

Appendix I
Stormwater Management & Erosion Control

Roadbank/Road Ditch Erosion
Very Severe

Location	Town	Sub-water-shed	Intersection	Distance From Intersection (mi)	Eroded Distance	Slope	Erosion Class (vs,s,m)	Side (l,r,b)	Depth (m)	Width (m)	Road Length (mi)	Exposed Roots	Collapsing Banks	Washed Out Gravel	Newly Dug/ Bare Soil (nd, bs)	Veg Cover	Private	Next to Crop
Townline Road	Aurelius	Yawger Creek	Oakwood Road	2.35	0.05	11%	VS	R	1.7	3.7	3.1	Y	Y	Y	BS	Some		
Braleley Road	Caroline	Sixmile Creek	Central Chapel Road	0.1	0.45	4%	VS	B	4.9	13	0.65	Y	Y	Y	BS	None		
Braleley Road	Caroline	Sixmile Creek	Central Chapel Road	0.1	0.45	4%	VS	B	4.9	13	0.65	Y	Y	Y	BS	None		
Grove School Road	Caroline	Sixmile Creek	Central Chapel Road	0.65	0.05	5%	VS	R	4.7	15	1.6	Y	Y	Y	BS	None		
Bald Hill Road	Caroline	Sixmile Creek	Dead End	1.45	0.2	10%	VS	L	1.8	3	1.9	Y	Y	Y	BS	Little		
Middaugh Road	Caroline	Sixmile Creek	Coddington Road	0.85	0.05	6%	VS	L	1	3.2	1.3	Y	Y	Y	BS	None		
Bailor Road	Caroline	Sixmile Creek	Valley Road	0.6	0.05	4%	VS	L	2.4	9.3	2	Y	Y	Y	BS	None		
Old 76 Road	Caroline	Sixmile Creek	Valley Road	0.6	0.1	1%	VS	B	1.4	16.3	2.5		Y	Y		None		
Deer Crossing Lane	Covert	Interlaken Area	Rt. 89	0.4	0.05	19%	VS	L			1	Y	Y	Y	BS	Little	Y	
Vanbuskirk Gulf Road	Danby	Cayuga Inlet	Kelloggs Corner Road	3.05	0.05	7%	VS	B	1.7	8.6	3.1	Y	Y	Y	BS	Little		
Beach Hill Road	Danby	Cayuga Inlet	Maple Avenue	0.65	0.65	10%	VS	L	1.5	3.8	1.5	Y	Y	Y	BS	Some		
Statton Road	Danby	Cayuga Inlet	Rt. 96	0.9	0.05	7%	VS	B	4.2	14	1.7	Y	Y	Y	BS	Little		
Statton Road	Danby	Cayuga Inlet	Rt. 96	1	0.05	9%	VS	L	1.7	7.3	1.7	Y	Y	Y				
Statton Road	Danby	Cayuga Inlet	Rt. 96	1	0.05	9%	VS	L	1.7	7.3	1.7	Y	Y	Y				
Yellow Barn Road	Dryden	Sixmile Creek	Midline Road	0.2	0.25	1%	VS	R	3.4	11		Y	Y	Y	BS	Some		
Bostwick Road	Enfield	Enfield Creek	Rt. 13A	4.4	0.45	10%	VS	R	1	4	5.3	Y	Y	Y	BS	Little		
Bostwick Road	Enfield	Enfield Creek	Rt. 13A	4.4	0.45	10%	VS	R	1	4	5.3	Y	Y	Y	BS	Little		
Fish Road	Enfield	Enfield Creek	Rt. 327	0.15	0.35	2%	VS	L	3.9	11.6	3.2	Y	Y	Y	BS	Moderate		
Van Ostrand Road	Enfield	Cayuga Inlet	Rt. 13	0.7	0.15	1%	VS	B	5.2	16.2	1.85	Y	Y	Y	BS	Little		
Trumbull Corner	Enfield	Enfield Creek	Rt. 13	5.25	0.15	3%	VS	R			6	Y	Y	Y	BS	None		
Hill Road	Genoa	Little Salmon Creek	Atwater Road	0.75	0.05	7%	VS	R	2.2	13	1.6	Y	Y	Y	BS	Little		
Center Road	Genoa	Little Salmon Creek	Dead End	0.45	0.05	9%	VS	L	2.6	10.6	3.7	Y	Y	Y	BS	Little		Y
Clearview Road	Genoa	King Ferry Station Area	Rt. 34B	1.4	0.05	13%	VS	R	1.8	3.3	1.5		Y	Y		Some		
Bedrock Lane	Genoa	King Ferry Station Area	Dead End	0	1.65	1%	VS	L			1.65	Y	Y	Y		Some		
Bedrock Lane	Genoa	King Ferry Station Area	Dead End	0	1.65	1%	VS	L			1.65	Y	Y	Y		Some		
Cemetery Lane	Groton	Fall Creek	Lafayette Road	0.6	0.05	0%	VS	R			1.6	Y	Y	Y		Little		
Bower Road	Hector	Spring Brook	Stillwell Road	1.9	0.1	7%	VS	L	4	11.5	2.5	Y	Y	Y	BS	None		
Voorheis Road	Hector	Spring Brook	Rt. 227	1.95	0.1	10%	VS	L	4.5	12.4	2.5	Y	Y	Y	BS	Little		
Bergen Road	Hector	Taughannock Creek	Newtown Road	0.95	0.05	7%	VS	R	4.5	11.4	2.9	Y	Y	Y	BS	None		
Burns Road	Ithaca	Sixmile Creek	Coddington Road	0.85	0.05	4%	VS	R	4.3	11	1.1	Y	Y	Y	BS	Some		
Caldwell Road	Ithaca	Fall Creek	Forest Home Drive	0.1	0.05	10%	VS	B	1.1	3.1	0.5	Y	Y	Y	BS	Little		
Rt. 13	Lansing	Lansing Area	Cayuga Heights Line	0	0.35	4%	VS	R			10.8			Y		Little		
East Lake Road	Lansing	Lansing Area	Rt. 34	0.45	0.05	6%	VS	R	2	7.5	0.9	Y	Y	Y		Little		
East Lake Road	Lansing	Lansing Area	Rt. 34	0.5	0.2	8%	VS	L	2.9	10.5	0.9	Y	Y	Y	BS	Some		
East Lake Road	Lansing	Lansing Area	Rt. 34	0.55	0.05	0%	VS	R	2.3	10	0.9	Y	Y	Y	BS	Little		
Reach Run	Lansing	Lansing Area	Dead End	0	0.1	6%	VS	L			0.85	Y	Y	Y	BS	None		
Reach Run	Lansing	Lansing Area	Dead End	0.1	0.05	5%	VS	R			0.85		Y	Y	BS	Little		
Waterplant Road	Lansing	Lansing Area	Rt. 34	0.45	0.15	6%	VS	R			0.85		Y	Y	BS	Little		
Brownhill Road	Lansing	Locke Creek	Gulf Road	0.05	0.1	11%	VS	R			1.3	Y	Y	Y	BS	None		
Ludlowville Road	Lansing	Salmon Creek	Rt. 34B	0.3	0.1	4%	VS	R	2.5	9.6	1.2		Y	Y	BS	Little		
Sunset Beach Road	Ledyard	King Ferry Station Area	Rt. 90	0.1	0.1	1%	VS	L			0.5		Y	Y	BS	Some	Y	
Honoco Lane	Ledyard	King Ferry Station Area	Lake Road	0.2	0.9	0%	VS	L			3.65	Y	Y	Y	BS	Some	Y	
Honoco Lane	Ledyard	King Ferry Station Area	Lake Road	1.3	0.1	0%	VS	L			3.65	Y	Y	Y	BS	Some	Y	
Honoco Lane	Ledyard	King Ferry Station Area	Lake Road	1.6	0.7	0%	VS	L			3.65	Y	Y	Y	BS	Some	Y	
Honoco Lane	Ledyard	King Ferry Station Area	Lake Road	2.4	1.2	0%	VS	L			3.65	Y	Y	Y	BS	Some	Y	
Kings Corners Road	Ledyard	Great Gully	Rt. 90	3.6	0.05	4%	VS	R	2.5	11.2	4.3	Y	Y	Y	BS	Little		
Van Ostrand Road	Newfield	Cayuga Inlet	Rt. 13	0.2	0.1	10%	VS	R	1.7	4.5	1.85	Y	Y	Y	BS	None		
Prottis Hill Road	Newfield	Fish Kill	Millard Hill	1.35	0.3	10%	VS	L	1.9	6.7	1.65	Y	Y	Y	BS	Little		
Cox Road	Newfield	West Branch	Rt. 13	0.1	0.1	6%	VS	R	4.8	13	0.8	Y	Y	Y	BS	Little		
Tupper Road	Newfield	Cayuga Inlet	Seely Hill Road	0.95	1	8%	VS	L	1.5	3.8	2.4	Y	Y	Y	BS	Little		
Vanbuskirk Road	Newfield	Cayuga Inlet	Vanbuskirk Gulf Road	0	0.1	10%	VS	B	4	12.3	1.5	Y	Y	Y	BS	Little		
West Wycoff Road	Ovid	Sheldrake Creek	Hall Road	0.65	0.1	3%	VS	L	8 ft	14.5	2.9	Y	Y	Y	BS	Little		Y
South Cayuga Lake Road	Romulus	Big Hollow Area	Rt. 89	0	0.05	8%	VS	L	2.6	6.1	0.3	Y	Y	Y	BS	Moderate		
Elm Beach Road	Romulus	Big Hollow Area	Rt. 89	0	0.1	9%	VS	R	5	10.2	1	Y	Y	Y	BS	Little		
Filmore Road	Summerhill	Fall Creek	Lake Como Road	0.15	0.2	5%	VS	L			1.4	Y	Y	Y	BS	Some		
Filmore Road	Summerhill	Fall Creek	Lake Como Road	0.15	0.2	5%	VS	L			1.4	Y	Y	Y	BS	Some		
Filmore Road	Summerhill	Fall Creek	Lake Como Road	0.35	0.1	6%	VS	B	1.6	4.4	1.4	Y	Y	Y	BS	Some		
Willow Creek Point	Trumansburg	Willow Creek Area	Rt. 89	0.025	0.05	16%	VS	R	1.8	3.9	0.1	Y	Y	Y	BS	Some		

