



**Westchester County  
Committee on  
Nonpoint Source  
Pollution**

**Westchester  
gov.com**

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County Executive**

# **F**requently **A**sks **Q**uestions **ON** **IMPERVIOUSNESS**

## **Q: WHAT IS WATER QUALITY?**

**A:** Water quality is determined by the ability of a specific water body to serve its intended use, e.g. drinking, habitat, fishing, swimming, etc.

## **Q: WHAT DOES IMPERVIOUS MEAN?**

**A:** Impervious means that water cannot penetrate the ground surface - instead it flows over the surface directly into catch basins, streams and wetlands. Nonporous pavement is one example. Development in Westchester County has created a significant amount of impervious surface, including roads, parking lots, buildings and rooftops. Urbanization is the major cause of increasing imperviousness.

## **Q: WHY IS IMPERVIOUSNESS AFFECTING THE ENVIRONMENT?**

**A:** When it rains, rain water can no longer seep into the ground and be naturally filtered by soil. Instead, the water moves over hard impervious surfaces at a much faster rate. As storm water travels over roads, parking lots, etc., it picks up pollutants such as oil, grease, bacteria and sediment. These pollutants, now in the stormwater runoff, are delivered directly to streams, estuaries, and reservoirs.



*Photo courtesy of NEMO (Nonpoint Education for Municipal Officials)*

Use of alternative surfaces can be explored, encouraged, even required, primarily for low traffic and overflow areas. This example shows both a traditional paved parking area and a new turf parking area for overflow parking at a retail mall.

**Q: WHAT AFFECTS DO WE SEE FROM STORMWATER RUNOFF OF IMPERVIOUS AREAS?**

- A:** The following impacts of imperviousness have been scientifically documented:
- ◆ **Flooding** as more water is delivered directly to water bodies without being slowed down by vegetation or absorbed into the soil.
  - ◆ **Erosion** as stream banks are undercut and washed away due to higher and faster flows of water.
  - ◆ **Sedimentation** due to upstream soil erosion, which is gradually filling in our lakes, harbors, bays and other water bodies.
  - ◆ **Water temperature increases** due to heated stormwater runoff from impervious surfaces.
  - ◆ **Water quality degradation** from increased pollution levels such as excessive nitrates, phosphates and pathogens.
  - ◆ **Habitat loss** of certain fish and wildlife species due to water temperature increases, sedimentation and nitrogen and phosphorous loading.

**Q: HOW CAN WE REDUCE THE NEGATIVE IMPACTS OF URBANIZATION AND IMPERVIOUSNESS?**

- A:** Here are some ways of minimizing the impacts of imperviousness:
- ◆ Divert roof gutters onto vegetated areas instead of paved surfaces or pipes.
  - ◆ Minimize the amount of impervious area (e.g. driveways, parking lots, roads, patios, etc.).
  - ◆ Plant trees and shrubs to minimize surface runoff.
  - ◆ Use paving surfaces that allow rainwater to soak into the ground, i.e. wood decking, bricks or interlocking stones and porous asphalt for driveways.
  - ◆ Select plants and trees that are indigenous to the area and don't need a great deal of water or fertilizer to survive.
  - ◆ Use fertilizers, herbicides and pesticides sparingly and according to directions.
  - ◆ Use car washes that treat and recycle the wastewater.
  - ◆ Check automobiles for leaking oil and other fluids and make repairs, if needed.
  - ◆ Pick up and properly dispose of pet waste.

See these additional Water Quality Fact Sheets (FAQS):

Fact Sheet 1 - Urban Watershed Management

Fact Sheet 3 - Septic Systems

Fact Sheet 4 - Wetland Restoration and Creation

Fact Sheet 5 - Stormwater Runoff

Fact Sheet 6 - Buffers

For more information on water quality, contact the Westchester County Department of Planning at (914) 285-4422, or visit the Planning Department web site at

[www.westchestergov.com/planning](http://www.westchestergov.com/planning)

Visit the NEMO (Nonpoint Education for Municipal Officials) web site at

[www.canr.uconn.edu/ces/nemo](http://www.canr.uconn.edu/ces/nemo)

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