



Winter 2025

SEBAGO IN DEPTH

Water, Land, Community

WHAT'S INSIDE

- 2 Do your Part. Be Septic Smart!
- 4 Profile of a Sebago Protector
- 5 What's Making Waves
- 6 Browntail Moth Web Removal
- 7 PWD Staff Profile
- 8 Grant to Protect Sebago Lake from Pollution



Do Your Part. Be SepticSmart!



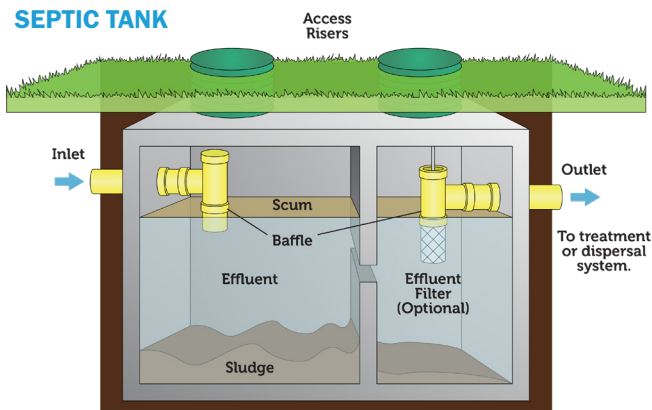
By Carina Brown

Water Resources Specialist Carina Brown
can be reached at cbrown@pwd.org

Roughly 2,500 homes on the shorefront of Sebago Lake and on Frye Island depend on a septic system to treat their used water and the waste carried with it. The proper functioning of these

wastewater treatment systems keeps Sebago Lake clean and safe for all of its uses, protects nearby wells, and helps keep our communities healthy. Individual homeowners are responsible for keeping their systems working. To fulfill that responsibility, you need to understand how your septic system works.

SEPTIC TANK

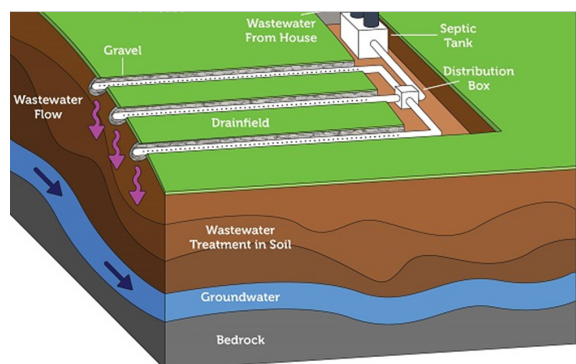


Please note: The configuration of your septic tank may vary.

A septic system generally includes an underground septic tank and a disposal field. The tank accepts the liquid and solid waste from your sinks, toilets, shower, washing machines, and other drains. Heavier particles settle to the bottom (sludge), liquids remain in the middle layer, and things like grease, oil, and fats (scum) float on top. The tank's design prevents sludge and scum from exiting. In the tank, naturally-occurring bacteria break down sludge and scum while liquid flows to the disposal field.

The disposal field distributes the liquid through a filtering system that includes perforated pipes or chambers, crushed gravel, and absorbent soils. The field is carefully sized to make sure that wastewater trickles slowly into the field, which allows contaminants time to get filtered out, bound up by soils, or die off.

DISPOSAL FIELD



Please note: Septic systems vary. Diagram is not to scale.

If a septic system isn't designed or installed correctly, is mistreated, or is not maintained, it can fail. Sometimes you can smell or see signs of a failing system in your home or in your yard, but not always. A failing septic system can lead to excess nutrients, harmful bacteria, and toxic metals and chemicals getting into Sebago Lake and nearby wells. Aside from the public health risks, fixing or replacing a failing septic system can cost tens of thousands of dollars.

Caring for Your Septic System

Being aware of your septic system's needs and limitations and doing routine care and maintenance can prevent costly failures. Take these actions to protect the longevity of your septic system and the health of the community around you.

Have your septic tank inspected and pumped. A regular inspection will help you detect build-up of sludge or damage to the tank that can lead to malfunctions in the downstream disposal field. A regular pump-out will prevent an overfilled tank from backing up into your toilets and sinks. For year-round residences, we recommend pumping every 2-3 years; for seasonal residences, pumping is recommended every 3-5 years.

Conserve water. Using a lot of water all at once can overload your system and flush contaminants out before they can be properly treated. To use less water, spread out when you run the dishwasher and clothes washer, install high-efficiency water fixtures, and avoid high water use during rainy, wet seasons when the ground is saturated.