Source: Cayuga Lake Watershed Roadbank Inventory, 2000, Genesee/Finger Lakes Regional Planning Council

Storm Water Management Regulations

Introduction

Significant improvements have been achieved in controlling pollutants that are discharged from sewage and wastewater treatment plants. Across the nation, attention is being shifted to other sources of pollution such as stormwater runoff. Stormwater management, especially in urban areas, is becoming a necessary step in seeking further reductions in pollution in our waterways and presents new challenges. Stormwater runoff normally cannot be treated in the same way as accomplished by sewage and wastewater treatment plants. More often than not, end-of-pipe controls are not the best answer for removing pollutants from stormwater runoff. Pollutants in runoff enter our waterways in numerous ways and the best way of control is usually at the pollutant's source. Sometimes, significant improvements can be made by employing best management practices, or "BMPs". Proper storage of chemicals, good housekeeping and just plain paying attention to what's happening during runoff events can lead to relatively inexpensive ways of preventing pollutants from getting into the runoff in the first place and then our waterways.

The EPA and the NYSDEC are increasing their attention in several ways. Some activities, including construction activities disturbing 5 or more acres, are now required to obtain SPDES permits which authorizes the discharge of runoff to surface waters. There are SPDES General Permits for Stormwater available for this purpose. The general permits require the activity to implement stormwater management measures for controlling pollutants in the stormwater runoff. Although it's only a proposal at this time, the Phase 2 regulations will widen the types of activities needing a SPDES permit to include separate storm water systems in urban areas and construction activities disturbing less than five (5) acres.

Future Stormwater Requirements: (Discussion of Phase I and Phase II)

Point Sources

The 1972 amendments to the Federal Water Pollution Control Act (referred to as the Clean Water Act), prohibit the discharge of any pollutant to navigable waters from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Efforts to improve water quality under the NPDES program have traditionally focused on reducing pollutants in discharges of industrial process wastewater and municipal sewage. At the onset of the program in 1972 many sources of industrial process wastewater and municipal sewage were not adequately controlled, and represented addressing environmental problems. In addition, sewage outfall and industrial process discharges were easily identified as responsible for poor, often drastically degraded water quality conditions.

Since enactment of the 1972 amendments to the Clean Water Act, significant progress has been made in cleaning up industrial process wastewater and municipal sewage.

Continuing improvements are expected for these discharges as the NPDES program continues to shift to toxic and water quality-based pollution control.

Nonpoint sources

With the vast improvements in pollution control of point source discharges it became evident that more diffuse sources (occurring over a wide area) of water pollution, such as urban runoff, were also a major cause of water quality problems. The focus was beginning to shift to nonpoint source pollution. The appropriate means of regulating storm water discharges within the NPDES program has been a matter of serious concern since implementation of the NPDES program. Each attempt to devise a workable program has been the focus of substantial controversy, in view of the large number of storm water sources, the nature of storm water runoff and the realities of program priorities and resources.

Initial Exemption for Stormwater

In 1973, EPA promulgated its first storm water regulations which exempted urban runoff if it was not contaminated by industrial or commercial activity. Because of the intermittent, variable and unpredictable nature of storm water discharges, EPA reasoned that the problems caused by storm water discharges were better managed at the local level through nonpoint source controls such as the imposition of specific management practices to prevent the pollutants from entering the runoff. The Agency also justified its decision by noting that issuing individual NPDES permits for the hundreds of thousands of storm water point sources in the United States would create an overwhelming administrative burden and would divert resources away from control of industrial process wastewater and municipal sewage, which at the time, were more pressing and identifiable environmental problems.

Phase I

There were a series of legal challenges to EPA's approach to stormwater pollution abatement and the NPDES permit process as it related to nonpoint source pollution. As a result of those legal challenges and comments from various municipalities around the country, the NPDES regulations evolved until the EPA promulgated the final Phase I storm water regulations on November 16, 1990. This final regulation establishes requirements for the storm water permit application process. It also sets forth the required components of municipal storm water as a preliminary permitting strategy for industrial activities. In implementing these regulations, EPA and the States will strive to achieve environmental results in a cost effective manner by placing high priority on pollution prevention activities, and by targeting activities based on reducing risk from particularly harmful pollutants and or from discharges to high value waters.

Phase II

The U.S. Environmental Protection Agency has recently proposed issuing new construction storm water permits, which will increase the scope of the permitting program. Under the proposal the scope of the new permits will extend to specifically designated sites under five acres and expand conditions for protecting endangered species and historic properties. The proposed permit adds requirements for public notification and pollution prevention plan performance objectives.

While the proposed permits will not impose a limitation or performance standard in the permit, EPA said it believes required storm water management measures will remove at least 80 percent of total suspended solids from at construction site run-off. The agency said total suspended solids also provide a parameter for controlling other pollutants, including heavy metals, oxygen demanding pollutants, and nutrients commonly found in storm water discharges.

The agency said the existing permits were first issued in 1992 and most will expire in September 1997. The permits authorize stormwater discharges from construction sites and currently apply to construction sites, which are larger than five acres. The permits call for sediment and erosion controls, storm water management measures, and construction site housekeeping best management plans. EPA said permittees must develop and implement four classes of controls in the pollution prevention plan. The first three include:

- * Erosion and Sediment Controls
- * Stabilization Practices
- * Structural Practices

to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. For sites with more than 10 disturbed acres at one time and served by a common drainage location will require a temporary or permanent sediment basin.

EPA estimated the cost for providing sediment and erosion controls from \$1 to \$5 per square foot for seeding mulching and riprap drainage swales. And around \$6 per linear foot silt fences and earth dikes.

Other measures such as traps, sump pits and sediment basins will cost between \$500 and \$50,000 depending upon application and size.

