

Stormwater Treatment

Problem

Streets, lawns, roofs, driveways, parking lots and agricultural lands produce stormwater runoff that contains phosphorus, nitrogen and heavy metals contamination. This polluted stormwater then flows to the neighboring rivers, streams and lakes. Phosphorus can cause the eutrophication of these bodies of water. The added phosphorus generates an increase in algae blooms that severely degrade water quality.

Some species of algae, called blue-green algae, or cyanobacteria can release toxins into the water that can kill fish and are harmful to humans.

Other less toxic forms of algae also can severely degrade water quality. Algal blooms are the result of an excess of nutrients, particularly phosphorus. The excess of nutrients, that may originate from fertilizers applied to land for agricultural or recreational purposes, can then enter watersheds through water runoff. When phosphates are introduced into water systems. Higher concentrations cause increased growth of algae and plants. Algae tend to out-compete plants under these conditions, and many plant species may begin to die. This dead organic matter becomes food for bacteria that decomposes it. With more food, available, the bacteria increase in number and use up the dissolved oxygen in the water. When the dissolved oxygen content decreases, many fish and aquatic insects cannot survive. This results in a dead area.

In addition, urban stormwater contains heavy metals (e.g. As, Cd, Cr, Cu, Ni, Pb, and Zn) in varying concentrations. They are, unlike organic pollutants, not degradable and may cause short and long term negative effects in the environment. Thus, heavy metal removal from stormwater is important to protect the receiving water and soil quality. **EnviRemed** can remediate the above mentioned metals from water and soil.

Solution

EnviRemed can remove phosphorus from the stormwater basins with a geochemical media that will bind the phosphorus in a non-leachable matrix, thus permanently removing the phosphorus from the runoff water. Treatment protocols for water systems are varied, and are developed on a site-specific basis.

Reagents, both prior and after application, cannot be classified as either a hazardous or dangerous waste, as defined by regulatory guidelines worldwide, including the Hazardous Waste Act. For these reasons, our reagents are considered safe to transport, safe to handle, and safe to apply, and are not toxic to plants, soil biota, fish or other aquatic life when assessed using worldwide standards of toxicological practice. Reagents are there for considered to be fully sustainable and healthy for the environment.

Parameter	Pre-treatment	After Treatment
pH	7.1	6.9
Phosphorus (mg/l)	28	0.6

**Results from a Colgate/Palmolive Study*

EnviRemed

EnviRemed is a consortium of top scientists, engineers, contractors and businessmen who have united to offer the best available technology to provide safe and natural solutions for governmental authorities, corporations, and private citizens to create a cleaner future for our planet.

Available worldwide, we offer environmentally friendly solutions that help your bottom line and the expertise to implement them. Through simple processes we have saved our customers millions of dollars, thousands of man hours, and improved the way they take care of their business.

EnviRemed technology has proven to reduce the amount of phosphorus.

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