Nonpoint Source Pollution

What happens to a drop of water when rain falls? How does the water move as snow melts? When you water your lawn or irrigate farm fields, where does the water go? Some of the water will run across the land surface. Other drops will soak into the ground. As the water moves, it can pick up things that make it impure. These substances are called pollutants. Pollutants can travel into rivers, lakes, streams or ground water.

Take a moment to think about the path rain follows. When it reaches the ground, it will either soak into the soil or run along the surface. Rain that lands on a parking lot can pick up motor oil and other things. Rain that lands on a lawn or farm field may carry fertilizer or loose soil with it as it travels. Rain that lands on a bare hillside can wash part of the soil away as it moves. All of these are examples of nonpoint source pollution.

Nonpoint source pollution cannot be traced back to a single starting place. Nonpoint source pollution is the largest water quality problem in the United States today. It is also called runoff pollution. The pollutants are carried in water as it runs off the land.

Runoff can travel directly to rivers, lakes and streams. It may also travel through storm drains. Stormwater is runoff water from rain and snowmelt. In cities and towns, a system of drains and pipes is often used to carry stormwater. These systems usually empty into a nearby body of water. They most often do not take water to a treatment plant.

The most common pollutants carried in runoff are sediment and nutrients. Sediment is soil that is carried in water. The soil can come from farm fields, construction sites, logging sites or any bare land. As the water moves across the land, it picks up part of the soil. This soil travels with the water until it reaches a stream, lake or river.

Nutrients are found in fertilizer, animal manure, pet waste and human waste. Pasture fields and animal feeding lots can be sources of nutrients. Pet waste can be carried in runoff water from lawns. Farm fields, golf courses and lawns are all sometimes fertilized. Some of the fertilizer can wash away in runoff.
Runoff water can also carry other pollutants. Oil and automotive fluids can wash off streets, roads, parking lots, and driveways. Pesticides may be found in runoff from farm fields, lawns and gardens. Toxic chemicals are sometimes washed away when spilled on the ground.

Because nonpoint source pollution can come from many places, we all can help prevent it. Farmers use best management practices to help prevent water pollution. Best management practices are techniques or management strategies that help prevent water pollution. These practices can help stop soil erosion and keep nutrients out of water. Best management practices can also be used to keep soil from running off construction sites and logging sites.

Everyone can help prevent nonpoint source pollution at home. Carefully using fertilizers and pesticides in lawns and gardens is a good start. We all should keep our cars in good working condition, too. If we fix oil leaks and are careful not to spill things like antifreeze, we can keep these pollutants out of our water. Protecting storm drains can also help.


Revised November 2007 by Ashley Osborne, Extension Associate for Environmental and Natural Resource Issues.