Lastly, in some cases the Storm Water Management plan will need to cover discharges of pollutants from storm water management structures after construction ceases. EPA pegged the annualized costs of several storm water management of options a between about \$3000 for 9 acre developed area to as much as \$10,000 for 20 acre developed area.

EPA said it will require all permit applicants to follow procedures to ensure protection of listed species and critical habitat. That requirement will extend to off-site area located in the path through which contaminated point source storm water flows to the point of

discharge into the receiving water. EPA is soliciting comment on whether the scope of protection should be broadened to encompass listed species found on the entire construction site and not just those species found "in proximity" as currently defined.

Potential Impact on New York State of Phase II Regulations

There are basically three groups of activities that will be affected by the proposal:

- (1) Phase 1 activities;
- (2) Construction activities disturbing between 1 and 5 acres ("other" activities); and
- (3) "Urbanized" smaller municipalities. These are discussed in greater detail below.

Phase 1 activities

The scope of activities covered by the NPDES regulations under §122.26(b)(14) will be unchanged, maintaining the original eleven categories of activities, including §122.26(b)(14)(x) which pertains to runoff from construction activities that disturb 5 or more acres. There are, however, several impacts that the proposal will have on these existing eleven groups of activities.

The permit exemption for industrial-type activities that are operated by small municipalities will expire. For example, storm water runoff from POTWs and construction activities for small municipalities will need to obtain permit authorization by August 7, 2001.

"Light industry" activities identified under 122.26(b)(14)(xi) which previously didn't have to do anything if materials weren't exposed to storm water will have to provide certifications of "non-exposure" to NYS under the proposal. Non-exposure certifications will need to be submitted for each permit term (i.e. 5 years) and will also be applicable to the other categories of activities listed under §122.26(b)(14) except construction activities under §122.26(b)(14)(x).

"Other" Activities(i.e. construction between 1 and 5 acres)

The proposal establishes a new section, 122.26(b)(15), which deals with construction activities disturbing more than 1 but less than 5 acres. Storm water runoff from these activities will need a permit by May 31, 2002 unless waived by the permitting authority (i.e. DEC).

There are potential waivers based upon certifications to DEC where: (1) the "R" factor (soil erosivity factor) is less than 2; or (2) the soil loss will be less than 2 tons per year; or (3) where storm water controls are not needed based upon TMDLs and watershed plans.

EPA estimates that there are 110,000 of these construction activities nationwide.

Small Municipalities

EPA has amended the stormwater regulations to require that operators of municipal separate stormwater systems ("MS4"s) within "Urbanized Areas" develop programs for the control of stormwater under their jurisdiction. Urbanized Areas are defined by the US Census. New York State has 14 Urbanized Areas. These are:

1. Danbury Connecticut-NY State
2. Stamford Ct - NY State
3. Buffalo - Niagara Falls
4. Glens Falls
5. Albany - Schenectady - Troy
6. Binghamton
7. Elmira
8. Ithaca
9. Newburgh
10. Poughkeepsie
11. Rochester
12. Syracuse
13. Utica - Rome
14. New York City - Northeastern NJ

There are 44 cities, 183 villages and 141 towns within New York State's urbanized areas. All of the MS4s within these urbanized areas must adopt a minimum program (described below).

EPA has also identified another 25 municipalities (cities and villages) which are located outside of an urbanized areas. MS4s within these jurisdictions are potentially subject to permitting under the storm water program because of their population (> 10,000) and density (> 1,000/square mile).

New York State will have to develop and implement criteria and a process for designating additional municipalities for inclusion into the storm water program. Candidates for designation include municipalities described in the previous paragraph, DOT, the NYS Thruway, correctional facilities, universities and military bases. NYS will also need to consider inter-connected systems as well as the possibility of public petitions for designating additional municipal candidates. The deadline for designation is May 31, 2002 or May 31, 2004 where comprehensive watershed plans exist. Permits applications would be required 180 days afterwards.

Waivers would be possible provided that the municipality is small (<1,000 people) and there are watershed plans where TMDLs address the pollutants of concern.

Permits for small municipalities would need to be issued by NYS by March 1, 2002 and would focus on six (6) minimum areas

1. Develop an educational program to encourage public awareness of stormwater issues
2. Increase Public Participation and involvement in decisions involving stormwater

3. Institute a trackdown system to determine the cause of and remedy illicit connections
4. Review development plans to insure the adequacy of construction site runoff controls
5. Inspect stormwater facilities to insure that they are performing as designed
6. Adopt and institute a stormwater management pollution prevention program at facilities operated by the municipality

The resulting local programs would be comprehensive and address a wide range of activities under the control of the municipality such as industrial-type activities, construction, post-construction needs, flood control, salt storage and snow removal, fleet maintenance, parks and golf course management and sewer system maintenance to name just a few.

New York State would need to establish a list of acceptable BMPs and small municipalities would have to report annually to DEC on their implementation. NOITTs would be submitted by May 31, 2002 for review by New York State.

List of NYS Urbanized Communities

Likely Subject to EPA Phase II Regulations (by County)

Please note that the regulations are only PROPOSED at this time.

These communities are located either entirely or partially within one of New York's 14 urbanized areas

MS4s within the urbanized portion of these communities will likely be required to develop Phase II stormwater programs. (Urbanized areas are generally contiguous census blocks with population densities of greater than 1000 persons per square mile.)

EPA defines an MS4 as "...a conveyance or system or conveyances (including roads with drainage systems and municipal streets) that is owned or operated by the Federal government, a State, city, town borough, county, parish, district, association, or other public body designed or used for collecting or conveying stormwater which is not a combined sewer and which is not part of a Publicly Owned Treatment Works as defined at 40 CFR 122.26"

Cayuga Lake Watershed Municipalities Proposed for Coverage Under Phase II

Cayuga Heights (V) Tompkins

Dryden (T) Tompkins

Ithaca (C) Tompkins

Ithaca (T) Tompkins

Lansing (T) Tompkins

Lansing (V) Tompkins

SPDES General Permit for Stormwater Information Background

Passage of the Federal Water Pollution Control Act of 1972, amended later and known as the Clean Water Act (CWA), included the revised permitting program identified as the National Pollutant Discharge Elimination System (NPDES).

The CWA also identified the types of activities that needed authorization for the discharge of pollutants to the nation's waterways and established a hierarchy of standards and deadlines that the discharger had to meet.

The 1987 CWA amendments specifically identified the types of stormwater discharges requiring permit authorization and established deadlines for their achievement. New York State administers its State Pollutant Discharge Elimination System (SPDES) program which serves as the authorizing mechanism for activities in the State to comply with the NPDES program.

Purpose of the Permitting Process

Whenever somebody discharges to a "Water of New York State," they first need authorization to do so, which usually is accomplished by obtaining a SPDES permit from the DEC. This permit contains provisions under which the discharge is allowed to occur. A SPDES permit also satisfies the federal NPDES requirements since the DEC has an approved NPDES program which is administered in lieu of the EPA issuing NPDES permits in New York State.

Since 1975, SPDES permits have been issued mostly on a site-specific basis and have been tailored to an individual activity which often has been either a sewage or wastewater treatment facility. These individual, site-specific SPDES permits contain limits on the quantity and quality of the discharge. Permits often require self-monitoring in order to facilitate and enable the permittee to gauge compliance with his/her effluent limits. Individual SPDES permits also contain other appropriate provisions for safeguarding the receiving waters.

More recently, another type of SPDES permit has emerged; a general permit which is issued to a class (or category) of similar activities. Instead of an application for an individual SPDES permit, eligible dischargers may obtain the authority to discharge by submitting a completed Notice of Intent, Transfer or Termination (NOITT) form. Just like any other permit, activities which are covered under the general permit are required to comply with the provisions of the general permit. The most notable provision of the general permits for stormwater is the implementation of a pollution prevention plan that is tailored to the specific site and continually updated. The plan is made up of various Best Management Practices (BMPs), inspections and other requirements, each of which is aimed at controlling pollutants at their potential source(s).