Be mindful of what goes down your drains. Grease, fats, food, garbage, and flushable wipes can all clog your system. Toxic chemicals, even those in cleaning products, can disrupt the hard-working bacteria that keep your tank working and are minimally treated by your septic system.

Protect the septic system's location. Park vehicles elsewhere unless you know your system can handle it (some designs allow this). Locate structures away from the septic system. The extra weight and runoff lead to compacted soils and more water directed to your system, both of which can negatively impact its effectiveness. Trees and shrubs should be kept away from this area to avoid roots clogging up the disposal field. Grass grows well over disposal fields.

PWD's Role in Septic Systems

To protect the safety of our drinking water sourced from Sebago Lake, PWD has the legal authority to permit and inspect septic systems for homes within 200 feet of Sebago

Lake and on Frye Island. Lake protection staff at PWD maintain certification as Local Plumbing Inspectors, which ensures they have an understanding of state plumbing and private wastewater laws. PWD staff, in addition to your town's Code Enforcement Officer (CEO), review new and replacement system designs to ensure they can handle and treat the flow of wastewater and will be located with adequate setbacks to the lake and other water resources. PWD and your town CEO inspect the system during installation.



Common projects that need a PWD and town septic system permit:

- Installing a new septic system
- Replacing your septic system
- Expanding your septic system
- Replacing a septic tank
- Adding more bedrooms to your home
- Building an accessory dwelling unit
- Demolishing and then rebuilding your home

Contact Us!

207-774-5961, extension provided below.

FRYE ISLAND, RAYMOND

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On a septic system?

When's the last time you thought about it?

Your septic system is part of your home and your responsibility.

Don't wait until you have issues with your septic system. Protect your home investment and avoid costly replacement—call a licensed septic tank contractor today.

- Have your septic tank inspected and pumped out by a licensed septic tank contractor as needed (on average every three to five years).
- Protect your system by practicing simple, daily tips (see reverse).




septicSMART[™]

U.S. Environmental Protection Agency

SEPTIC TIPS

Keep it Protected—Get it Inspected!

Have your septic tank inspected and pumped out by a licensed septic tank contractor as needed (on average every three to five years).

Don't Strain your Drain!

Use water efficiently to avoid overtaxing your system. Fix household leaks, run the dishwasher and clothes washer only on full loads, and consider installing high-efficiency fixtures.

Think at the Sink!

Don't pour grease, fats, or harmful chemicals like paints and solvents down your sink. They can clog or harm your system.

Don't Overload the Commode!

Do not flush non-degradable items such as dental floss, diapers, coffee grounds, or feminine hygiene products.

Shield your Field!

Care for your drainfield by only planting grass, not driving or parking on it, and reducing roof and surface water drainage near the drainfield.

Know your part, be SepticSmart!

Learn more at www.epa.gov/septicSMART.



septicSMARTTM

U.S. Environmental Protection Agency



PROFILE OF A SEBAGO PROTECTOR

Paul Larrivee
Licensed Forester,
207 Forestry LLC

Conserving and managing forests around Sebago Lake is one strategy we utilize to protect the water quality of our drinking water. In 2021, PWD hired Paul as our consulting forester to manage the 2,500 acres of PWD-owned forest around the lower bay of Sebago Lake.

Paul Larrivee is a Licensed Forester with a wide range of expertise. Paul grew up in New Gloucester, Maine, and continues to live there today. It was at an early age that Paul had the opportunity to work with a local forester as part of a school project. He grew up hunting and fishing as many kids did back then and loved being in the woods. During this time, Paul became drawn to working in the woods. He could envision himself cutting wood like the loggers he saw during his school project, but as he grew up, he also fell in love with the science of the woods and the trees.

Now, after more than 25 years as a professional forester, Paul's expertise extends beyond timber management to include commercial invasive plant management, consulting on timber harvesting and shoreland zoning, and municipal ordinance review. Since being hired by PWD in 2021, he has become intimately familiar with the land and trees that grow on the Sebago Lake Land Reserve. He has helped us know more about it, too.

