



“There’s foam in the lake—did someone dump laundry detergent into the water?”

by Andrea LaMoreaux, NH LAKES



Lake Foam is typically a naturally-occurring phenomenon.

“Come quick,” the concerned caller urged, “There’s foam in the lake—did someone dump laundry detergent into the water?” As an aquatic biologist, I have been at the receiving end of this type of urgent phone call at least a dozen times during my career. Thankfully, more often than not, it turned out that someone did **not** dump detergent into the lake. But, if not laundry detergent, what caused the foam to appear?

Lake foam is usually a natural phenomenon. Here is the inside scoop on lake foam formation. “Natural” foaming occurs in lakes, ponds, rivers, and streams when aquatic organisms, such as algae and fish, die and are decomposed, releasing a variety of organic compounds into the waterbody. These natural organic compounds reduce the attraction of water molecules for each other (referred to as ‘surface tension’ of the water) allowing air to be mixed into the water by wind and wave action and causing foam to be produced. Foam will usually collect in large quantities along windward shorelines.

It is usually easy to tell if foam is natural or not. A very quick test is to simply smell the foam. If it seems to have a floral or perfume-like aroma, then the foam is likely caused by a detergent. If the foam has a fishy or “earthy” aroma to it, then it is probably natural. In addition, natural foams are generally off-white, tan, or brown in color—usually darker in color than the bright white foam produced by detergents.

What if you can't determine if the foam is natural or not? If you suspect that foam in the lake is from pollution, contact the New Hampshire Department of Environmental Services (DES) Jody Connor Limnology Center at (603) 271-3414 right away to report your concern. Better yet—collect a sample of the foam in a clean glass jar and deliver it to DES at 29 Hazen Drive in Concord. The Limnologists (lake scientists) will conduct a simple laboratory test using a black light to determine if the foam contains optical brighteners—the chemicals found in laundry detergents that help our clothes appear to be cleaner by brightening colors and lessening the natural yellowing of the fabric over time. If you have a black light, you can try this test at home!

Foam from detergent pollution in our lakes and other waterbodies is uncommon these days. However, this was not always the case! According to DES, in the late 1950s and early 1960s, many communities experienced tremendous foam problems in lakes, rivers, sewage treatment plants, and even in drinking water from contaminated wells. This foam was caused by synthetic laundry detergents that were highly resistant to chemical breakdown, and were only slowly degradable by natural bacteria. Fortunately, by law, these days the sudsing agent of all detergents on the market must be biodegradable. This means that today's detergents quickly lose their ability to cause foaming and are unable to produce the long-lasting foam often found along New Hampshire's shorelines.

NH LAKES is the only statewide, member-supported nonprofit organization working to keep New Hampshire's lakes clean and healthy, now and in the future. The organization works with partners, promotes clean water policies and responsible use, and inspires the public to care for our lakes. For information, visit www.nhlakes.org, email info@nhlakes.org, or call 603.226.0299.

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