As of this writing, there are two SPDES general permits for stormwater in effect. Another general permit for concentrated animal feeding operations (CAFOs) was issued in early July 1999. There are bound to be even more general permits in the future, especially when the Phase 2 regulations become final. General permits provide an alternative to

individual SPDES permitting and are available to any discharge which meets the eligibility provisions contained in the general permit. A discharger may have appropriate authority to discharge stormwater under either type of SPDES permit. Although the DEC would prefer that a facility have a single SPDES permit addressing all discharge sources, the recent federal regulations and associated deadlines have made it necessary for some activities to obtain SPDES authorization for a portion of its discharges under an individual permit and some stormwater discharges under the general permit. In time, however, it is the intent of DEC to amalgamate SPDES authorization under a single permit.

Advantages of a General Permit

Simple NOITT form
Quicker availability
Permit provisions
Lesser annual regulatory fee

General Construction Activity Stormwater Permit

(GCSP) application process begins with the filing of a Notice of Intent, Transfer or Termination (NOITT). The NOITT consists of a two page application and a letter size map. There is no filing fee, but a fee of \$50. per year is charged by NYSDEC. Bills for this fee are scheduled to be sent out in June or July of each year. Do not send money until you are billed to do so.

NOITT's are to be sent to:

NOITT
NYSDEC
50 Wolf Road
Albany NY 12233-3505

Who, When, and Why

Owners of lands which discharge stormwater associated with construction activity must apply for a permit if activities involve the disturbance of five (5) acres or more. Construction activity that results in a land disturbance of less than five (5) acres, but which is part of a larger common plan of development or sale, must also be covered by a permit.

Construction activities do not include routine maintenance performed by public agencies, or their agents, to maintain original line and grade, hydraulic capacity, or original purpose of facility, or emergency construction activities required to protect public health and safety.

Owner(s) of new construction must file an NOITT prior to commencement of clearing, grading, or excavation.

Owners of ongoing construction must file an NOITT along with a letter of explanation for late filing. For ongoing construction activity involving a change of ownership, the new owner must submit a new NOITT within 30 days of ownership.

Permit Conditions and Requirements

The GCSP prohibits the discharge of materials other than storm water and all discharges which contain a hazardous substance in excess of reportable quantities established by 40 Code of Federal Regulations (CFR) 117.3 of 40 CFR 302.4, unless a separate NPDES permit has been issued to regulate those discharges.

Permits for storm water discharges associated with construction activity must meet all applicable provisions of Sections 301 and 402 of the CWA.

After submitting an NOI and receiving notification of coverage under the GCSP, you must do the following:

Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) as described in Section A of the GCSP.

Develop and implement a Monitoring Program as described in Section B of GCSP.

Retain all records for a period of at least three (3) years after construction is completed.

Penalties

For falsification of reports, penalties of no more than \$10,000 and/or imprisonment of no more than two (2) years.

For violations of permit conditions, penalties are a fine of no more than \$25,000 per day as well as any other sanction provided by Section 309 of the Clean Water Act (CWA).

Other Stormwater Management & Erosion Control Permit Information

- General Permit for Stormwater Discharges Associated with Industrial Activity from Construction Activities <<http://www.dec.state.ny.us/website/dow/cnstruct.htm>>
- Stormwater Permits for Industrial and Commercial Properties <<http://www.dec.state.ny.us/website/dow/industr.htm>>
- General Permit for Construction Activities Erosion and Sediment Control Guidelines <<http://www.dec.state.ny.us/website/dow/appndixe.htm>>
- General Permit for Construction Activities The Stormwater Management and Erosion Control Plan <<http://www.dec.state.ny.us/website/dow/appndixf.htm>>

**Municipal Regulation & Control
Related to Stormwater Management & Erosion Control**

Stormwater Management & Erosion Control	Steep Slope & Structural Measures	Impervious Surfaces Controls	Wetlands & Riparian Corridor Controls	Open Space Controls
City of Ithaca	Town of Caroline	City of Ithaca	City of Ithaca	City of Ithaca
Town of Caroline	Town of Catherine	Town of Aurelius	Town of Caroline	Town of Cortlandville
Town of Catherine	Town of Covert	Town of Caroline	Town of Catherine	Town of Danby
Town of Cortlandville	Town of Danby	Town of Catherine	Town of Cortlandville	Town of Fayette
Town of Covert	Town of Groton	Town of Danby	Town of Covert	Town of Groton
Town of Danby	Town of Ithaca	Town of Dryden	Town of Danby	Town of Homer
Town of Dryden	Town of Lansing	Town of Fleming	Town of Dryden	Town of Ithaca
Town of Fayette	Town of Romulus	Town of Homer	Town of Fayette	Town of Lansing
Town of Groton	Village of Cayuga	Town of Ithaca	Town of Groton	Town of Romulus
Town of Homer	Village of Lansing	Town of Virgil	Town of Homer	Town of Seneca Falls
Town of Ithaca	Village of Trumansburg	Village of Aurora	Town of Ithaca	Town of Spencer
Town of Lansing		Village of Dryden	Town of Lansing	Town of Ulysess
Town of Seneca Falls		Village of Freeville	Town of Romulus	Town of Varick
Town of Spencer		Village of Lansing	Town of Seneca Falls	Town of Virgil
Town of Ulysess		Village of Trumansburg	Town of Spencer	Village of Dryden
Town of Varick			Town of Summer Hill	Village of Lansing
Town of Virgil			Town of Varick	Village of Trumansburg
Village of Aurora			Village of Aurora	
Village of Cayuga			Village of Cayuga	
Village of Dryden			Village of Dryden	

Village of Freeville			Village of Trumansburg	
Village of Lansing				
Village of Trumansburg				

Municipal Regulatory Stormwater Management & Erosion Control

	Comprehensive Plan	Zoning	Subdivision	Site Plan
City of Ithaca		All new or enlarged parking areas, including combined drive ways and maneuver areas, need adequate runoff drainage for a 2-yr. storm, connection to public stormwater system	Designed to accommodate runoff from undeveloped land uphill and where to discharge into natural or artificial surface drainage way; should not have greater rate than would under most severe conditions if were undeveloped	Adequate; numbers on existing and expected increased loads on the system may be required
Town of Caroline			<p>Drainage plan for 25 year flood. No more storm water runoff than before development. Protect and maintain exist systems (perennial and intermittent streams, swales and ditches etc.). No construction, alteration or moving within drain course</p> <ul style="list-style-type: none"> Design goal: minimize opportunity for the soil to be moved by wind, precipitation, runoff and prevent sediment from reaching water body of other lands 	
Town of Catherine			When area subject to periodic overflow. If top soil removal, other means to prevent runoff and erosion. PB might require report if grading, excavating, filling involved	
Town of Cortlandville		<p>Stormwater management and erosion and sediment control: No net increase in runoff between pre and post development for 2yrs, 10yrs, 50yrs-24hrs storm events; however, some perform standards more stringent: Water quality management: e.g. stormwater return to remove pollutants in Areas I and II</p> <p>E.g. smallest area possible subject to erosion and sediment (maximum 2 acres), immediately stabilizing within 3days and seeding immediately after end of construction. Board approval for excavation every year: considers soil erosion, drain, presence of farmland, slopes</p>	Installation of approved storm and surface drain	

Town of Covert			Culverts or similar structure where watercourse separates a proposed street from abutting property; approval by town engineer. Stormwater easement or drainage ROW not <20ft in width as required by town engineer. Planning Board may require to carry away by pipe or open ditch spring or surface water that existed because of or prior to construction. Culvert of drainage facility large enough to accommodate potential runoff from its entire upstream drainage area (10 year storm) whether inside or outside the subdivision, approval by town engineer. Study on the effect of subdivision on existing downstream drainage facilities (overload during ten year storm) reviewed by town engineer and Planning Board: improvements when necessary	
Town of Danby	Appropriate for development	No excavation open for more than a year after work is done	Avoid stormwater rechanneling. Construction consistent with surrounding drainage patterns, preference of natural drainage patterns over rechanneling. Easement when subdivision traversed by water course, creek, etc., drain. ROW of sufficient width. No more runoff from development than before development for a 2 year, 10 year, 100 year 24-hour storm considered individually. Exist and potential runoff determined: 0.5 inches per hour. When >7% grade, detention or retention ponds, check dams, etc. require to minimum runoff velocity. Adequate facilities; 2% grade minimum on newly regraded land to expedite drainage. Only to necessary extent; start revegetation as soon as practical	
Town of Dryden			Adequate drainage facilities required where water course separates street from abutting property; and where subdivision is traversed by water course ROW or easement >20ft, approval by town engineer required. Board may require to carry away spring or surface water through pipe or ditch, location in street ROW where feasible. Drain facility to carry entire potential run-off from upstream from 10yr storm, approval by town engineer. Drain facility to prevent overflow of downstream facility in a 5 year storm, approval by town engineer.	

