

May 1, 2023

To: Maine Legislature Natural Resources Committee

From: Scott Williams

Re: LD 1473

Chair Brenner, Chair Gramlich, and Distinguished Members of the Environment and Natural Resources Committee. Thank you for the opportunity to submit written comments in support of LD 1473.

My name is Scott Williams. I am the former (retired) Executive Director of Lake Stewards of Maine, the current Lakes Science Advisor for Maine Lakes (organization), and I have worked closely with municipalities, water utilities, lake communities throughout Maine, and natural resource protection agencies for more than 4 decades in the realm of lake and watershed assessment and protection.

Even though Maine has some of the cleanest and clearest lakes in the nation, they are sensitive and vulnerable to a number of threats that can result in the degradation of their water quality over time. Foremost among these threats is the cumulative impact of development in their watersheds, through which the natural filtering effect of undisturbed forested areas is reduced and compromised. Studies conducted in Maine and throughout the country have demonstrated that runoff from roads, structures, lawns and other changes associated with watershed development typically contains five to ten times more phosphorus than runoff from natural forested areas.

The natural occurrence of phosphorus in Maine's lakes is very low, compared to lakes throughout the rest of the nation. Increasing phosphorus and sediment from soil erosion in stormwater runoff from developed areas in lake watersheds can result in a dramatic increase in the growth of algae in lake water, resulting in reduced water clarity, habitat impairment, and the loss of dissolved oxygen that is critical to fisheries and healthy lake ecosystems.

Climate warming will, and has already, exacerbated the threats of watershed development, as a result of extreme weather events, which cause an increase in the erosive effects of watershed runoff, and even higher concentrations of phosphorus in lake water. High concentrations of phosphorus, combined with warming lake water temperatures, can result in a significant increase in cyanobacteria in lakes. Cyanobacteria may cause "harmful algal blooms", in which dangerous toxins are produced, which represent a potential threat to organisms, including humans, that are exposed to, or ingest the toxins.

Lakes that serve as drinking water resources are particularly sensitive to the threats of watershed development and climate warming. These lakes are typically clear and clean. Communities that rely on them for safe drinking water, and the water utilities that ensure the safety of their water for consumption take extra measures to control and limit the adverse effects of watershed development on water quality. Because these lakes are typically healthy, regulatory agencies often grant water utilities waivers from filtration requirements, thus saving the utilities and the individuals in the communities that they serve many millions of dollars.

Any relaxation of development regulations in the watersheds of drinking water lakes could result in a degradation of the drinking water resource, an increase in risks to public health, and substantial increases in the cost of drinking water in the communities served.

In 2012, Lake Auburn, which serves the Lewiston-Auburn communities with drinking water, experienced a major cyanobacteria bloom, which resulted in critically low dissolved oxygen levels in the lake, a significant die-off of the high value lake trout population, and borderline compromised drinking water for the communities. Historically, Lake Auburn has experienced excellent water quality. The 2012 event illustrated how rapidly a lake can change – without significant warning. A thorough analysis of the event by a team of lake scientists showed that extreme weather associated with climate warming was a triggering factor. Lake Auburn has since undergone a very costly “Alum” treatment, in order to reduce the likelihood of future blooms, and to maintain the filtration waiver for the water utility.

Other lakes that currently maintain filtration waivers are vulnerable to what occurred in Lake Auburn. Reduced regulations concerning watershed development increases the risk of similar catastrophic events in those lakes.

Although I am not able to testify in person today, I would be happy to meet with the committee in person, or via Zoom to answer any questions that you may have.

Respectfully,

Scott Williams

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P.O. Box 65; Turner, Maine 04282

Resident of Buckfield, Maine

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Buckfiled
LD 1473

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