



ALPHA Resolution

2009-03 Protecting Vulnerable Populations from Exposure to Toxic Chemicals

WHEREAS, in addition to the alarming rates of heart disease, diabetes and obesity that afflict Alaska residents, Alaska also has a birth prevalence of major congenital anomalies (MCA) twice as high as the 3% reported rate for the United States as a whole;ⁱ

WHEREAS, Alaska Native infants have twice the risk of MCAs as white infants, with 10% of the birth cohort affected versus 4% of whites and even during multivariate analysis, controlling for gender and maternal age, prenatal alcohol and cigarette use, and prenatal care initiation, Alaska Natives continue to be associated with a higher risk of a MCA;ⁱⁱ

WHEREAS, the causes of birth defects remain largely unknown, the majority of birth defects are considered the result of multiple environmental and/or genetic causes acting together;ⁱⁱⁱ

WHEREAS, there is a growing body of scientific evidence suggesting environmental contaminants are linked to birth defects and other harmful reproductive health effects in both males and females;^{iv,v}

WHEREAS, exposure to environmental contaminants have been linked to a wide array of adverse health effects including cancer, diabetes, learning and intellectual disabilities, reproductive and developmental damage, and birth defects;^{vi}

WHEREAS, as of June, 2006 over 2,800 contaminated sites remain in Alaska containing hazardous substances that continue to pose a risk to human health and the environment, including military sites, open dump sites throughout rural Alaska, mining sites, other waste sites, and five major military sites that have been listed on National Priority List as among the most polluted sites in the nation (known as Superfund sites);^{vii}

WHEREAS, Alaska and the circumpolar Arctic are also subject to pesticides and industrial chemicals that originate from thousands of miles away, traveling northward via oceanic and atmospheric currents and eventually settle in cold climates, accruing in the north because the cold climate and fat-based food web favor retention of these persistent toxics;^{viii,ix}

WHEREAS, even though some toxic chemicals that have been banned in the U.S. (such as the insecticide DDT and class of industrial chemicals known as PCBs), they continue to accumulate in the Arctic and sub-Arctic and threaten the health of northern peoples who rely on traditional diets of fish and marine mammals;^x

WHEREAS, research demonstrates that industrial chemicals, pollutants, and pesticides cross the placenta as readily as residues from cigarettes and alcohol^{xi} and these and other contaminants are

similarly hazardous to the health of developing fetuses and children, as the following studies have found:

- A review of scientific studies revealed contaminants such as solvents, heavy metals, and pesticides are linked to birth defects such as heart abnormalities, oral clefts (lip and/or palate) and neural tube defects (incomplete development of the brain, spinal cord and/or protective coverings of these organs).^{xii}
- Exposure to plasticizers (used in consumer products) is linked to feminization of baby boys while PCBs and fine particulate matter are linked to low birth weight.^{xiii} A recent study in Alaska found that women from villages with “hazardous” open dump sites were more likely to deliver preterm or low birth weight babies.^{xiv,xv}
- Maternal and pre-conception paternal exposure to environmental contaminants may also contribute to the newly discovered male-to-female sex ratio declines.^{xvi} Nationwide, the number of males being born is declining,^{xvii} and skewed sex ratios have been observed in populations exposed to man-made chemicals.^{xviii,xix}

THEREFORE, BE IT RESOLVED that the Alaska Public Health Association:

- Promotes the use of public health principals in evaluating the impact of proposed policies, balancing the risks and benefits in the decision making process;
- Insists that we preventatively protect Alaskans from hazardous chemicals by supporting policy that works to phase out persistent, bio-accumulative chemicals and/or those linked to birth defects, cancer, genetic harm, endocrine disorders, immune and neurological damage;
- Urges and supports the enactment of regulations and policies that prevent the release of toxic chemicals from military and industrial sources;
- Urges the establishment of protective standards for environmental cleanup; and
- Supports policies and activities that would ensure that rural Alaska villages have adequate resources for waste minimization, sanitation, recycling, and the design and maintenance of solid waste management facilities;

Fiscal and Public Health Impact Statement

This action will result in minor costs associated with sending this resolution and accompanying cover letter to the Governor and key political leaders. This action will benefit public health by helping to eliminate the negative health effects associated with toxic chemicals.

