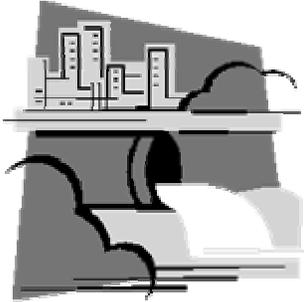


## What is Stormwater?

Stormwater is rain that falls on roofs, lawns and paved areas, like driveways and roads, and is carried away by a system of stormwater pipes, culverts and ditches. As it flows over the land, stormwater picks up or is contaminated by debris, chemicals, dirt and other pollutants. This **untreated** water is discharged into the waterbodies we use for swimming, fishing and drinking water.



## How Do Construction Activities Pollute Stormwater?

Construction activities can cause soil erosion and downstream problems with sedimentation. Erosion at construction sites may affect a relatively small percentage of land in the watershed, but can contribute significantly to the erosion rates in the watershed.<sup>1</sup> Development resulting from construction activities can increase the amount of impervious surfaces thus increasing runoff to lakes, rivers and streams. This heightened flow rate may result in erosion and sedimentation problems downstream as well.



<sup>1</sup> Brady, N.C., and R.R. Weil. 1999. *The Nature and Properties of Soils*. 12th ed. Prentice Hall. Upper Saddle River, NJ.

## Additional Information

Syracuse Urban Area Stormwater Phase II Program

<http://www.cnyrpdb.org/stormwater-phase2/>

New York State Dept. of Environmental Conservation

<http://www.dec.state.ny.us/website/dow/mainpage.htm>

United States Environmental Protection Agency

<http://www.epa.gov/npdes/>

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Participating municipalities include the towns of Camillus, Cicero, Clay, Dewitt, Geddes, LaFayette, Lysander, Manlius, Marcellus, Onondaga, Salina, Sullivan, Van Buren, the Villages of Baldwinsville, Camillus, East Syracuse, Fayetteville, Liverpool, Manlius, Marcellus, Minoa, North Syracuse, Solvay, the City of Syracuse, and Madison and Onondaga Counties.



Information Provided By:

“Soil Erosion and Sedimentation in the Oneida Lake Watershed” by the Oneida Lake Management Plan Erosion and Sedimentation Working Group

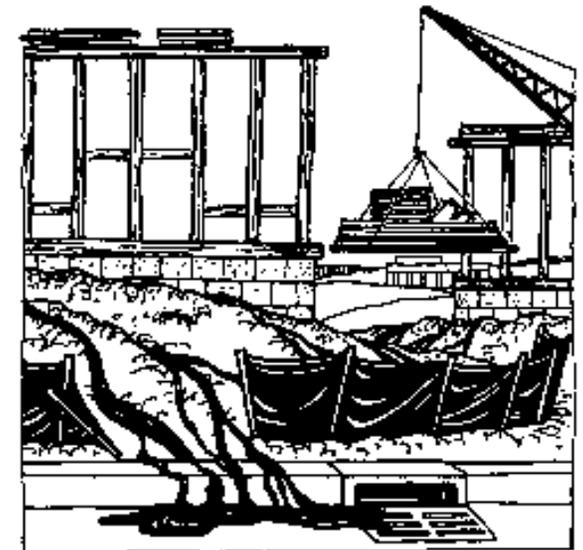
“Stormwater and the Construction Industry” poster by the United States Environmental Protection Agency

“Construction Site Erosion and Sediment Control Ordinance” brochure by the Planning and Development Services in Boise, Idaho

[www.starfish.govt.nz/shared-graphics-for-download/fish2.gif](http://www.starfish.govt.nz/shared-graphics-for-download/fish2.gif),  
[www.cityofboise.org/public\\_works/publications/pdf](http://www.cityofboise.org/public_works/publications/pdf),  
[www.unomaha.edu/~wwwpsnl/training](http://www.unomaha.edu/~wwwpsnl/training),  
[www.louisville.edu/hsc/sphhis/](http://www.louisville.edu/hsc/sphhis/), [www.bisnow.com](http://www.bisnow.com),  
[www.mcps.k12.md.us/clipart](http://www.mcps.k12.md.us/clipart), [clean-water.uwex.edu/keepdurt/decjan99/comm65](http://clean-water.uwex.edu/keepdurt/decjan99/comm65) (graphics)



# Stormwater Pollution Prevention: The influence of construction activities



## How Does Stormwater and Sedimentation Impact Water Quality?

- Sediments increase turbidity and reduce light availability which can cause a decline in aquatic plants and organisms.
- Fish eggs are covered, spawning beds and pools are filled in with sediment and food supplies are reduced.
- Boating and other recreational activities are also impaired due to effects such as decreased water clarity and fisheries decline.
- Sedimentation reduces the depth of streams and can cause an increase in flooding.
- Nutrients, microbiological inputs and toxicants adhere to sediment. Excess nutrients promote the growth of too much aquatic vegetation and deplete oxygen levels for other organisms. Microbiological inputs and toxicants can affect wildlife and threaten human health.



## Builder, Contractor, Owner and Construction Site Operator Responsibilities

You are responsible for:

- Impacts to the storm system and damage caused by pollutants from your work site.
- Developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) in compliance with the statewide Phase II Stormwater permit for construction activities.
- Complying with stormwater management requirements of the local government having jurisdiction over the project.

## BMP's to Prevent Erosion and Sedimentation

For a complete list of approved Best Management Practices refer to the *NYS Guidelines for Urban Erosion and Sediment Control*

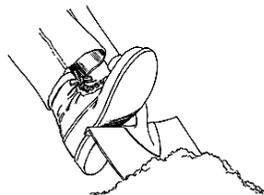
### Construction Phasing

- Sequence construction activities so that the soil is not exposed for long periods of time.
- Schedule or limit grading to small areas.
- Install key sediment control practices before site grading begins.
- Schedule site stabilization activities, such as landscaping, to be completed immediately after the land has been graded to its final contour.



### Site Stabilization

- Vegetate or mulch all exposed areas as soon as land alterations have been completed.
- Use rock or other appropriate material to cover the storm drain inlet to filter out trash and debris.
- Inspect and maintain silt fences after each rain-storm.
- Don't place silt fences in the middle of a waterway or use them as a check dam.



- Make sure storm water is not flowing around the silt fence or other vegetative buffers.
- Cover or seed all dirt piles.

### Protect Natural Features

- Minimize the amount of vegetation that is cleared from the site.
- Identify and protect areas where existing vegetation, such as trees, will not be disturbed by construction activity.



- Minimize the amount of exposed soil.
- Protect and install vegetative buffers along waterbodies to slow and filter stormwater runoff.
- Maintain buffers by mowing or replanting periodically to ensure their effectiveness.

### Storm Drain Inlet Protection

- Rough grade or terrace slopes.
- Break up long slopes with sediment barriers. Under drain or divert stormwater away from slopes.
- Install structural BMP's to trap sediment on the downslope sides of the lot.
- Remove mud and dirt from the tires of construction vehicles before they enter a paved roadway.
- Control driveway access to limit tracking of mud onto streets.
- Properly size entrance BMP's for all anticipated vehicles.
- Make sure that the construction entrance does not become buried in soil.

