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In support of the regulation of PFAS in drinking water in Maine, but Neither For Nor Against LD 129 (Resolve, To Protect Consumers of Public Drinking Water by Establishing Maximum Contaminant Levels for Certain Substances and Contaminants) and LD 164 (An Act To Establish Maximum Contaminant Levels under the State's Drinking Water Rules for Certain Perfluoroalkyl and Polyfluoroalkyl Substances).

Before the Committee on Health and Human Services, Augusta Maine (via Zoom)
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Senator Claxton, Representative Meyer and members of the Committee, thank you for hearing my testimony. My name is Gail Carlson, and I live in Waterville. I have a Ph.D. in biochemistry and I teach public health courses at Colby College. I have conducted environmental research in Maine on PFAS, the chemicals in question in today's bills, and I sat in on two meetings of the Governor's PFAS Task Force in summer 2019 in place of a member who was not able to attend.

PFAS are a family of thousands of industrial chemicals that are extraordinarily persistent in the environment, build up in the human body, and are very hazardous. PFAS are widespread environmental contaminants, here in Maine and around the world, and the U.S. CDC has detected PFAS in the blood of nearly every American tested,¹ with most exposures coming from the ingestion of contaminated drinking water and foods. PFAS cause numerous health problems from cancers to birth defects and adverse pregnancy outcomes to metabolic and thyroid conditions. Studies have shown that children and adults with high levels of PFAS in their blood do not produce as effective a response to certain vaccines as those with much lower levels,² and PFAS exposure may impact COVID-19 severity.³ Furthermore, we know almost nothing about what the cumulative health effects are from exposures to multiple PFAS or what happens at the chronic low levels of exposure so common in nearly all of us. Because of these data gaps, we ought to take a precautionary approach, acknowledge the likely harms that PFAS are causing, and regulate them strictly in order to protect public health.

We have been using PFAS for decades with very little regulation, and they escaped at high levels into the environment or have been deliberately used in uncontrolled ways in the environment, as with sludge spreading on land and through the use of AFFF fire-fighting foam. It's too late to put the genie back in the bottle because PFAS are such widespread and persistent pollutants, and thus, I believe we must identify where these chemicals are, regulate them to minimize human exposures, and ultimately and hopefully soon, phase them out, as is starting to happen in the EU.

These two bills are a good start toward that end, but neither is sufficient in their current form. LD 129 proposes to require testing the community water supply, which I support and think ought to be included in LD 164 as well. It is good that both bills identify several PFAS for regulation by setting a drinking water standard, although more chemicals could and should be included. For example, testing I did last year at a site in Waterville revealed shallow groundwater contamination by seven different PFAS and at a cumulative concentration of 35 ppt,⁴ which would exceed the 20 ppt standard proposed in LD 164. I believe enforceable PFAS standards should be set in Maine as soon as possible and be much more stringent than the 70 ppt federal health advisory for PFOA and PFOS. A standard of 20 ppt is a good start, although other states, for example Michigan and New Jersey, have set even lower standards.⁵

Another reason for Maine to set strict PFAS standards is that this may allow for the government to assist people whose private wells have become contaminated with PFAS, as is the case in the vicinity of the Tozier Farm in Fairfield. Even though these

standards won't strictly apply to the private water supply, they can be used to define who needs to receive clean drinking water, cleanup assistance, and other services. Given what an enormous problem PFAS pollution is in Maine, we should be doing everything we can to protect as many people as possible moving forward. Thank you.

References

- 1 U.S. Centers for Disease Control and Prevention, National Report on Human Exposure to Environmental Chemicals.
<https://www.cdc.gov/exposurereport/index.html>
- 2 Grandjean, 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.
<https://doi.org/10.1080/1547691X.2017.1360968>
- 3 Grandjean P. et al. 2020. Severity of COVID-19 at elevated exposure to perfluorinated alkylates. *PLoS ONE* 15(12): e0244815.
<https://doi.org/10.1371/journal.pone.0244815>
- 4 Carlson and Tupper. 2020. Ski wax use contributes to environmental contamination by per- and polyfluoroalkyl substances. *Chemosphere* 261, 128078.
<https://doi.org/10.1016/j.chemosphere.2020.128078>
- 5 National Conference of State Legislatures.
<https://www.ncsl.org/research/environment-and-natural-resources/per-and-polyfluoroalkyl-substances-pfas-state-laws.aspx>