When asked what his favorite part is of managing the Land Reserve, Paul painted the picture of common goals and shared philosophy on how a forest should be managed. "I love working for PWD because you see it the same way I see it. It's fun when my personal philosophy for the forest and the environment is shared by the client." Paul is a philosophical guy, and this passion for his work is evident in the way he talks about it. He loves how the structure of a multitiered forest makes

it more resilient to environmental change, promotes biodiversity, and protects water quality, saying "a healthy, multi-aged, and diverse forest has components that complement each other in a way that protects and enhances its ecology." Paul takes the time to explain his approach to anyone who asks and is always eager to share his knowledge. He regularly volunteers his time to further the cause, participating in many of our outreach events aimed at supporting forest conservation and stewardship efforts in the watershed.

At PWD, we often refer to Sebago Lake as Maine's most valuable natural resource. When asked what makes Sebago Lake notable to him, Paul stated, "The amount of value it offers in so many ways from a public water standpoint, it is a critical and amazing water supply for a huge part of southern Maine. From public health to recreation and the economy, Sebago Lake is just incredibly valuable." When asked about his favorite part of the lake, Paul's reply was "the forest around it." Surprise, surprise.

Erosion & Sedimentation Control Practices Certification Course

Contractors doing work in the shoreland zone of Sebago Lake are required to hold a DEP Contractor Certification in Erosion & Sedimentation Control (ESC). If you need continuing education credits or certification, Cumberland County Soil & Water Conservation District is hosting an 8-hour course this March. The course covers ESC principles, regulations, best practices, the Permit By Rule process, and more. Email us at sebagolake@pwd.org with the subject line "Erosion Control Course" for your chance to win free registration. Entrants must do work on Sebago Lake to be eligible. Include your name and contact information.

Thursday, March 27, 2025 | 8AM - 4PM
Cumberland County SWCD
35 Main Street, Windham

More info and to register: cumberlandswcd.org/conservation-shop/p/basic-amp-advanced-erosion-control-practices-for-contractors-amp-inspectors

WHAT'S MAKING WAVES: Around Sebago Lake

QR Codes to Access Sebago Lake Land Reserve

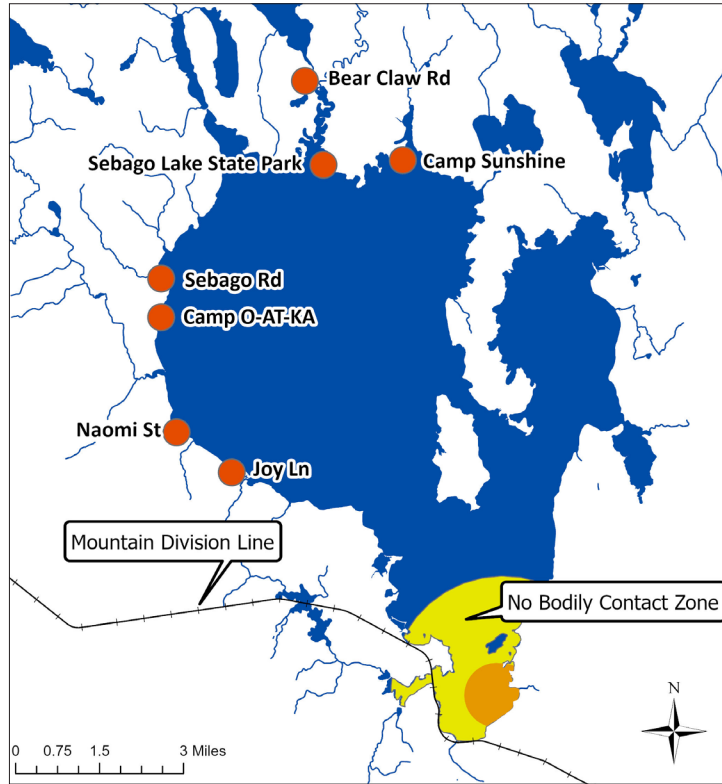
You now have two options for completing a day-use permit, which is required for access to the Sebago Lake Land Reserve. Using your mobile phone, you can scan the QR code at kiosks and easily submit the required information before enjoying the trails. The paper permit is still available if you prefer that method.

Grant Helps Protect Sebago Lake from Pollution

A two-year grant from the Maine Department of Environmental Protection is helping protect Sebago Lake from polluted stormwater runoff. Through collaborative efforts with towns, businesses, and private landowners, seven sites will be addressed.

One notable site in Standish involved the improvement of Joy Lane, a gravel road that suffered significant erosion from heavy rainstorms in 2023. With grant funds and contributions from adjacent homeowners, we paved the road and added a ditch to help handle stormwater.

