

Testimony of Gail L. Carlson, Ph.D.

In Support of
LD 1870 *An Act to Establish a Climate Superfund Cost Recovery Program to
Impose Penalties on Climate Polluters*

Before the Committee on Environment and Natural Resources
May 5, 2025

Senator Tepler, Representative Gramlich, and members of the Committee, thank you for reading my testimony. My name is Gail Carlson, I have a Ph.D. in biochemistry, and I live in Waterville. I teach public health courses at Colby College, and I have conducted research and written a [textbook](#)¹ on the human health impacts of climate change. I also had the pleasure of serving on the Maine Climate Council's Scientific and Technical Subcommittee and co-authoring its 2024 [report](#) *Scientific Assessment of Climate Change and Its Effects in Maine*.²

LD 1870 sets up a “polluter pays” system in Maine so that the companies that created the problem (primarily large fossil fuel companies responsible for greenhouse gas emissions driving climate change) pay for the solutions. This system has worked well for the U.S. Superfund program in which responsible parties (polluters) are given the bill for cleanup of this country's most hazardous waste sites. On its own, Maine cannot afford the enormous price tag for addressing climate change, so this approach makes a lot of sense.

I am concerned about climate change for many reasons, but primarily because it impacts the health of Mainers in negative ways, making us sicker and leaving us with a massive bill for health and medical costs, along with lost worker productivity, which damages our economy. There are many, many adverse health effects of climate change, and they are not a future threat but are already being experienced, particularly by vulnerable populations like children, the elderly, the many, many people with underlying chronic health conditions, and workers in outdoor occupations, like farming and fishing, which are common in Maine, as well as emergency responders.

Last year, I published a [study](#) in which I surveyed Maine physicians and asked them how climate change is affecting their patients' health.³ Maine physicians see a clear effect of climate change on the following illnesses:

- **Heat-related illnesses**
- Respiratory diseases like **asthma**, for which Maine has the [highest prevalence](#) in the U.S.⁴ (along with Rhode Island), and chronic obstructive pulmonary disease (**COPD**), for which Maine has the [highest prevalence](#) in the Northeastern U.S.⁵
- **Vector-borne diseases** like Lyme disease, for which Maine has the [third highest rate](#) in the U.S. (8-times higher than the national average)⁶
- Seasonal **allergies**
- Adverse **mental health** conditions

These Maine physicians noted that rising temperatures in Maine will exacerbate heart and lung diseases, cause heat stress in Mainers (many of whom have little access to air conditioning or other cooling measures) and limit exercise and other physical activities that are essential for good health. They also noted that severe weather, which is becoming more frequent and destructive in Maine, leads to power outages that affect critical medical devices and may prevent people from accessing needed health services. Because Mainers' livelihoods may be affected by climate change, and because there is a lot of

uncertainty in being able to predict the impacts on individuals and families, climate change was identified as a major mental health stressor.

These health impacts will only increase in Maine as climate change worsens, particularly because Maine has such an aged population with many health burdens. And these impacts come at a steep cost. Maine CDC [quoted](#) U.S. CDC as estimating that Lyme disease alone may cost the country \$345-\$968 million per year.⁷ Asthma in Maine alone has a [price tag](#) of \$173 million per year in just direct medical costs.⁸ A portion of these disease cases and their costs can be attributed to climate change.

LD 1870 is preferable to LD 1808 in several ways that relate to Mainers' health. First, it covers more years of polluting (back to 1995 rather than 2000). Second, it instructs Maine DEP to use all best available scientific and other information about climate change, not just EPA data, which is often lacking and under the Trump Administration is in danger of disappearing or being replaced by biased information. Third, 35% of the recovered costs must go to vulnerable communities which inevitably bear a disproportionate burden of climate impacts. And fourth, the lawsuit brought by Maine's Attorney General against fossil fuel companies seeking compensation for past and future harms is not preempted by this bill.

Please vote *ought to pass* on LD 1870. Thank you.



References

¹ Carlson, Gail. 2023. *Human Health and the Climate Crisis*. ISBN 9781284207293. Jones and Bartlett Learning. <https://www.jblearning.com/catalog/productdetails/9781284207293>

² MCC STS. 2024. *Scientific Assessment of Climate Change and Its Effects in Maine - 2024 Update*. A Report by the Scientific and Technical Subcommittee (STS) of the Maine Climate Council (MCC). Augusta, Maine. 268 pp. https://www.maine.gov/future/sites/maine.gov/future/files/inline-files/STS_2024_digital.pdf

³ Carlson, Gail, and Megan Andersen. 2024. Roles for Maine's Physicians in the Climate Crisis. *Maine Policy Review* 33.1: 22 -28. <https://doi.org/10.53558/BXMO1848>

⁴ U.S. Centers for Disease Control and Prevention (CDC). 2021. *Asthma*. https://www.cdc.gov/asthma/most_recent_data_states.htm

⁵ U.S. Centers for Disease Control and Prevention (CDC). 2022. *State Estimates of COPD*. <https://www.cdc.gov/copd/php/case-reporting/state-level-estimates-of-copd.html>

⁶ U.S. Centers for Disease Control and Prevention (CDC). 2023. *Lyme Disease Surveillance Data*. <https://www.cdc.gov/lyme/data-research/facts-stats/surveillance-data-1.html>

⁷ <https://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/lyme/documents/2023-Tickborne-Illnesses-Report.pdf>

⁸ https://www.maine.gov/dhhs/mecdc/population-health/mat/information-and-publications/2014%20Factsheets/Statewide_factsheet%202-8-16.pdf