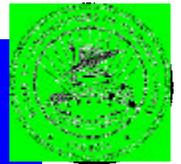


IRON BACTERIA



The Basics

If you've seen a slimy brown residue in your local waterway or drain, it could be the result of iron bacteria, a naturally occurring microorganism. While it may be unsightly there is no evidence to suggest that it is harmful to our health, or the health of our waterways. Iron bacteria occur naturally in our waterways where they feed on iron (Fe) in the water. While the bacteria are "feeding," they may leave slimy, rust - colored deposits suspended in or on the surface of puddles, lakes, creeks, and streams. If you live near a waterway, you may notice this condition appears or intensifies after heavy rainfall. This is a result of iron rich soils leaching elemental iron into waterways which provides more food for the bacteria.



Iron bacteria causing oily sheen on the water's surface.



Iron bacteria forming slimy, rust - colored deposits in a creek.

The Process

When oxygen, water and iron mix together they can create the right conditions for iron bacteria to bloom. Iron bacteria need to oxidize (a chemical process) iron to give them energy. This involves changing ferrous iron (Fe^{2+}) into ferric iron (Fe^{3+}). This process makes the iron insoluble and produces the rust colored slimy deposit or oily sheen you may have noticed.

Spotting the Presence of Iron Bacteria

The presence of iron bacteria is identified by rust colored, slimy deposits that may include an oily appearance on the water's surface. The bacteria will be found in standing water on the ground's surface, or in slow moving creeks and streams. To distinguish between an oil spill and iron bacteria, break up the oily sheen on the water. If the sheen immediately goes back together the substance is oil. If the sheen stays broken up into pieces, then it is most likely iron bacteria.

If you have further questions or comments, please call 678-376-6932. To learn more about storm water issues in Gwinnett County, please visit www.gwinnettstormwater.com.

