
CAN NATURAL MATERIALS BE WATER POLLUTANTS?

The latest news about the Fund for Lake Michigan Stormwater Grant



Top Image: Fall leaves leaching phosphorus into the water way.



Bottom Image: Excess soil causing poor water quality.

Content Modified from USEPA

www.epa.gov/nutrientpollution/problem
and Mid-America Regional Council
cfpub.epa.gov/npstbx/files/ksmo_sediment.pdf

Content Provided by:



*Bringing diverse partners together to protect and restore
our shared water resources*

Yes, too much natural material can overwhelm the environment

Urbanization across landscapes has led to an excess of natural materials in waterways which can lead to poor water quality. Soil can contain harmful fertilizers, herbicides or pesticides and leaves contain phosphorus - a common water pollutant. Both soil and leaves can contribute to water clarity issues. These natural materials are natural to aquatic environments, however, because urbanization decreases natural areas and increases impermeable area, the addition of more natural materials can overwhelm natural aquatic environments.

Phosphorous in Leaves

Phosphorus is a nutrient naturally found in leaves that is release when soaked in water - like a pile of leaves left in a puddle, rain storm, or under melting snow. Phosphorus is a natural nutrient in aquatic environments. It supports the growth of algae and aquatic plants, which provide food and habitat for fish and other organisms that live in water. But when too much phosphorus enters the environment the water can become polluted. Nutrient pollution has impacted many streams, rivers, lakes, bays and coastal waters for the past several decades, resulting in serious environmental and human health issues, and impacting the economy.

Excess phosphorus in the water causes algae to grow faster than aquatic environments can handle. Significant increases in algae harm water quality, food resources and habitats, and decrease the oxygen that fish and other aquatic life need to survive. Large growths of algae are called algal blooms, and they can severely reduce or eliminate oxygen in the water, leading to illnesses or death to large numbers of fish. Some algal blooms are harmful to humans because they produce elevated toxins and bacterial growth that can make people sick if they come into contact with polluted water, consume tainted fish, or drink contaminated water.

A recent U.S. Geological Survey study suggest that timely removal of fall leaf litter can reduce harmful phosphorus concentrations in stormwater by over 80%. Fall leaf litter contributes a significant amount of phosphorus to urban stormwater, which runs into waterways and lakes.

Please help protect your local waterways by following the rules of the Village's Leaf Collection Program. www.bayside-wi.gov/119/Leaves

Sedimentation

Sediment is the loose sand, clay, silt and other soil particles that can be visibly seen in waterways. Sediment can come from soil or from the decomposition of animals and plants - like fallen leaves.

Waterways containing too much sediment can become muddy causing an assortment of issues. Excess sediment can prevent sunlight from reaching natural vegetation, causes fish or other animals from seeing food, destroys aquatic habitats, and causes declines in fish populations. Additionally, excess sediment can trash, and obstruct the flow of water into wetlands, estuaries, and catch basins. This obstruction impedes their ability to carry water away from roads and homes which causing flooding.

What you can do to help

- 1. Spread the word!** Educate your neighbors about keeping grass clippings, pet waste, and other natural or unnatural materials out of stormwater ditches.
- 2. Plant deep-rooted plants** like wildflowers, ornamental grasses, shrubs or trees along shorelines instead of grass. These plants help prevent soil from eroding into waterways and absorb and filter stormwater runoff that contains nutrients, soil, and pollutants, as well as providing habitat for wildlife.
- 3. Follow best practices.** Most concentrated sediment releases come from construction activities, including relatively minor home-building projects such as room additions and swimming pools. Follow your Village's Erosion and Sediment Control Plans.