
ENVIRONMENTAL Fact Sheet



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BB-5

2001

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. Small trout streams, for example, often have naturally occurring pools of foam where fish will hide.

What causes the foaming of surface waters on lakes?

The foaming of surface waters on lakes is not a new phenomenon. It is a natural process that has been going on for a long time. Foam is created when the surface tension of water (attraction of surface molecules for each other) is reduced and the air is mixed in, forming bubbles. Man-made agents can also reduce surface tension.

All lakes contain organic matter, such as algae and plants, and when these decompose they release cellular products (surfactant) into the water, which lessens the surface tension. When the wind blows, the waves on the lake agitate this surface agent, thus transforming it into sudsy white foam. Currents and boats also mix air with the organic compounds present in the lake to produce foam.

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.

Where is lake foam found and what its like?

The foam will frequently form parallel streaks in the open water, caused by wind-induced surface currents. It will also collect in large quantities on windward shores, coves, or in eddies. Natural foam has a somewhat earthy fishy aroma and may have an off-white, tan, or brown color. Detergent foam in contrast will have a noticeable perfume smell, and is usually whiter in color.