ⁱ Schoellhorn, Janine. July 14, 2008. High prevalence of major congenital anomalies in Alaska, 1996-2002. State of Alaska Epidemiology Bulletin No. 16. Available at: http://www.epi.alaska.gov/bulletins/docs/b2008_16.pdf

ⁱⁱ Schoellhorn, Janine. July 14, 2008. High prevalence of major congenital anomalies in Alaska, 1996-2002. State of Alaska Epidemiology Bulletin No. 16. Available at: http://www.epi.alaska.gov/bulletins/docs/b2008_16.pdf

ⁱⁱⁱ Weinhold B. 2009. Environmental factors in birth defects. *Environmental Health Perspectives* 117(10): A440-A447.

^{iv} Weinhold B. 2009. Environmental factors in birth defects. *Environmental Health Perspectives* 117(10): A440-A447.

^v Mekdeci B, Schettler T. 2004. Birth defects and the environment. Collaborative on Health and the Environment. Available: http://healthandenvironment.org/birth_defects/peer_reviewed

^{vi} The Collaborative on Health and the Environment. CHE toxicant and disease database. Accessed 10.30.09. Available at: <http://www.healthandenvironment.org/tddb/>.

^{vii} Alaska Department of Environmental Conservation, Spill Prevention and Response Division. 2007. Alaska’s Legacy of Oil and Hazardous Substances Pollution: Cleanup and Management of Alaska’s Contaminated Sites. Available at: <http://www.dec.state.ak.us/spar/csp/docs/csstory.pdf>

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- ^{viii} AMAP. 2009. Arctic Pollution 2009. Arctic Monitoring and Assessment Programme (AMAP). Oslo, Norway. xi+83pp.
- ^{ix} AMAP. 2009. AMAP Assessment 2009. Human Health in the Arctic. Arctic Monitoring and Assessment Programme (AMAP). Oslo, Norway. xi+256pp.
- ^x AMAP. 2009. AMAP Assessment 2009. Human Health in the Arctic. Arctic Monitoring and Assessment Programme (AMAP). Oslo, Norway. xi+256pp.
- ^{xi} Houlihan J, et al. 2005. Body Burden: The Pollution in Newborns. Environmental Working Group.
- ^{xii} Mekdeci B, Schettler T. 2004. Birth defects and the environment. Collaborative on Health and the Environment. Available: http://healthandenvironment.org/birth_defects/peer_reviewed
- ^{xiii} Swan S, et al. 2005. Decrease in anogenital distance among male infants with prenatal phthalate exposure. *Environmental Health Perspectives* 113(8): 1056-1061.
- ^{xiv} Gilbreath S, Kass P. 2006. Adverse birth outcomes associated with open dumpsites in Alaska Native villages. *American Journal of Epidemiology* 164(6):518-528.
- ^{xv} Gilbreath S, Kass P. 2006. Fetal and neonatal deaths and congenital anomalies associated with open dumpsites in Alaska Native villages. *International Journal of Circumpolar Health* 65(2): 133-147.
- ^{xvi} Davis D. et al. 2007. Declines in sex ratio at birth and fetal deaths in Japan, and in U.S. whites but not African Americans. *Environmental Health Perspectives* 115(6): 941-946.
- ^{xvii} Davis D. et al. 2007. Declines in sex ratio at birth and fetal deaths in Japan, and in U.S. whites but not African Americans. *Environmental Health Perspectives* 115(6): 941-946.
- ^{xviii} Ryan JJ, et al. 2002. Sex ratios of children of Russian pesticide producers exposed to dioxin. *Environmental Health News* 110(11) : A699-A7-1.
- ^{xix} Mackenzie CA, et al. 2005. Declining sex ratio in a First Nation community. *Environmental Health Perspectives* 113(10): 1295-1298.