BisphenolA_FactSheet.html (Feb. 2011); Massachusetts Department of Public Health Advisory Regarding Bisphenol A (BPA), http://www.mass.gov/?pageID=eohhs2pressrelease&L=1&L0=Home&sid=Eeohhs2&b=pressrelease&f=090803_bpa_advisory&csid=Eeohhs2 (Aug. 3, 2009).

⁴ <http://www.nrdc.org/health/bpa.pdf>

⁵ *See, e.g.*, Vandenberg *et al.*

⁶ Braun, J. and B. Lamphear, Prenatal Bisphenol A Exposure and Early Childhood Behavior. Environmental Health Perspectives, <http://tinyurl.com/62kkldn> (2009); Li, Z. *et al.*, Occupational Exposure to Bisphenol-A (BPA) and the Risk of Self-Reported Male Sexual Dysfunction, Oxford Journals: Human Reproduction, vol. 25, no. 2, 519-527, <http://humrep.oxfordjournals.org/cgi/content/abstract/dep381> (2009).

⁷ Vandenberg *et al.*, 1068; Braun, J. *et al.*, Prenatal Bisphenol: A Exposure and Early Childhood Behavior, Environmental Health Perspectives., <http://tinyurl.com/62kkldn> (2009).

⁸ Vandenberg *et al.*, 1056.

⁹ Barrett, J., The Pharmacokinetics of BPA: Similarities in Human and Animal Metabolism Suggest Higher Exposure Than Thought, Environmental Health Perspectives, 119 (4): A177, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3080961/> (April 2011).

¹⁰ Vandenberg *et al.*, 1068.

¹¹ <http://tinyurl.com/l2qzjn>

¹² U.S. Food and Drug Administration, Update on Bisphenol A for Use in Food Contact Applications: January 2010, <http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm064437.htm> (2010).

¹³ <http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm064437.htm>

¹⁴ Canada Gazette, Order Adding a Toxic Substance to Schedule 1 to the Canadian Environmental Protection Act, 1999, Vol. 144, No. 21, <http://www.gazette.gc.ca/rp-pr/p2/2010/2010-10-13/html/sor-dors194-eng.html> (Oct. 13, 2010).

¹⁵ <http://tinyurl.com/l2qzjn>