

Pollutant Fact Sheet

Pollutant:	Nutrients	Sediment	Metals	Oxygen-demanding Substances	Oil, Grease, Petroleum, Hydrocarbons and Synthetic Organics	Pathogens
Definition	A nutritive substance that fosters growth, especially compounds that contain nitrogen, phosphorous and potassium. Examples are fertilizers and detergents.	Particles of soil.	Problematic metals dissolved in the water in local waterways include chromium, copper, lead and zinc	Organic compounds that are decomposed by microorganisms, which consume oxygen in the process.	Organic compounds that are not easily degraded by organisms.	Disease-causing organisms that affect human health.
Source	Fertilizers; greenwaste; detergents from car washing, dumping of janitorial wastewater or failing septic/sewer systems.	Land erosion, mostly during rain events, from poorly protected construction sites, exposed landscape areas and gardens, and areas where runoff is channeled and scours exposed soils such as at the mouth of storm drains. Sediment also comes from natural erosive processes.	Mostly associated with motor vehicles, including direct atmospheric deposition from exhaust emissions, dripping or improperly transferred oil and lubricants, tire wear, brake lining wear and degradation of highway pavement material. Some may occur naturally in soils.	Greenwaste, litter and garbage, leaking garbage bins, improperly discarded wash water and improperly disposal of food waste.	Oils and greases from vehicles and motor equipment, gasoline, synthetic detergents, pesticides, herbicides, wood preservatives and certain industrial products.	The primary source is fecal matter from humans. Pathogens can enter creeks through failing septic/sewer lines or where people defecate directly in or near creeks. Some less common pathogens are transmitted through the feces of other animals including birds, rodents, deer, dogs, raccoons, etc.
Effects	Eutrophication: enrichment of a body of water in dissolved nutrients that stimulate growth of aquatic plants. These "blooms" eventually die, and bacteria decompose the plant material, consuming oxygen and creating toxic aquatic conditions. This causes some plant species to flourish while others die, and the ultimate result is an imbalance in the native flora and fauna. Non-native species may replace a wide variety of native species killed by eutrophication.	Covers and clogs feeding and spawning areas for aquatic animals; interferes with aquatic organism respiratory functions; increases water temperature; decreases the amount of transmitted light, thus decreasing the primary productivity of aquatic plants and phytoplankton; increases flood risk.	Accumulate in bottom sediments and adversely affect benthic organisms (organisms that reside at the bottom of a body of water); bioaccumulate in animal tissue, resulting in chronic toxic effects for aquatic animals and other animals that eat them. In high concentrations, dissolved metals can be immediately toxic to aquatic organisms.	If present in large quantities, decomposition causes consumption of available oxygen. The resulting anaerobic conditions may produce bad odors and suffocate organisms that require oxygen to breathe. The effect can be worsened with increased temperatures and excessive nutrients.	Are toxic to fish and other aquatic organisms, causing acute and chronic toxic effects; inhibit reproduction, respiration and development of tissue. Many of these compounds are mutagenic (cause relatively permanent change in hereditary materials), carcinogenic and can persist and bioaccumulate.	Cause many sorts of illnesses and discomfort, ranging from minor skin infections to ear aches, pink-eye and gastrointestinal infections.
Alternatives	Minimize the use of pesticides, herbicides or fertilizers. Compost or properly dispose of yard waste. Ensure that your septic or sewer system is working properly. Was your car on a lawn and keep soapy water from entering storm drains, or take your car to a car washing facility where the wastewater is transported to a sewage treatment facility. Never pour wastewater into the gutter.	Keep soil areas vegetated or protected. Do not sweep soil into storm drains.	Reduce the amount you drive. Utilize public transportation or walk or bike. Fix car leaks and properly dispose of hazardous materials from cars (i.e. oil, brake or transmission fluids). These materials can be disposed of at designated auto service centers or the Community Hazardous Waste Collection Center.	Properly dispose of yard waste, compost if possible. Pick up and recycle or properly dispose of all waste.	Reduce use of all chemicals including pesticides and detergents. Drive private vehicles less often and utilize public transportation. If driving, ensure that your car is not leaking any hazardous fluids. Properly dispose of hazardous materials from cars at the Community Hazardous Waste Collection Center.	Use toilet facilities or properly bury waste. Ensure that septic or sewer systems are functioning correctly. Pick up after your pets.