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A Component Society of the American College of Occupational and Environmental Medicine

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Statement of Support for AB 69 (Perea) On Groundwater: Nitrate at-Risk-Area Fund Revised April 19, 2013

SUMMARY: The Western Occupational and Environmental Medical Association (WOEMA), a professional association of over 500 physicians and other health care professional who champion workplace and environmental health and safety in our five member Western States (Arizona, California, Hawaii, Nevada, and Utah) supports AB 69 (Perea) regarding control of nitrate contamination of drinking water, and recommends the passage of this important public health measure.

Background: Persons who drink water with nitrate concentrations above the MCL are a significant risk for developing methemoglobinemia, a condition characterized by a chemical alteration of the hemoglobin in the blood, with babies and pregnant women particularly at risk of significant illness (1,2). Methemoglobinemia can cause cyanosis (blue skin) of limbs/trunk, weakness, and rapid heart rate. If methemoglobinemia progresses in severity, central nervous system depression can occur, as can headache, dizziness, fatigue, difficulty in breathing, and nausea. Severe methemoglobinemia can cause lethargy, brief loss of consciousness, irregular heartbeat, shock, convulsions, coma, and even death. Methemoglobin levels greater than 50% are potentially fatal. Maternal exposure to environmental nitrates and nitrites may increase the risk of pregnancy complications such as anemia, abortion, premature labor, or preeclampsia.

A statewide survey of drinking water wells and stand-by wells done by RWQCB in 2010, indicated that as many as 7% of these wells serving predominantly small water systems (5 to 14 hook-ups) have nitrate concentrations above the Maximum Contaminant Level (MCL) of 45 mg / liter (3). In rural areas, the percentage of such wells may be as high as 15%, serving over a million persons, mostly low-income individuals.

A recent study by UC Davis (2012) about the impacts of nitrate contamination of ground water in Tulare and Salinas basins (4) indicated that a small water systems task force would be a very

helpful step in addressing this lack of safe drinking water for a significant number of Californians.

Impact of AB 69: This bill would establish a special fund to be administered by the State Water Quality Control Board, to implement a variety of mitigation measures related to nitrate contamination of groundwater, where that groundwater serves as the drinking water source for disadvantaged communities.

For more detailed analysis, see: http://www.leginfo.ca.gov/pub/13-14/bill/asm/ab_0051-0100/ab_69_cfa_20130313_163602_asm_comm.html

Conclusion: Because groundwater contamination with nitrates represents an important environmental health problem for a large number of California residents, including pregnant women and small children in poorer communities, and because existing evidence allows us to conclude that the formation of a Small Water Systems Task Force, as envisioned by this bill would be an effective remediation step with modest cost, WOEMA supports the passage and enactment of this bill. WOEMA further stands ready to assist staff from the California Department of Public Health or from the Regional Water Quality Control Boards in their efforts to further improve drinking water quality for all Californians.

Sincerely,

Leslie Israel, DO MPH
President, WOEMA

References:

1. U.S. Environmental Protection Agency. Ground Water & Drinking Water. Consumer Fact sheet on Nitrates/Nitrites (October 2, 2007). Available at: http://www.epa.gov/safewater/contaminants/dw_contamfs/nitrates.html
2. California Department of Public Health (2012). Nitrates and Nitrites in Drinking Water. Available at: <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Nitrate.aspx>
3. State of California, State Water Resources Control Board, 2010. Groundwater Information Sheet: Nitrate. Available at: http://www.waterboards.ca.gov/gama/docs/coc_nitrate.pdf

UC Davis. Center for Watershed Sciences (2012). Addressing Nitrate in California's Drinking Water. Available at: <http://groundwaternitrate.ucdavis.edu/files/138958.pdf>