



**Testimony of Maine Public Health Association In Support of:
LD 1437: An Act To Reduce Poisoning from Radon, Arsenic and Other Air or Water Pollutants by
Expanding Education, Testing and Mitigation Regarding Those Pollutants**

Joint Standing Committee on Health and Human Services
Room 220, Cross State Office Building
Tuesday, April 20, 2021

Good morning Senator Claxton, Representative Meyer, and distinguished members of the Joint Standing Committee on Health and Human Services. My name is Rebecca Boulos. I am a resident of South Portland and executive director of Maine Public Health Association. MPHA is in support of LD 1437: “An Act To Reduce Poisoning from Radon, Arsenic and Other Air or Water Pollutants by Expanding Education, Testing and Mitigation Regarding Those Pollutants.”

MPHA is the state’s oldest, largest, and most diverse association for public health professionals. We represent more than 500 individual members and 30 organizations across the state. The mission of MPHA is to improve and sustain the health and well-being of all people in Maine through health promotion, disease prevention, and the advancement of health equity. As a statewide nonprofit association, we advocate, act, and advise on critical public health challenges, aiming to improve the policies, systems, and environments that underlie health inequities – but which also have potential to improve health outcomes for all people in Maine. We are not tied to a national agenda, which means we are responsive to the needs of Maine’s communities and we take that responsibility seriously.

This bill expands the breadth of education about health risks associated with exposure to radon, arsenic and other air and waterborne pollutants. It also allows funds from the Maine Energy, Housing and Economic Recovery Program and Housing Opportunities for Maine Program to be used for testing and mitigation.

We support the intentions of this bill. Clean drinking water is fundamental for good health, and exposure to arsenic, radon and otherwise contaminated drinking water has been associated with a host of poor health effects. Research has consistently found an association between arsenic exposure and cardiac disease.^{1,2,3,4} A 2004 study also found an association between arsenic water concentration and depression.⁵ Calderon and colleagues found that arsenic exposure is associated with lower verbal IQ and poorer long-term memory in children.⁶

Radon gas exposure is the leading cause of lung cancer among nonsmokers, and second only to tobacco use in all cases. Lung cancer is the leading cancer killer in both men and women in the U.S. In Maine, our lung cancer rate is 30% higher than the national average. Unfortunately, 75% of lung cancer cases in Maine are detected late and are not treatable. Persons with lower income and those living in rural areas share a greater burden of lung cancer than persons with higher income or those living in urban areas. For example:

- Lower income smokers have higher lung cancer risk than those with higher income.⁷
- People with family incomes of less than \$12,500 had lung cancer incidence rates that were more than 1.7 times the incidence rate of those with incomes \$50,000 or higher.⁸

- People living in rural, deprived areas have 18–20% higher rates of lung cancer than people living in urban areas.⁴

Lower-income populations have less access to health care, making it more likely they are diagnosed at later stages of diseases and conditions.⁹

Last, this bill allows funds from the Maine Energy, Housing and Economic Recovery Program and Housing Opportunities for Maine Program to be used for testing *and* mitigation. The inclusion of both testing and mitigation ensures people can find out if they have a dangerous level of exposure and are able to take action to reduce or eliminate that exposure, reducing likelihood of disease onset. Oftentimes, there are resources for testing, but not for mitigation, which can be costly depending on the pollutant and whether it is air or waterborne. Given that, it can become an ethical question about whether to test since mitigation can be cost prohibitive.

Given the greater risk and burden of disease among vulnerable Mainers – including persons with lower-income, those living in rural areas and those with less access to health care, this bill is important for ensuring awareness of health risks associated with air and waterborne pollutants, and financial resources to test and mitigate are available.

MPHA supports legislation that improves health equity and reduces health disparities among underserved populations. We believe this bill has potential to improve public health, and we are in support. We respectfully request you vote LD 1437 “Ought to Pass.” Thank you for your consideration.

¹Wu MM, Kuo TL, Hwang YH, Chen CJ. Dose-response relation between arsenic concentration in well water and mortality from cancers and vascular diseases. *Am J Epidemiol.* 1989;130:1123–1132.

²Engel RR, Hopenhayn-Rich C, Receveur O, et al. Vascular effects of chronic arsenic exposure: A review. *Epidemiol Rev.* 1994;16:184–209.

³Hertz-Picciotto I, Arrighi HM, Hu SW. Does arsenic exposure increase the risk for circulatory disease? *Am J Epidemiol.* 2000;151:174–181.

⁴Agency for Toxic Substances and Disease Registry (ATSDR). *Toxicological Profile for Arsenic.* Atlanta, Ga: US Dept of Health and Human Services, Public Health Service; 2000.

⁵Zierold KM, Knobloch L, and Anderson H. Prevalence of chronic diseases in adults exposed to arsenic-contaminated drinking water. *Am J Public Health.* 2004;94:1936-1937.

⁶Calderon J, Navarro ME, Jimenez-Capdeville ME, et al. Exposure to arsenic and lead and neuropsychological development in Mexican children. *Environ Res.* 2001;85:69–76.

⁷Singh GK, Williams SD, Siahpush M, Mulhollen A. Socioeconomic, rural-urban, and racial inequalities in US cancer mortality: Part I—All Cancers and Lung Cancer and Part II—Colorectal, Prostate, Breast, and Cervical Cancers. *J. of Cancer Epidemiology* 2011.

⁸Clegg LX, Reichman ME, Miller BA, Hankey BF, Singh GK, Lin YD, et al. Impact of socioeconomic status on cancer incidence and stage at diagnosis: Selected findings from the surveillance, epidemiology, and end results: National Longitudinal Mortality Study. *Cancer Causes and Control* 2009;20(4).

⁹Campaign for Tobacco-Free Kids. Tobacco and socioeconomic status. Washington, D.C.: Campaign for Tobacco-Free Kids, 2015.