NPS Pollution

New York NEMO Program

Nonpoint Source Pollution:
New York's Primary Water Quality Problem

Why is there still water that's too dirty for swimming, fishing or drinking? Why are native species of plants and animals disappearing from many rivers, lakes, and coastal waters?

Nonpoint Source Pollution

Nonpoint source pollution (NPS) occurs when rainfall, snowmelt, or irrigation flows over land or through the ground, picks up pollutants, and delivers them into rivers, lakes, coastal waters or ground water. Imagine the path taken by a drop of rain from the time it hits the ground to when it reaches a river, ground water, or the ocean. Any pollutant it picks up on its journey can ultimately affect natural habitats and the living organisms they sustain. Nonpoint source pollution, particularly sediment, also alters the shape and flow of streams and other aquatic systems and may promote conditions for nonnative species invasion. *NPS pollution is widespread and it can occur any time activities disturb the land.*

Tremendous advances have been made to clean up the aquatic environment by controlling pollution from point sources such as industries and sewage treatment plants. Unfortunately, we have not done enough to control runoff from diffuse, or nonpoint, sources. Today, nonpoint source pollution, or runoff, remains our largest cause of water quality problems. It's the main reason that approximately 40 percent of our rivers, lakes, and estuaries are not clean enough to allow basic uses such as fishing or swimming.

Runoff from urban areas is the largest cause of water quality impairments to estuaries such as the Long Island Sound and the New York-New Jersey Harbor estuary. Concern over polluted runoff has resulted in an ever-increasing number of state and federal laws. The federal government recently enacted the Total Maximum Daily Load (TMDL) and Phase II stormwater regulations. In addition to implementing these federal programs, many states have passed laws altering local land use (planning and zoning) processes and building codes to address the problem of nonpoint source pollution. Polluted runoff is one of the most important matters being addressed by local governments in New York today.

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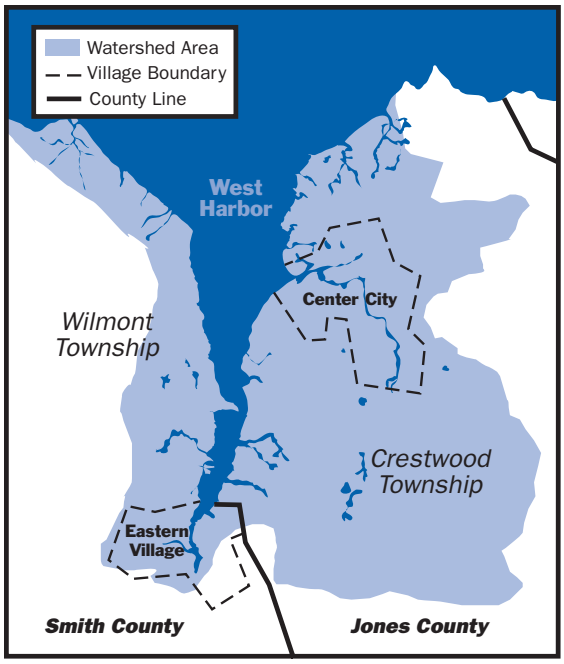
Runoff Contaminants
Impacts

The most common nonpoint pollutants are sediment and nutrients. These contaminants wash into water bodies from lawns, roads, construction sites, and other areas of disturbance. Runoff pollutants include fertilizers, pesticides, pathogens (bacteria and viruses), salts, oil, grease, toxic chemicals, and heavy metals. Beach closures, destroyed habitat, unsafe drinking water, fish kills, and many other severe environmental, economic and human health problems result from these widespread pollutants. Each year, polluted runoff threatens community vitality. Restoration and protection of coastal resources costs millions.

Managing Nonpoint Pollution
The Watershed Approach

A watershed is the area of land that contributes drainage to a particular body of water. Land features such as slope, permeability, elevation and contour determine which way the water flows. We can identify the drainage area for water bodies as small as a backyard stream or as large as an entire estuary. Watersheds represent the natural boundaries within which nonpoint source pollution is best managed. They enable us to know the origins and route that runoff travels before flowing into a receiving water body. Watershed boundaries are irrespective of governmental boundaries (see illustration below). Therefore, effective protection and restoration of our waterways necessitates multi-jurisdictional partnerships and collaboration. There are several highly successful watershed management partnerships in New York state today.



The natural boundaries of a watershed can fall in the jurisdiction of multiple villages, towns, or counties. Management of a watershed is often multi-jurisdictional.

The New York NEMO Program (Nonpoint Education of Municipal Officials) is an educational program for land use decision makers that strives to reduce nonpoint pollution by illustrating the connection between land use and water quality. Our goal is to provide communities with information that will assist them in protecting their natural resources while meeting land use needs.

LONG ISLAND SOUND STUDY
A Partnership To Restore And Protect The Sound

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The New York NEMO Program is a member of the National NEMO Network.

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