

Good Neighbors

Tackling Nonpoint Source Pollution in Pennsylvania

Clean water is important to everyone. We drink it, wash with it, and run our industries with it. Although America's waterways are healthier than they were twenty years ago, battling water pollution can be quite a challenge.

"Point source" pollutants for instance, such as pipes that illegally discharge into our waterways, are just part of the problem. We now realize that a large portion of water pollutants come from sources which cannot be easily pinpointed. Our nation's waters are under siege by a subtle, yet dangerous threat known as Nonpoint Source (NPS) Pollution.

Where does NPS Pollution Come From?

Nonpoint source pollution finds its way into streams, rivers, and groundwater supplies from **virtually everywhere**. It is caused by human activities and natural processes involving land, air, and water.

NPS pollution is present in the runoff from cities, suburbs, and farms. It is created during activities such as construction, forestry, and mining. NPS pollutants move through air, across the land, and through the soil, making their way to surface and ground waters. Some studies have reported as much as 70 percent of all water pollution comes from NPS pollutants. Nonpoint source pollution is more than just an **eyesore**. It is a threat to our environment, our economy, and our health.

How Does NPS Affect Our Waterways?

Nonpoint source pollution can seriously affect water quality. Sediment, nutrients, pesticides, debris, oil and toxic chemicals enter local waterways and travel downstream into areas such as the Chesapeake Bay. These pollutants cloud the water, reduce the water's vital oxygen supply, and disrupt stream habitat, affecting thousands of plants and animals as well as humans who have relied on the Bay for generations.

Some Sources of NPS Pollution

Air Pollution

Airborne nitrogen causes acid rain and excess enrichment of waterways. It is created by our cars, power plants, and industries. Acid rain alters the pH levels of streams making them unsuitable for some forms of aquatic life, it also eats away at buildings and other structures causing costly repair bills. There is mounting evidence that suggests about 1/3 of nitrogen pollution comes from airborne pollutants.

Agriculture

A large percentage of NPS pollution comes from agricultural activities in the form of sediment, pesticide, and nutrient pollution. Overgrazing and certain cultivation practices can also increase soil erosion and runoff. Sediment particles and runoff may carry excess pesticides, fertilizers, and animal nutrients into waterways. In addition to runoff, excess nitrogen makes its way to our streams through groundwater.

Construction

Large scale earth disturbance activities such as land development, forestry, mining and highway construction can produce sediment levels 10 to 20 times greater than those created by farming. Erosion and sedimentation control measures, such as the use of silt fencing, should be taken prior to beginning excavation and construction.

Waste Disposal

Improper disposal of chemicals, oil and other waste leads to NPS pollution. Some people believe storm drains will carry waste to sewage treatment facilities for cleanup. This misconception results in tons of pollutants being dumped "down the drain" each year. In addition, malfunctioning wastewater treatment plants and private septic systems contribute to nonpoint source pollution.

Resource Extraction

Acid drainage from abandoned mines and mine waste piles contaminate streams. Improperly sealed oil and gas wells and leaking underground tanks used to store petroleum products can contaminate surface and groundwater.

What is Pennsylvania Doing About NPS?

It's been said by more than one expert, the health of the Chesapeake Bay is a good indication of water quality here at home. In 1987 Pennsylvania, Maryland, Virginia, the District of Columbia, and the U.S. Environmental Protection Agency, committed to join forces in an effort to restore the Chesapeake Bay. Many cooperative projects are under way among the Bay partners to reduce the phosphorus and nitrogen controllable loads entering the Bay by 40% by the year 2000. Right now, the major focus is finding better ways to control key nonpoint source pollutants. In Pennsylvania, the Department of Environmental Protection's Bureau of Water Quality Protection directs the efforts of the state's NPS Program. These programs work with citizens of the Commonwealth to improve water quality by offering planning, educational, financial, and technical assistance.



Be a Good Neighbor

Individuals who do not live next to a stream may find it difficult to understand how their actions can impact water quality. No matter how distant you are from a waterway, through creeks, rivers, and underground springs we are all connected because We All Live Downstream.

When you get involved in protecting local water quality you can take pride in knowing your efforts will extend beyond the boundaries of your backyard and help improve the quality of life in neighborhoods located further downstream.

Nonpoint source pollution is a collective problem -- directly or indirectly it is the result of many individual actions. How can you be a **Good Neighbor** and help to control nonpoint source pollution?

What Farmers Can Do

- Team up with your local Conservation District. Learn how you can get the maximum value out of animal manure. A nutrient management plan may help you save money and at the same time, protect water quality.
- Explore using Integrated Pest Management, a program designated to help reduce pesticide pollution. Contact your local Cooperative Extension Office.
- Incorporate "Best Management Practices" into your farming operation. They can help optimize your harvests and reduce soil erosion. You may be eligible to receive cost-share assistance for implementing these approved practices. Contact your conservation district for more information.

What Developers and Industry Can Do

- Control runoff from construction sites. Familiarize yourself with Pennsylvania's Erosion and Sediment Control regulations and seek assistance from your county conservation district office. Minimize disturbances to trees and vegetation. Follow storm water management guidelines when designing and installing drainage systems.
- Practice good industrial housekeeping. Control toxins from industrial sites by developing and following a pollution prevention plan. Make sure you have the right permits for all operations, including manufacture, storage, disposal, and cleanup. Contact the nearest Department of Environmental Protection Regional Office for more information and assistance.

What Everyone Can do

- Plant trees, shrubs, and groundcovers to prevent soil erosion on your property. Report sediment and erosion control problems to your county conservation district.
- Help reduce runoff by using building materials such as brick, flagstone, or wood for walkways and patios. Divert runoff from your roof to a well-vegetated area rather than the pavement. Call your local Cooperative Extension office for help with soil testing to determine the right amount and type of fertilizer to use on your lawn and garden.
- Dispose of used motor oil, antifreeze, paints, and other hazardous materials properly. Never dump substances down a storm drain, into the soil, or into a waterway!
- Reduce emissions by using public transportation or car pooling. Save energy by turning off lights, lowering thermostats, and insulating hot water pipes in your home.
- Support your local government's role in controlling nonpoint source pollution. Attend planning meetings and hearings, promote activities such as city tree plantings, or help establish a community environmental advisory council.
- Encourage your school board to promote educational pollution prevention programs.
- Join a citizen stream cleanup or water quality monitoring effort.

This Brochure was produced with financial support provided by the [Pennsylvania Department of Environmental Protection](#) Chesapeake Bay Program and the Environmental Protection Agency Section 319 Program.