
ENVIRONMENTAL Fact Sheet



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Lake Foam

Lakeshore property owners sometimes complain 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 it?

Foam is created when the surface tension of water (attraction of surface molecules for each other) is reduced and air is mixed in, forming bubbles. Surface tension can be reduced by both natural organic compounds and by man-made soaps and detergents.

Natural organic compounds are released by decomposing aquatic organisms (such as algae or fish) or leached from the soil. Native Americans were known to have used various natural materials, such as bark and plant roots, to cleanse items. In a lake, wind, currents, and boats mix air with the organic compounds present to produce foam.

In the late 1950's and early 1960's, many communities experienced tremendous foam problems in lakes, rivers, sewage treatment plants and even drinking water from contaminated wells. This foam was caused by the use of synthetic compounds which came on the market after World War II. These detergents were 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 it found and what is it 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. Detergent foam in contrast will have a noticeable perfumey smell.