MPHA
Maine Public Health Association

Testimony of Maine Public Health Association in Support of:
LD 1875: An Act To Address Perfluoroalkyl and Polyfluoroalkyl Substances Pollution from State-owned Solid Waste Disposal Facilities
LD 1911: An Act To Prohibit the Contamination of Clean Soils with So-called Forever Chemicals

Joint Standing Committee on Environment and Natural Resources
Room 216, Cross State Office Building
Monday, January 24, 2022

Good morning, Senator Brenner, Representative Tucker, and distinguished members of the Joint Standing Committee on Environment and Natural Resources. My name is Rebecca Boulos. I am a resident of South Portland, and executive director of Maine Public Health Association. MPHA is supportive of LD 1875: "An Act To Address Perfluoroalkyl and Polyfluoroalkyl Substances Pollution from State-owned Solid Waste Disposal Facilities" and LD 1911: "An Act To Prohibit the Contamination of Clean Soils with So-called Forever Chemicals."

MPHA is the state's oldest, largest, and most diverse association for public health professionals. We represent more than 500 individual members and 50 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.

LD 1875 requires pretreatment of leachate for Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) (or transfer to a facility with appropriate technology to reduce PFAS concentrations). LD 1911 closes a loophole that allows PFAS-contaminated commercial composting materials to be spread on farmland and home gardens.

LD 1875
Decades of widespread use of PFAS in a variety of products means that the trash in our landfills contains significant amounts of PFAS, some of which rinses off into the leachate. If advanced treatment is not used, then the PFAS in leachate is not removed, which means some of it will end up in sludge and some will be discharged with the effluent; both scenarios pose threats to our environment.

Fortunately, there are advanced treatment options available. The PFAS can either be filtered on-site at the landfill before sending it to a traditional wastewater treatment facility or it can be sent to a water treatment facility with more advanced treatment options. In Maine, federal funding was recently awarded to the Anson-Madison wastewater facility to develop specialized treatment for PFAS waste.

Recognizing the harmful health and environmental impacts of PFAS contamination (outlined below), we support efforts that aim to reduce PFAS exposure, including ensuring that our state-owned landfills follow best practices for treating leachate.

LD 1911

One major source of PFAS contamination in Maine is the application of industrial or municipal sludge (i.e., biosolids) on farmland. This application has contributed to contamination of at least four family farms and hundreds of residential wells in the state. These numbers will likely continue to rise as more testing is done.

In 2019, the Department of Environmental Protection (DEP) halted the spread of sludge unless the sludge tested below a screening level for three types of PFAS (Note: Initial results show more than 95% of sludge tested exceeds the screening levels for at least one of the compounds). Unfortunately, this policy left two loopholes that allow contaminated sludge to be applied to land in Maine. The first is that if the sludge is being spread on soil that tests clean, then contaminated sludge may be mixed with the clean soil as long as the resulting mix does not exceed the screening level.

The second loophole is that contaminated sludge may be sent to composting facilities (and potentially mixed with other compostable waste) and sold to farmers, landscapers, and home gardeners. While the compost is tested for PFAS, DEP assumes it is used on soil that is clean and applies the screening standard to the modeled mix of clean soil and compost. In practice, this means that users may be unknowingly spreading contaminated compost on farmland and in gardens.

LD 1911 closes both loopholes, prohibiting the land application of contaminated sludge and requiring that the sludge-mixed compost meet the state screening standards. Contaminated sludge would instead be sent to landfills – the least bad redirection option – for further treatment (see LD 1875 above).

Health Considerations of PFAS

According to the U.S. Environmental Protection Agency,[1] PFAS are found in air, soil, surface water, and groundwater (including drinking water); food and food packaging; commercial household products; and some living organisms (where PFAS have accumulated over time). PFAS do not break down and can accumulate over time. There is evidence from human and animal studies that PFAS exposure may reduce antibody responses to vaccines[2,3] and infectious disease resistance,[4] alter metabolism[5] and fertility,[6] reduce fetal growth and increase the risk of being overweight or obese.[7] A recent review of the research literature explored the relationship between PFAS exposure and children's health. Six associations with health were identified: early puberty onset, immunity/infection/asthma, thyroid and renal function, cardio-metabolic measures, and neurodevelopmental/attention.[8]

Given the human and environmental health risks associated with PFAS, prevention of exposure must be a priority. We support the intentions of these bills and believe they are protective of public health. We respectfully request you vote LDs 1857 and 1911 "Ought to Pass." Thank you.

---

[1]U.S. Environmental Protection Agency. 2018. Basic information on PFAS. https://www.epa.gov/pfas/basic-information-pfas.
[2]Grandjean P, Heilmann C, Weihe P, et al. 2017. Estimated exposures to perfluorinated compounds in infancy predict attenuated vaccine antibody concentrations at age 5-years. *J Immunotoxicol*,14(1):188-195.
[3]Looker C, Luster MI, Calafat AM, et al. 2014. Influenza vaccine response in adults exposed to perfluorooctanoate and perfluorooctanesulfonate. *Toxicol Sci*.,138(1):76-88.
[4]National Toxicology Program. 2016. Monograph on immunotoxicity associated with exposure to perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). Research Triangle Park, NC: National Toxicology Program.
[5]Liu G, Dhana K, Furtado JD, Rood J, Zong G, Liang L, Qi L, Bray GA, DeJonge L, Coull B, Grandjean P, Sun Q. 2018. Perfluoroalkyl substances and changes in body weight and resting metabolic rate in response to weight-loss diets: A prospective study. *PLoS Med*,15(2):e1002502.

[6]Bach CC, Vested A, Jorgensen K, Bonde JP, Henriksen TB, Toft G. 2016. Perfluoroalkyl and polyfluoroalkyl substances and measures of human fertility: A systematic review. *Crit Rev Toxicol*,46(9):735-55.
[7]Braun J. 2017. Early-life exposure to EDCs: Role in childhood obesity and neurodevelopment. *Nat Rev Endocrinol*,13(3):161–173.
[8]Rappazzo KM, Coffman E & Hines EP. 2017. Exposure to perfluorinated alkyl substances and health outcomes in children: A systematic review of the epidemiologic literature. *International Journal of Environmental Research and Public Health*, *14*(7):691.