Town of Fayette			<p>Adequate drain facility required where water course separates street from abutting property; and where subdivision is traversed by water course ROW or easement >20ft, approval by town engineer required. Board may require to carry away spring or surface water through pipe or ditch, location in street ROW where feasible. Drain facility to carry entire potential run-off from upstream from 10year storm, approval by town engineer. Drain facility to prevent overflow of downstream facility in a 5 year storm, approval by town engineer. Moved topsoil redistributed to have at least 6 inches of cover and shall be stabilized by seeding or planting within 90days. Re-cover disturbed area maximum 6 months after end of construction</p>	
Town of Groton		Re-cover disturbed area maximum 30days after end of construction	<p>Adequate drainage facility required where water course separates street from abutting property; and where subdivision is traversed by water course ROW or easement >20 feet, approval by town engineer required. Culverts be placed in natural waterways, at low spots in grade and other when required; size and length determined and approval by Highway Superintendent. Adequate ditches be provided by builder. Underdrains be placed in low wet areas where hill seepage is encountered. Board may require to carry away spring or surface water through pipe or ditch, located in street ROW where feasible. Drain facility to carry entire potential run-off from upstream from 10 year storm, approval by town engineer. Drain facility to prevent overflow of downstream facility in a 5yr storm, approval by town engineer</p>	
Town of Homer		Reseeding after sod removal and if no building or parking. Covering or refilling of construction sites to normal grade after 1yr	<p>Street improvements including storm drain. Adequate drain facility required where water course separates street from abutting prop; and where subdivision is traversed by water course ROW or easement >20ft, approval by town engineer required. Drain facility to carry entire potential run-off from upstream from 10yr storm, approval by town engineer. Drain facility to prevent overflow of downstream facility in a 5yr storm, approval by town engineer</p>	

Town of Ithaca		Drainage and erosion management plan approval by town engineer when more than 50cubic yards removal or deposit of fill. After end of construction, restore normal grade	Related to surround drain pattern. Approval by town engineer: minimum run-off rate of 0.5in per hour	
Town of Lansing	Should reduce negative impacts on Cayuga Lake and its tributaries from erosion, sedimentation, and drainage	Site Plan Review: require, no increase in stormwater amount across adjacent property	Engineering plan required to explain proposed stormwater drain plan (culverts, erosion control measures, etc.). Drain facility to carry entire potential run-off from upstream from 25yr storm and bank stabilization, approval by town engineer. Drain facility to prevent overflow of downstream facility in a 25yr storm, approval by town engineer. No topsoil removal without Planning Board approval; after construction redistribution to have 6 inches of cover	
Town of Seneca Falls		For PUD approval: storm drain system including adequate protection of surrounding area from stormwater runoff. Town Board approval of landscaping and drain plan before topsoil removal. Re-cover disturbed area maximum 1yr after end of construction	Adequate drainage facility required where water course separates street from abutting property; and where subdivision is traversed by water course ROW or easement >20ft, approval by town engineer required. Board may require to carry away spring or surface water through pipe or ditch, locate in street ROW where feasible. Drain facility to carry entire potential run-off from upstream from 10 year storm, approval by town engineer. Drain facility to prevent overflow of downstream facility in a 5yr storm, approval by town engineer	
Town of Spencer			No approval for development that threatens public health, water supplies, including aquifers. Ground surface restored and graded 6 months after construction.; also original topsoil returned and seeded (to stabilize)	
Town of Ulysess			Adequate drain facility required where water course separate street from abutting property; and where subdivision is traversed by water course ROW or easement >20ft, approval by town engineer required. Board may require to carry away spring or surface water through pipe or ditch, location in street ROW where feasible. Drain facility to carry entire potential run-off from upstream from 10yr storm, approval by town engineer. Drain facility to prevent overflow of	Environmentally sound design to minimize runoff, minimize erosion, and protect building in flood prone areas

			downstream facility in a 5 year storm, approval by town engineer. Roads: adequate ditches approval by town engineer (minimum ditch grade 0.5%). Culverts in natural waterways approval by Highway Superintendent. Underdrains in low wet areas. Top surface from crushed gravel or crusher run stone	
Town of Varick			Adequate drain facility required where water course separate street from abutting property; and where subdivision is traversed by water course ROW or easement >20feet, approval by town engineer required. Board may require to carry away spring or surface water through pipe or ditch, location in street ROW where feasible. Drain facility to carry entire potential run-off from upstream from 10 year storm, approval by town engineer. Drain facility to prevent overflow of downstream facility in a 5 year storm, approval by town engineer	
Town of Virgil			Storm sewers and drain facilities required and approval by town engineer. Re-cover disturbed area maximum 6 months after end of construction	
Village of Aurora		Subdivision: systems must be approved by SWCD. Subdivision design frequency: roadway ditches 5yrs; storm sewers 5yrs; culvert under roadway 25yrs; water courses 10yrs. Subdivision ditch easement for maintenance (minimum width of 12ft); open ditches must have side slope ratio of 2:1 and a min 2ft bottom width. Subdivision: adequate protection of ditches by enclosing the water course with pipe; sodding or paving w/ brick, concrete, half tile or broken concrete slabs or stone. Stormwater management: Bureau of Water Quality management guidelines (1992). Subdivision: storm sewers shall be installed when board decides (advise from Village Consultant Engineer, or Cayuga County SWCD or C D T) according to NYSDEC standards. Road construction: removed topsoil shall be uniformly spread again to support vegetation		

Village of Cayuga			Adequate drainage easement required where property is traversed by water course. Lots graded to provide positive drain. Facility standards specified according to Village standards. Storm sewers to ensure adequate drain if Board deems necessary, advised by Village public works supervisor	
Village of Dryden		Adequate drainage facility required where water course separates street from abutting prop; and where subdivision is traversed by water course ROW or easement >20ft, approval by town engineer required. Approved adequate drainage facility for up- and down-stream runoff (very detailed design provisions). Board required to carry away spring or surface water through pipe or ditch, location in street ROW where feasible. Construction sites: erosion control measures (anti-erosion materials, straw, etc.). Any disturbed area must be restored with 6inch cover and appropriately reseeded		
Village of Freeville		Re-cover disturbed area maximum 6months after end of construction		
Village of Lansing		Re-cover disturbed area maximum 1yr after end of construction	Adequate drain facility required where water course separates street from abutting property; and where subdivision is traversed by water course ROW or easement >20ft, approval by village engineer required. Approval by village engineer, very detailed design requirements for street gutters, ditches, storm drains and channels, catch basins. Board may require to carry away spring or surface water through pipe or ditch, location in street ROW where feasible. Drain facility, approval by village engineer, to carry entire potential run-off from upstream; natural waterways are preferable to artificial ones. Facilities are based on design flow with a minimum return interval (drain area 1sq mi/>1sq mi for recurrence level of 25yrs/50yrs); overall run-off coefficient is 0.4 minimum. No approval if overflow of downstream facility in a 25 year storm: mitigation necessary. In general, new subdivision shall not discharge more stormwater into	

			adjacent culverts and channels than before its construction, but Planning Board may require additional drain facility capability in areas susceptible to flooding. Open drain lines and swales shall be protected against erosion. Planning Board may require erosion prevention measures (adequate run-off facility, vegetative retention, seeding and sodding, etc.). Expose the least amount of land during construction; prevention measures within 5days except on immediate construction site. Temporary vegetation and/or mulching, seeding and sodding mandated. Temporary sediment basins and /or check dams before construction begins	
Village of Trumansburg		Extraction of natural products prohibited, except for construction		

