

# Three Big Pollutants

For the waterbodies listed as IMPAIRED in the *National Water Quality Inventory*, top pollutants causing problems are dirt, bacteria, and nutrients.

## 1 Dirt

That's right, dirt. Dirt was listed as a leading cause of pollution in our rivers and streams. When rain washes dirt into streams and rivers, it smothers the little critters in the stream and kills any fish eggs clinging to rocks. Dirt can also clog the gills of fish, suffocating them. Have you ever walked into a pond or lake and noticed huge swirls of muck rising up and clouding your view of the bottom? Well, if the plants that use the sun to make food (yes, that's right, **photosynthesis**) can't get enough sunlight because the water is murky, they die.

### Where does all this dirt come from?

Most of the dirt washing into lakes and streams comes from activities that remove trees and shrubs and leave the earth exposed. This exposed earth includes fields that have just been plowed, construction sites that have been bulldozed, and areas that have been logged or mined. Bare patches in your lawn or ballfield can also contribute to the problem. Some of the dirt polluting streams comes from the stream banks. The problem is that fast-moving water erodes the banks of streams. The water moves faster because the vegetation that would slow it down has been replaced with pavement and buildings.

### What's being done to control dirt?

The solution is to stop the dirt from getting into the stream in the first place by disturbing the land as little as possible. Farmers are using different methods to grow their crops so they leave less earth exposed, and they plant grasses in fields that aren't being used. Construction workers are putting up silt fences and hay bales to trap the dirt and contain it while they build. Developers can design new home sites that leave more natural areas and less pavement to reduce the amount of earth they disturb.

## 2 Bacteria

Bacteria are a big water quality problem in our nation's waters. Not all bacteria are harmful (yogurt contains live bacteria cultures!), but the presence of some indicator bacteria is a clue that other germs and viruses that can make you sick might be in the water too.

### Where do the bacteria come from?

The major sources of bacteria are **combined sewers** (which can overflow in a rainstorm and dump untreated sewage directly into our waters) and runoff of animal waste (including wild animal droppings!) from farmland and city streets.

### What's being done to control bacteria?

Cities and towns are improving their sewage systems to keep untreated sewage from overflowing. Farmers are developing better ways to manage livestock manure. Dog owners are picking up after their pets (yes, dog waste pollutes too).

## 3 Nutrients

Nutrients were listed as the number one cause of water quality pollution in our lakes, ponds, and reservoirs. They caused impairment in more than 3.8 million acres! (That's more than 2.9 million football fields!) The two most common nutrients are nitrogen and phosphorus, which cause algae to grow and can turn the water green.

### Where do nutrients come from?

The major sources of nutrients are runoff of fertilizers and animal waste from farms and cities (lawn fertilizers can wash away in heavy rain), sewage treatment plants, and failing **septic systems**.

### What's being done to control nutrients?

Farmers are learning new ways to apply fertilizers and manage livestock. Homeowners are being educated about maintaining their lawns and septic systems. Cities and towns are fixing their sewage treatment plants.