

# What Causes Foam In Streams And Lakes?

## Can foam in our waterways be a natural occurrence?

Foam is not necessarily an indicator of pollution in our streams and lakes, though it can be. Foam can be seen accumulating against logs or on the banks of streams, or along the shores of lakes on windy days. The development of foam occurs due to changes in the water surface tension and physical introduction of air. There is a slight tension on the surface of water caused by the chemical attraction among water molecules. This tension is what allows some insects to move along the water surface or cause water to "bead up" on your car during a rain storm. Certain molecules are called surface active agents or surfactants. Foam is produced as air, introduced in the turbulence of stream riffles... bubbles to the water surface."

## ...or is it an indicator of some kind of pollution?

There are human sources of surfactant molecules as well. Household cleaning products such as detergents, shampoos, toothpaste and cosmetics are can create a fragrant smell whereas sanitary sewer or septic system failures have an unpleasant odor. These pollutants are often found near a pipe or other point of discharge.

But, there are also many naturally produced organic surfactants that are released from algae and plants when they die and begin to decompose, releasing organic surfactants.

This natural causing surfactant can be off- white in color and have a "fishy" or "earthen" odor and found in waters with high levels of organic debris such as sticks and leaves.

Human introduced practices that result in even greater plant or algae growth, such as phosphorus in turf fertilizer, serve to "fertilize" such plant growth.



Absent these human factors, a certain level of plant growth and decay is natural. Buildups of foam in streams are more prevalent after rainfall or snow melt due to water moving through the ground and more organic matter being introduced into the waterways.

If you see foam, don't panic. Please contact the Lake County General Health District to report a possible illicit discharge at (440)350-2543 or report on website

<https://www.lcghd.org/nuisance-complaint/>

CREATED: 12/16/2022



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