Regulatory Management for Steep Slope & Structural Measures

	Comprehensive Plan	Zoning	Subdivision
Town of Caroline			Avoid cross streams and ditches with roads and driveways to handle potent future upland runoff and prepare for 100yr flood. Consider landscape slope instead of retaining wall
Town of Catherine			Planning Board may require larger lot sizes when slope >15%
Town of Covert			Grading plan if natural contours to be changed more than 2 feet
Town of Danby	Appropriate topography for development		No development when >15% poses threat to environment, residents. Construction at >15% need Code Enforcement approval for stabilization and revegetation measures. When land disturbed: no slope steeper than 1 foot vertical rise to 3 feet horizontal distance, except when slope grade existed before development, even than Planning Board approval necessary (threats to nature and residents). Use terraces and diversions on long slopes to minimize erosion, also sedimentation; basins, traps
Town of Groton	Avoid development on steep slopes to minimize effects on soil stability and water quality		
Town of Ithaca		No construction over 25% with minimum horizontal slope length of 25 feet	
Town of Lansing		Site Plan Review: development on erodible soils and slopes >10% shall include erosion plan	
Town of Romulus	Least possible development		
Village of Cayuga			No development over 10%
Village of		Permit for development >25%	

Lansing			
Village of Trumansburg	Protection from destructive development		

Regulatory Management of Impervious Surfaces

	Comprehensive Plan	Zoning	Subdivision	Site Plan
City of Ithaca		Combine driveways whenever possible; Building Commissioner approval for new and enlarged park lots (four cars or more); surface of parking areas and driveways according to standards, minimum erosion and shall support drainage; acceptable surface material: crushed stone, brick, concrete, asphalt or sim.	Compacted gravel roadway approved by City Engineer	In parking areas a minimum of 12% of interior ground area shall be planted including trees with at least 50 feet mature height and 2 1/2 inch at time of planting
Town of Aurelius		Accessory structures >200 square feet need build permit; well-drained parking; max building cover: A, AR, FH 10%; R and C 30%; I 35%; off-street parking and loading facility: all weather surface, may be gravel, crushed stone, concrete, black top		
Town of Caroline			Avoid construction on hydric soils; impervious surfaces in favor of pervious surf; areas that raise concerns: large parking lots or load areas without methods to contain oil and sediment deposited on pavement	
Town of Catherine		One-family, ag., business: >20 % of lot covered w/ structures multi-family: >50 % of lot covered w/ structures	Pavement approved by Highway Superintendent	
Town of Danby		Low-density area: no more than 25% of lot covered; commercial zone: <30%; new mobile		

		home park: access drives and walkways paved w/ blacktop, concrete, or other solid materials; old mobile home park: crusher run stone		
Town of Dryden		<15% of lot covered w/ structures (low density residential, low density residential and ag); <20% w/ structures and <30% including water and sewer facilities (moderate density ag-res); <30% (higher density ag-commercial-residential), <60% (manufacturing and assembly); Planned Unit Dev District with minimum of 100acres, a minimum of 30% in low density residential must remain open		
Town of Fleming		Maximum building on lot coverage for all zones 35%		
Town of Homer	Sufficient to let water penetrate ground	Establishment of Aquifer Protection District, including Wellhead Protection Area (Area I), Primary Aquifer Area (including Environmental Conservation Law wetlands)(Area II), and Principal Aquifer Area (including Environmental Conservation Law wetlands (area III), Tributary Watershed Area) (Area IV). Prohibited uses include pavement/impervious parking with area >12,000 sq feet in Areas I and II.		
Town of Ithaca		Multiple family homes: park lots surfaced w/ black top, compacted gravel or other dust-free material, graded to drain properly and access and sidewalks covered w/ black-top, concrete, other solid material; Business C: <30% lot cover; park: black-top, stone, dust-free material, graded to drain; Light industrial, industrial: black-top, stone, dust-free material, graded to drain; Six Mile Creek Valley Construction District: no more than 15% of		

		total lot covered		
Town of Lansing	Should encourage a maximum amount of natural vegetation in development projects and planting of appropriate new trees along roads and park lots			
Town of Virgil		Maximum lot/land coverage: farm and farm uses (AG, AR) 10%; Highway Commercial 30%; PUD 50%; all other 20%		
Village of Aurora		Maximum building coverage: AR 30%; R 30%; C 35%; I 25%		
Village of Dryden		Maximum lot coverage: RA 30%, RB 40%, Multiple R 30%; Specified road construction material: bituminous concrete as surface		
Village of Freeville		maximum lot coverage: residential 15 - 20%; ag 30% (residential), 40% (non-residential); site plan 40% (residential, municipal, education, business), 50% (religious), 80% (commercial)		
Village of Lansing		Maximum lot coverage: low density residential, all uses (10%); medium density residential (sewered areas 15%; non-sewered 10%); high density residential (sewered areas 20%, non-sewered 10%); commercial low traffic (none); commercial high density traffic (none); business and	Require bituminous concrete street pavement	

		technology (25%); research (25%)		
Village of Trumansburg		Industrial district: maximum lot coverage 50%, rest for parks, sidewalks	Adequate drain facility required where water course separates street from abutting property; and where subdivision is traversed by water course ROW or easement >20ft, approval by town engineer required; Board may require to carry away spring or surface water through pipe or ditch, location in street ROW where feasible; Drain facility to carry entire potential run-off from upstream from 10 year storm, approval by town engineer; Drain facility to prevent overflow of downstream facility in a 5 year storm, approval by town engineer	

Stormwater Management and Erosion Control (Local Law) Model Ordinance

Section One: Short Title

This Ordinance shall be known as the "Stormwater Management and Erosion Control Law."

Section Two: Findings of Fact

The **(City/Town/Village)** finds that uncontrolled drainage and runoff associated with land development has a significant impact upon the health, safety and welfare of the community.

Specifically,

- (a) Stormwater runoff can carry pollutants into receiving waterbodies, degrading water quality;
- (b) The increase in nutrients in stormwater runoff such as phosphorus and nitrogen accelerates eutrophication of receiving waters;
- (c) Improper design and construction of drainage facilities can increase the velocity of runoff thereby increasing streambank erosion and sedimentation;
- (d) Construction requiring land clearing and the alteration of natural topography tends to increase erosion;
- (e) Siltation of waterbodies resulting from increased erosion decreases their capacity to hold and transport water, interferes with navigation, and harms flora and fauna;
- (f) Impervious surfaces increase the volume and rate of stormwater runoff and allow less water to percolate into the soil, thereby decreasing groundwater recharge and stream base flow;
- (g) Improperly managed stormwater runoff can increase the incidence of flooding and the level of floods which occur, endangering property and human life;
- (h) Substantial economic losses can result from these adverse impacts on community waters;
- (i) Many future problems can be avoided if land is developed in accordance with sound stormwater runoff management practices.

Section Three: Purpose and Objectives

In order to protect, maintain and enhance both the immediate and the long-term health, safety and general welfare of the citizens of **(City/Town/Village)**, this Ordinance has the following objectives:

- (a) Prevent increases in the magnitude and frequency of stormwater runoff so as to prevent an increase in flood flows and in the hazards and costs associated with flooding;
- (b) Prevent decreases in groundwater recharge and stream base flow so as to maintain aquatic life, assimilative capacity, and potential water supplies;
- (c) Maintain the integrity of stream geometry so as to sustain the hydrologic functions of streams;
- (d) Control erosion and sedimentation so as to prevent its deposition in streams and other receiving water bodies;
- (e) Facilitate the removal of pollutants in stormwater runoff so as to perpetuate the natural biological functions of streams; and,
- (f) To the extent practical, secure multiple community benefits such as groundwater replenishment, open space protection, and increased recreational opportunity through integrated land use - stormwater management planning.