This project is funded in part by the United States Environmental Protection Agency under Section 319 (h) of the Clean Water Act.



Mountain Division Rail Update

The Maine Legislature considered a bill in 2023 which would authorize MDOT to implement the recommendations of the Mountain Division Rail-Trail Council. Portland Water District has offered the use of adjacent PWD-owned lands to accommodate the trail. During the feasibility study, PWD collaborated with MDOT and consultants, providing technical assistance and field tours of potential trail routes. This resulted in a draft feasibility report outlining three possible trail options through PWD-owned land. The Draft Mountain Division Trail Feasibility report can be accessed here: storymaps.arcgis.com/stories/dec4a29e8e5d44d6a08dcd21c18f5099.

Conservation-minded Family Recognized

Protecting land and water requires the cooperation and dedication of many. To recognize the importance of people who care, Sebago Clean Waters established the "Forest and Water Quality Award" to be presented periodically to a person or people who notably stood out in their work on behalf of woods and waters in the Sebago Lake watershed. The inaugural awardee is the Hague family of Waterford. The family has dedicated their time, effort, and land located along the Crooked River for conservation and protection. In September, the award was presented to Mary Ann Hague at Sebago Lake State Park during an annual celebration of the region's woodland owners. To learn more, visit mainetree.org/post/a-celebration-of-watershed-conservation.



Reduce the itch! KNOCK OUT BROWNTAIL

Learn how to safely remove and
destroy browntail moth winter webs

maine.gov/dacf/knockoutbtm

Browntail moth
winter web



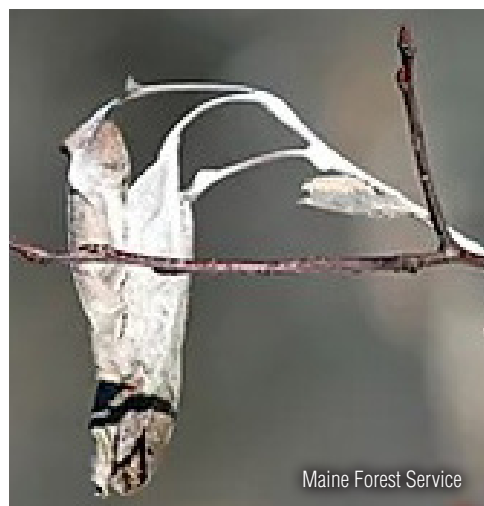
By Brie Holme

Water Resources Specialist Brie Holme can be reached at bholme@pwd.org

If you didn't experience an itchy rash from the browntail moth caterpillar last spring, chances are you know someone who did! These invasive pests release tiny, irritating hairs that can become airborne, leading to rashes similar to poison ivy, and even trouble breathing in sensitive individuals. These symptoms are due to both a toxin in the microscopic hairs and physical irritation as the barbed hairs become embedded in the skin.

When to Be Cautious

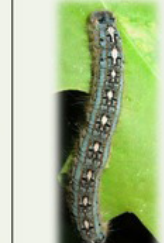
The risk of exposure to these toxic caterpillar hairs is highest from April to July. The caterpillars emerge from their winter webs in mid-April and grow until they reach their full size



Maine Forest Service

in June. The caterpillars, the skins they shed, and their cocoons, can contain these irritating hairs. Fortunately, adult moths – active at night from July to August - don't have toxic hairs, so you can enjoy summer evenings without worry.

Just remember to turn off outdoor lights from late June to early August to avoid attracting them to your yard.

Browntail Moth	Eastern Tent	Forest Tent	Spongy Moth
Overall brown color; White tufts along sides; Red-orange dots on tail-end (related species have similar spots)	White stripe down center of back; Blue spots like the "eye" in peacock feather along each side of stripe	White or off-white footprint-shaped marks down the center of the back; Blue body coloration in later instars	Prominent knobs with hairs on each side behind head. Five pairs of blue- and six pairs of red-spots along back (fourth instar and later).
DANGER!!			
Tent-makers			No Tents
			
Invasive Human & Forest Health Impacts	Native Mostly visual impacts	Native Occasional outbreaks	Invasive Forest Health Impacts Quarantined pest

How to Identify Them

To avoid the removal of native caterpillars, which are an essential food for many birds, it's important to identify these caterpillars correctly. Browntail moth caterpillars feed on a wide range of trees and shrubs, but they prefer oak, birch, crabapple, and cherry trees, among others. Check your trees now for winter webs. Look for small webs (about 2-5 inches long) made of leaves bound together at the outer tips of branches. In contrast, native caterpillars like eastern tent caterpillars and fall webworms build larger webs in the crotch or inner branches of trees.

