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# ENVIRONMENTAL Fact Sheet

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## Lake Foam

Lakeshore property owners sometimes become concerned about lake foaming. However, most foam observed in lakes and streams is a product of nature; foam is not necessarily an indicator of pollution and it is not necessarily indicative of something bad. Small trout streams, for example, often have naturally occurring pools of foam where fish will hide.

### What causes the foaming of surface waters?

Foaming on lakes is not a new phenomenon. It is a natural process created when the surface tension of water (attraction of surface molecules for each other) is reduced and the air is mixed in, forming bubbles.

All lakes contain organic matter, such as algae and plants, and when this matter decomposes cellular products (surfactants) are released into the water, which lessens the surface tension. When the wind blows, the waves that form on the lake agitate this surface agent, thus transforming it into sudsy white foam. Waves from boats may also increase foaming when surfactants are present. Natural foam has a somewhat earthy or fishy aroma and may have an off-white, tan, or brown color, like in the photo above, and below.



Photo Courtesy of J. Smith

However, man-made agents can also reduce surface tension. 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 only slowly degradable (broken down by bacteria). By law, the sudsing agent of all detergents now on the market must be biodegradable. This means that they quickly lose their ability to cause foaming and are unable to produce the long-lasting foam found along many shores. Foam from soaps or detergent will have a noticeable perfume smell, and is usually whiter in color.

### **Where is lake foam found?**

Foam will frequently form parallel streaks in the open water, caused by wind-induced surface currents. It will also collect in on windward shores, coves, or in eddies. A variety of organic material can get caught in the surface water and may aggregate with the foam. For example, decaying cyanobacterial blooms can also be mixed in with these foamy events.

Please contact the NHDES Harmful Algal and Cyanobacterial Bloom Program for inquiries on surface scums, foams, streaks, discoloration of water, cyanobacteria bloom or algae questions. A microscopic examination of anything in question is recommended. Send your photos to 603-848-8094 or email to [HAB@des.nh.gov](mailto:HAB@des.nh.gov).