Section Four: Authority

In accordance with **(Article 10 of the municipal Home Rule Law, Article 20 of the General City Law, Article 9 of the Town Law, and Article 4 and 20 of the Village Law)** of the State of New York (choose appropriate law and delete inappropriate laws), the **(City/Town/Village)** has the authority to enact **(local laws/ordinances)** for the purpose of promoting the health, safety or general welfare of **(City/Town/Village)**. The **(City/Town/Village)** may include in any such **(local law/ordinance)** provisions for the appointment of any municipal officer or employees to effectuate and administer such **(local law/ordinance)**.

Section Five: Jurisdiction

Upon approval of this Ordinance by the **(City/Town/Village)**, all site preparation and construction activities requiring approval under this Ordinance shall be in conformance with the provisions set forth herein.

Section Six: Definitions

Unless specifically defined below, words or phrases shall be interpreted so as to give them the meaning they have in common usage and to give this Ordinance its most effective application. Words used in the singular shall include the plural and the plural the singular; words used in the present tense shall include the future tense. The word "shall" connotes mandatory and not discretionary; the word "may" is permissive.

Critical Environmental Area - A specific geographic area designated by a state or local agency having exceptional or unique characteristics that make the area environmentally important.

Development - To make a site or area available for use by physical alteration. Development includes but is not limited to providing access to a site, clearing of vegetation, grading, earth moving, providing utilities and other services such as parking facilities, stormwater management and erosion control systems, and sewage disposal systems, altering landforms, or construction of a structure on the land.

Drywell - Similar to infiltration trench but smaller with inflow from pipe; commonly covered with soil and used for drainage areas of less than 1 acre such as roadside inlets and rooftop runoff.

Erosion - The removal of soil particles by the action of the water, wind, ice or other geological agents.

Exfiltration - The downward movement of runoff through the bottom of an infiltration system into the soil.

Extended Detention - A practice to store stormwater runoff by collection as a temporary pool of water and provide for its gradual (attenuated) release over 24 hours or more. A practice which is used to control peak discharge rates, and which provides gravity settling of pollutants.

First Flush - The delivery of a disproportionately large load of pollutants during the early part of storms due to the rapid runoff of accumulated pollutants. The first flush in these guidelines is defined as the runoff generated from a one year 24 hour storm event from land which has been made more impervious from pre-development conditions through land grading and construction/development activities.

Flood Plain - For a given flood event, that area of land temporarily covered by water which adjoins a watercourse.

Forebay - An extra storage area or treatment area, such as a sediment pond or created wetland, near an inlet of a stormwater management facility to trap incoming sediments or take up nutrients before they reach a retention of extended detention pond.

Impervious Area - Impermeable surfaces, such as pavement or rooftops, which prevent the percolation of water into the soil.

Infiltration - A practice designed to promote the recharge of groundwater by containment and concentration of stormwater in porous soils.

Infiltration Basin - An impoundment made by excavation or embankment construction to contain and exfiltrate runoff into the soil layer.

Outfall - The terminus of a storm drain where the contents are released.

Peak Flow - The maximum rate of flow of water at a given point and time resulting from a storm event.

Peak Flow Attenuation - The reduction of the peak discharge of storm runoff by storage and gradual release of that storage.

Retention - A practice designed to store stormwater runoff by collection as a permanent pool of water without release except by means of evaporation, infiltration, or attenuated release when runoff volume exceeds the permanent storage capacity of the permanent pool.

Riprap - a combination of large stone, cobbles and boulders used to line channels, stabilize stream banks, reduce runoff velocities.

Riser - A vertical pipe that is used to control the discharge rate from a pond for the specified design storm.

Stream Corridor - The landscape features on both sides of a stream, including soils, slope and vegetation, whose alteration can directly impact the streams physical characteristics and biological properties.

Swale - A natural depression or wide shallow ditch used to temporarily route, or filter runoff.

Section Seven: Applicability

- 1) It has been established that the land cleaning, land grading, earth moving or development activities can have a significant effect on the environment, therefore, no person, corporation, organization, or public agency shall, on or after the effective date of the ordinance:
 - a) Initiate any land clearing, land grading, earth moving or development activities without first preparing a stormwater management and erosion control plan and obtaining approval of said plan from the **(City/Town/Village)**, or;
 - b) Alter any drainage system without first preparing a stormwater management and erosion control plan and obtaining approval of said plan from the **(City/Town/Village)**.
- 2) **Exemptions.** The following activities are exempt from the Stormwater Management and Erosion Control Plan requirements:
 - a) Agricultural activities, including household gardening and timber harvesting that is not part of a development project;
 - b) Development of less than five single-family or duplex residential dwelling units and their accessory structures such as garages and storage sheds in an existing subdivision;
 - c) Development of one single-family or duplex residential structure not in an existing subdivision;
 - d) Industrial and/or commercial development projects which result in an impervious surface less than 10,000 square feet;
 - e) Any maintenance, alteration, use or improvement to an existing structure which will not change the quality, rate, volume or location of surface water discharge or contribute to erosion and sedimentation.

Section Eight: Contents of the Stormwater Management and Erosion Control Plan

- 1) It is the responsibility of an applicant to prepare a Stormwater Management and Erosion Control Plan so that the **(City/Town/Village)** can evaluate the environmental characteristics of the affected areas, the potential and predicted impacts of the proposed activity on community waters, and the effectiveness and acceptability of those measures proposed by the applicant for reducing or mitigating adverse impacts.
- 2) The Stormwater Management and Erosion Control Plan shall contain the name, address, and telephone number of the owner and developer. In addition, the legal description of the property shall be provided, and its location with reference to such landmarks as major waterbodies, adjoining roads, railroads, subdivisions, or towns shall be clearly identified on a map.
- 3) The structure and content of the Stormwater Management and Erosion Control Plan shall be as follows:
 - a) Background Information
 - i) Project description
 - ii) Existing (pre-development) conditions

- iii) Proposed future (development) conditions
- b) Comparison of pre-development with post-development runoff
 - i) Methodology
 - ii) Calculations
- c) Stormwater Management
 - i) Stormwater management facilities
 - ii) Stormwater conveyance system
 - iii) Recreational and/or landscape features (optional)
- d) Erosion and Sediment Control
 - i) Temporary erosion and sediment control facilities
 - ii) Permanent erosion and sediment control facilities
- e) Implementation Schedule and Maintenance

Section Nine: Plan Review Process

- 1) Provisions for stormwater management and erosion control should be considered in a three-stage process:
 - a) Pre-submission Phase - which provides an opportunity for the community to learn of the developer's intent and for the developer to learn of the community's requirements and standards for development.
 - b) Preliminary Site Development Plan Phase - which includes the submission of an application for preliminary site development plan approved for a developer. The application shall be accompanied by information about the proposal as set forth in Section Eight of this Ordinance. Because it is a preliminary action and not final, action on the proposal shall be given as tentative approval, tentative approval with modification or disapproval.
 - c) Final Site Development Plan Phase - if approval or approval with modification is tentatively given in the preliminary site development phase, the next step can be submission of a final application, including the necessary documentation for final approval. It is this phase that any requested modifications be satisfied as part of final application submission.
- 2) The Stormwater Management and Erosion Control Plan shall not be approved unless it is consistent with the Purposes and Objectives of this Ordinance in Section Three and the Performance Standards described in Section Ten.
- 3) Inspections. No Stormwater Management and Erosion Control Plan will be approved without adequate provision for inspection of the property before development activity commences. The applicant shall arrange with the **(City/Town/Village)** for scheduling the following activities:
 - a) Initial Inspection: prior to approval of the Stormwater Management and Erosion Control Plan;
 - b) Erosion Control Inspection: to ensure erosion control practices are in accord with the Plan;
 - c) Bury Inspection: prior to backfilling of any underground drainage or stormwater conveyance structures;
 - d) Final Inspection: when all work including construction of stormwater management facilities has been completed.

The **(City/Town/Village)** shall inspect the work and either approve it or notify the applicant in writing in what respects there has been a failure to comply with the requirements of the approved Stormwater Management and Erosion Control Plan. Any portion of the work which does not comply shall be promptly corrected by the applicant or the applicant will be subject to the bonding provisions of Section Thirteen and the penalty provisions of Section Fourteen. The **(City/Town/Village)** may conduct random inspections to ensure effective control of erosion and sedimentation during all phases of construction.

