
Testimony in Support of LD 1550, Resolve, Directing the Department of Health and Human Services to Amend Its Rules to Protect Water Quality by Reducing Nutrient Pollution from Septic Systems

Before the Committee on Health and Human Services

Luke Frankel, Woods, Waters, & Wildlife Director

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Senator Ingwersen, Representative Meyer, and distinguished members of the Health and Human Services Committee, my name is Luke Frankel, and I am the Woods, Waters, & Wildlife Director and Staff Scientist at the Natural Resources Council of Maine (NRCM). NRCM is Maine's leading nonprofit, nonpartisan membership organization dedicated to protecting the environment on behalf of our nearly 20,000 supporters statewide and beyond. I am here today to testify in support of LD 1550, Resolve, Directing the Department of Health and Human Services to Amend Its Rules to Protect Water Quality by Reducing Nutrient Pollution from Septic Systems.

In Maine, we are known for our clean water. In 2023, our lakes, rivers, and beaches helped to attract more than 15 million visitors to the state, who contributed more than \$9 billion to Maine's economy.¹ Maintaining high water quality is also essential for the livelihoods of Mainers who rely on clean water to support jobs in the shellfishing, outdoor recreation, and real estate sectors among others. However, as Maine's population continues to grow, the pressures facing our waters will only increase, making their protection ever more important.

One of the most consequential pollutant sources for waterbodies in Maine are septic systems. As a result of being large and rural, Maine is one of the most septic-reliant states in the country, with around half of all homes served by an individual system rather than public sewer.² Many of these systems are old and poorly maintained, contributing pathogens and nutrients to nearby waterways.

Due to the threat that exposure to human sewage poses to public health, conventional septic systems were designed to treat pathogens. This is why the rules that govern them here in Maine are housed within the Department of Health and Human Services (DHHS) rather than the Department of Environmental Protection (DEP). These rules are well crafted to minimize public health risks by making sure that septic system effluent infiltrates into the soil quickly and at adequate distances from water resources to ensure that pathogens either die or are removed before they can contaminate nearby groundwater or surface waters.

For many soil types, this public health protection also serves the dual benefit of providing environmental protection from nutrient pollution. When septic system effluent passes through

¹ Maine Office of Tourism: https://motpartners.com/wp-content/uploads/2024/05/MOT_GovCon_HighlightSheet_2023_Printed-Paper_FNL-0430.pdf

² EPA Septic Systems Overview: https://19january2021snapshot.epa.gov/septic/septic-systems-overview_.html

fine-grained soils that contain high amounts of clay and/or silt, the nutrients contained within the wastewater get filtered out through natural processes. These processes include microbial activity, cation exchange with soil particles, and plant uptake through roots.

However, due to Maine's glacial history, much of the state is now covered with sandy soil that does a poor job of removing nutrients through these natural processes. Instead of undergoing a plethora of chemical and biological reactions as wastewater slowly percolates through in the case of finer-grained soils, water quickly drains through sandy soils and can reach nearby surface waters with minimal treatment. Picture pouring a cup of water into a pot filled with topsoil vs. a pot filled with sand; the water will drain through the sand much more quickly.

This phenomenon where septic system effluent receives minimal treatment because of its location within sandy soils has been called "short circuiting," and Maine's current subsurface wastewater rules do not have provisions in place to address it. LD 1550 aims to fix this by directing DHHS to amend these rules specifically for disposal field design to better promote nutrient removal in sandy soils through natural processes, like what already occurs in fine-grained soils.

To try and understand the scope of this problem statewide, we have developed an online map in collaboration with others that identifies areas where septic systems have a very high potential, high potential, or moderate potential of "short circuiting" based on the soil types present. This map is intended to serve as a general reference of potential risk, as soil can be very heterogeneous across the landscape. The only way to truly determine if a septic system is "short circuiting" is by digging into the ground and taking a look. If interested, we would be happy to share this map with Committee members and other interested stakeholders.

Although it will ultimately be up to DHHS to determine what the specific changes are through rulemaking, by focusing on natural processes to address this issue, the outcome will likely have very little impact on the overall cost to install septic systems in areas with sandy soil. Additionally, by including the provision that "an area of land suitable for the installation of a disposal field may not be rendered unsuitable due to any changes in the rules adopted pursuant to this resolve," this bill will not have the unintended consequence of restricting development.

With very little downside and huge upside, LD 1550 represents a great opportunity to address one of the largest sources of water pollution here in Maine through very modest changes to existing regulations. By focusing on natural processes backed by science to reduce pollution, the approach proposed in this bill represents a cost-effective means to tackle an emerging threat facing our waterbodies here in Maine. For these reasons, we strongly encourage the Committee to vote Ought to Pass on LD 1550.

Thank you for your time and consideration.