Managing Browntail Moths

The Maine Board of Pesticides Control, Maine Forest Service, and Portland Water District recommend winter web removal as the safest method of controlling browntail moth. Winter web removal should be done between late October and early April. If the webs are within reach, you can remove them yourself - just be sure to wear protective clothing to cover skin, eye protection, and gloves.



Use hand snips or a pole pruner to remove the webs, then soak them in soapy water for 3-5 days before disposing of them or burning them safely and legally. For webs that are out of reach, the Maine Forest Service maintains a list of arborists willing to remove winter webs: maine.gov/dacf/mfs/forest_health/documents/arborists_prune_btm_webs.pdf

Chemical Control Caution

While pesticides may seem like a quick fix, they pose risks to drinking water sources such as groundwater and Sebago Lake. Pesticides typically used to control browntail moth are toxic to mammals, fish, aquatic insects, and beneficial insects like bees. For all of these reasons, non-chemical control methods are always the safest!

If you are considering pesticide application, keep these guidelines in mind:

- the least risky chemical control method around Sebago Lake is tree injection of an insecticide approved for such use (though bees and other insects will be killed)
- it is illegal for a pesticide applicator to apply insecticide without a pesticide applicator's license
- it is illegal to apply pesticide in any manner other than described on the label
- terrestrial broadcast application of pesticides is prohibited within 25 feet of the mean high water line of any lake or pond in Maine

For more information on browntail moths and control methods, visit the Maine Forest Service's website: maine.gov/dacf/knockoutbtm

For questions about browntail moth management, contact:

Maine Forest Service: (207) 287-2431

Board of Pesticides Control: (207) 287-2731, thinkfirstspraylast.org

Cooperative Extension: 1-800-287-0279 or (207) 581-3880



PWD STAFF PROFILE } Crystal Cooper Environmental Scientist

Crystal has been with Portland Water District since 2016. She started as a part-time lab intern during her final year of college and transitioned to wastewater as an intern. Over the next few years, she advanced to Wastewater Operator and then Senior Operator. She has been working as an Environmental Scientist in the lab for the past three years. As a scientist, Crystal works with three other staff to test drinking water at the source, distribution system, and at customers' taps, as well as wastewater that enters and leaves the East End Wastewater Treatment Facility in Portland. Her team also collects samples for both drinking water and wastewater operations and assists with operational tests that help operators run the treatment facilities. She plays a critical role in ensuring PWD delivers clean water to customers and protects the health of Casco Bay.

Her favorite part of the job is learning the different aspects of water systems, from the watershed's influence on lake water quality to the ecological impacts to the receiving waters for wastewater. She says there is always something new to learn, and it never gets boring.

Crystal's educational background is in marine science and environmental science. While at PWD, she obtained her Grade 5 Wastewater license, Grade 1 Treatment license, and Grade 4 Distribution license. For someone considering a career in the laboratory or environmental sciences, she would advise them to explore all aspects of what the field has to offer and never feel pigeon-holed into one facet of the job.

Crystal's favorite thing about Sebago Lake is its clarity and cleanliness. She also appreciates that it is massive and deep enough to provide excellent drinking water, as well as recreational fulfillment. When asked what she'd like people to know about water quality, she said recognizing the importance of pollution reduction, from what goes into the soil in the watershed to what goes into the sewers in the streets.



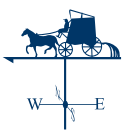
Jerry Monkman: ecophotography.com

DAM REMOVAL

Restores Indigenous Sebago Salmon to the Crooked River

In a landmark achievement for environmental restoration in the region, the Edes Falls Dam on the Crooked River in Naples has been removed after years of planning and permitting. This project not only restores the Crooked River's natural flow but also opens up over 25 miles of critical spawning and nursery habitats for Sebago's landlocked salmon and brook trout.

The Edes Falls Dam removal project is a collaborative effort managed and funded by several partners, including the Lakes Environmental Association, Sebago Chapter of Trout Unlimited, Casco Bay Estuary Partnership, Maine Council of Trout Unlimited, Maine Department of Inland Fisheries and Wildlife, Natural Resources Conservation Service, Sebago Clean Waters, Sebago Lake Anglers, Sebago Rotary, The Nature Conservancy, and US Fish and Wildlife Service.



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