



Henry L. Ingwersen
Senator, District 32

THE MAINE SENATE
132nd Legislature

3 State House Station
Augusta, Maine 04333

Testimony of Senator Henry Ingwersen introducing
**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 Joint Standing Committee on Health and Human Services

April 22, 2025

Chair Meyer and my colleagues on the Joint Standing Committee on Health and Human Services, I am Senator Henry Ingwersen, representing Senate District 32, including the City of Biddeford and the Towns of Arundel, Dayton, Hollis, and Lyman. It is my honor to present **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.*”

Most of you are probably wondering why a bill that has to do with water quality is before our committee today and not the Environment and Natural Resources Committee. Although the answer to this is straightforward – the Department of Health and Human Services (DHHS) is the body that oversees the State’s Subsurface Wastewater Disposal Rule – this broader question of what exactly this rule is designed to accomplish in terms of public health vs. environmental protection strikes at the core of what this bill is all about.

Before I get into the technical details of how septic systems work, I would just like to say that I am a good sponsor for a bill like this. In addition to being co-chair of this Committee, I also used to install septic systems for a living from 1982 to 1990. As a result, I am familiar with the science behind septic systems, the rules that govern their design and installation, and how the recommendations outlined in this bill represent a modest and reasonable approach to address an emerging issue.

As many of you already know, septic systems are the primary means by which buildings that are not served by public sewer systems dispose of wastewater. The two primary components of a septic system are the septic tank and the disposal field, which is often referred to as the drain field or leach field.

In most homes with septic systems, all the water that goes down the drains of showers and sinks and all the wastewater that is flushed down toilets ends up in a septic tank that is sized to the expected flow of water into the system. In this tank, primary treatment occurs where solids settle to the bottom to form sludge and oils and grease float to the top to form scum. With the sludge

*Chair, Health and Human Services Committee * Agriculture, Conservation, and Forestry Committee
State House: (207) 287-1515 * Fax: (207) 287-1585 * Toll Free: 1-800-423-6900 * TTY: 711
Henry.Ingwersen@legislature.maine.gov * legislature.maine.gov/senate*

Proudly representing Senate District 32: Arundel, Biddeford, Dayton, Hollis, Lyman



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and scum separated out, the remaining wastewater drains out of the septic tank and into the disposal field.

The disposal field most often consists of a network of perforated pipes within gravel trenches or beds that evenly distribute the effluent into the soil. This disposal field is designed based on both the expected flow of water and the soil conditions present. For soils that drain water more slowly, disposal fields need to be bigger to prevent wastewater from ponding on the surface of the ground.

Due to the various diseases and illnesses that humans can contract by coming into contact with wastewater, the original design standards for septic systems were created primarily from a public health perspective. Hence, the rules governing them are housed within DHHS and not the Department of Environmental Protection (DEP). From this perspective, the best way to avoid human contact is to infiltrate wastewater as quickly as possible and with reasonable setbacks from surface and ground water to allow for pathogens to either die or get filtered out in the soil.

The issue with this is that septic system effluent does not just contain pathogens; it also contains high concentrations of nutrients in the form of nitrogen and phosphorus that can fuel harmful algal blooms in our lakes, rivers, and coastal waters. Fortunately, there are many soil types that naturally do a good job of filtering out these nutrients through physical and chemical properties. These are generally finer-grained soils with higher amounts of clay, silt, or organic matter within them. Additionally, plant roots in upper layers of soil can also assist in absorbing nutrients as effluent passes through.

However, not all soils are created equally. Sandy soils, of which there are many in Maine, do a poor job of removing nutrients from wastewater. When these sandy soils are located below or adjacent to disposal fields, the effluent does not receive adequate nutrient treatment like in finer-grained soils, causing more nutrients to enter nearby groundwater and surface waters. This phenomenon has been called “short circuiting,” and has been documented occurring in the disposal fields within Maine.

LD 1550 aims to address this problem by directing DHHS to amend their Chapter 241 Subsurface Waste Disposal Rule. The bill specifically calls for changes to the requirements for disposal field design that reduce “nutrient loading from septic tank effluent through natural processes,” like is found in finer-grained soils. These changes would be targeted only to soil profiles that “pose a high risk of short circuiting due to the presence of sand or gravel layers in lower horizons or bedrock fractures.” It would also prevent any unintended consequences of restricting development by ensuring that these changes do not make any land area that is currently suitable for a disposal field unsuitable.

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Although as written, it is ultimately up to the Department to determine what these changes will look like through rulemaking, there are a few practical ones that would meet the requirements outlined in the Resolve at little to no additional cost for homeowners. One example is requiring that disposal fields be installed in upper soil horizons where finer-grained soils and plant roots can remove nutrients before wastewater gets to sandier soil horizons below. Another could be requiring that soil of a specific texture be placed below a disposal field so that nutrient removal is more adequately facilitated. These are actions that are already done in some cases where site conditions require it, as in the case of high water tables for example. This would just be an expansion of these common and cost-effective practices to address the emerging problem of short circuiting.

Although we do not often talk about it in this committee, as Mainers we can all appreciate the value that clean lakes, rivers, and coastal waters provide for our economy, quality of life, and overall well-being. As issues like climate change and population growth continue to add stress to our water bodies, it is important that we continue to refine our regulations around development to meet current demands and address impacts that we can control.

LD 1550 represents a modest, but important, refinement of Maine's septic system regulations to address the emerging issue of "short circuiting." I urge this committee to vote ought to Pass on LD 1550.

Thank you for your time and I'm happy to answer any questions you have.

Henry Ingwersen
State Senator, District 32

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