Section Ten: Performance Standards

Stormwater Management and Erosion Control Plans shall be prepared in accordance with performance standards (see model Performance Standards in the Appendix) which have been structured to achieve the purposes and objectives of this Ordinance as well as to ensure that the quality and quantity of runoff after development is not substantially altered from pre-development conditions.

Section Eleven: Off-Site Stormwater Management Facilities

- 1) The **(City/Town/Village)** may allow stormwater runoff that is of unacceptable quality or which would be discharged in volumes or rates in excess of those otherwise allowed by this Ordinance, to be discharged into stormwater management facilities off the site of development if all of the following conditions are met:
 - a) It is not practicable to completely manage runoff on-site in a manner that meets the Performance Standards in Section Ten;
 - b) The off-site drainage facilities and channels leading to them are designed, constructed and maintained in accordance with the requirements of this Ordinance;
 - c) Adverse environmental impacts on the site of development will be minimized;
 - i) Adequate provision is made for the sharing of construction and operating costs of the off-site facilities. The developer may be required to pay a portion of the cost of constructing the facilities as a condition to receiving approval of the drainage plan.
 - ii) Use of regional off-site stormwater management facilities does not eliminate the requirement that the first-flush be captured and treated on-site pursuant to the Section Ten Performance Standards.
 - iii) A request to use off-site stormwater management facilities and all information related to the proposed off-site facilities shall be made a part of the developer's stormwater management plan.

Section Twelve: Maintenance

- 1) The **(City/Town/Village)** shall determine whether stormwater management facilities are to be maintained by the developer/owner, a homeowner's association, or by the **(City/Town/Village)**.
 - a) If maintenance is to be performed by a homeowner's association, the homeowner's association must be registered pursuant to Section 352-E of the New York State General Business Law.
 - b) If maintained by an owner or homeowner's association, a maintenance plan containing a maintenance schedule shall be provided by the developer, owner and/or homeowner's association for approval by the **(City/Town/Village)** (see Section Eight (3)).
 - c) Stormwater management facilities maintained by an owner or home owner's association shall have adequate easements to permit the **(City/Town/Village)** to inspect and, if necessary, to take corrective action should the owner fail to properly maintain the system. Before taking corrective action, the **(City/Town/Village)** shall give the owner or home owner's association written notice of the nature of the existing defects. If the owner or homeowner's association fails within thirty (30) days from the date of the notice to commence corrective action or to appeal the matter to the **(City/Town/Village)**, the **(City/Town/Village)** may take necessary corrective action, the cost of which shall be borne by the owner or developer pursuant to Section Thirteen of this Ordinance or by the homeowner's association. If, in the event the homeowner's association fails to pay for required corrective action, the **(City/Town/Village)** shall have a lien placed on the real property of members of the homeowner's association until payment is made.
- 2) Stormwater management facilities may be dedicated to the **(City/Town/Village)** for purposes of maintenance by mutual consent and agreement of the developer/owner and **(City/Town/Village)**.

Section Thirteen: Performance Bond

- 1) In order to ensure the full and faithful completion of all construction activities related to compliance with all conditions set forth by the **(City/Town/Village)** in its approval of the Stormwater Management and Erosion Control Plan, the **(City/Town/Village)** may require the developer to provide, prior to construction, a performance bond, escrow account certification, or irrevocable letter of credit from an appropriate financial or surety institution which guarantees satisfactory completion of the project and names the **(City/Town/Village)** as the beneficiary. The security shall be in an amount to be determined by the **(City/Town/Village)** based on submission of final design plans, with reference to actual construction costs.
- 2) Where stormwater management and erosion and sediment control facilities are to be operated and maintained by the developer or by a corporation that owns or manages a commercial or industrial facility, the developer, prior to construction, may be required to provide the **(City/Town/Village)** with an irrevocable letter of credit from an appropriate financial institution or surety to ensure proper

operation and maintenance of all stormwater management and erosion control facilities for the life of the project.

The letter of credit shall remain in force until the surety is released from liability by the **(City/Town/Village)**.

Per annum interest on the letter of credit will be reinvested in the account until the surety is released from liability.

The operation and maintenance letter of credit shall remain in force for the life of the project.

If the developer or owner fails to properly operate and maintain stormwater management and erosion and sediment control facilities, the **(City/Town/Village)** may draw upon the account to cover the costs of proper operation and maintenance.

Section Fourteen: Enforcement

- 1) Nuisance. Any development activity that is commenced without prior approval of a Stormwater Management and Erosion Control Plan or is conducted contrary to an approved Stormwater Management and Erosion Control Plan as required by this Ordinance, may be restrained by injunction or otherwise abated in a manner provided by law.
- 2) Civil and Criminal Penalties. In addition to or as an alternative to any penalty provided herein or by law, any person who violates the provisions of this Ordinance shall be punished by a fine of not less than One Hundred Dollars (\$100) nor more than One Thousand Dollars (\$1000) or by imprisonment for a period not to exceed sixty (60) days, or by both such fine and imprisonment. Such person shall be guilty of a separate offense for each day during which the violation occurs or continues.
- 3) Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the **(City/Town/Village)** may take necessary corrective action, the cost of which shall become a lien upon the property until paid.
- 4) Notice of Violation. When the **(City/Town/Village)** determines that development activity is not being carried out in accordance with the requirements of this Ordinance, it shall issue a written notice of violation to the owner of the property. The notice of violation shall contain:
 - a) The name and address of the owner or applicant;
 - b) The street address when available or a description of the building, structure, or land upon which the violation is occurring;
 - c) A statement specifying the nature of the violation;
 - d) A description of the remedial actions necessary to bring the development activity into compliance with this Ordinance and a time schedule for completion of such remedial action;
 - e) A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;
 - f) A statement that the determination of violation may be appealed to the **(City/Town/Village)** by filing a written notice of appeal within fifteen (15) days of service of notice of violation.

The notice of violation shall be served upon the person(s) to whom it is directed either personally, in a manner provided for personal services of notices by the court of local jurisdiction, or by mailing a copy of the notice of the violation by certified mail, postage prepaid, return receipt requested to such person at his or her last known address.

A notice of violation issued pursuant to this section constitutes a determination from which an administrative appeal may be taken to the **(City/Town/Village)**.

Section Fifteen: Appeals

Any person aggrieved by the action of any official charged with the enforcement of this Ordinance, as the result of the disapproval of a Stormwater Management and Erosion Control Plan, issuance of a written notice of violation, or an alleged failure to properly enforce the Ordinance in regard to a specific

application, shall have the right to appeal the action to the **(City/Town/Village)**. The appeal shall be filed in writing within twenty (20) days of the date of official transmittal of the final decision or determination to the applicant, shall state clearly the grounds on which the appeal is based, and shall be processed in the manner prescribed for hearing administrative appeals under **(state/local code provision)**.

Section Sixteen: Severability

Each separate provision of this Ordinance is deemed independent of all other provisions herein so that if any provision or provisions of this Ordinance is declared invalid, all other provisions thereof shall remain valid and enforceable.

Section Seventeen: Variance

The **(City/Town/Village)** may grant a written variance from any requirement of this Ordinance using the following criteria:

- 1) There are special circumstances applicable to the subject property or its intended use; and
- 2) The granting of the variance will not result in:
 - a) An increase or decrease in the rate or volume of surface water runoff;
 - b) An adverse impact on a wetland, water course or waterbody;
 - c) Degradation of water quality; or
 - d) Otherwise impair attainment of the objectives of this Ordinance.

Section Eighteen: Effective Date

This Ordinance shall become effective on _____

Stormwater Management & Erosion Control Local Law Performance Standards

Erosion Control Plans shall be prepared in accordance with performance standards which have been structured to achieve the purposes and objectives of a Stormwater Management & Erosion Control Local Law as well as to ensure that the quality and quantity of runoff after development is not substantially altered from pre-development conditions. The following performance standards must be satisfied:

1. Existing vegetation on a project site shall be retained and protected as much as possible to minimize soil loss from the project site.
2. Sediment control practices/measures, where necessary, shall be designed to protect the natural character of waterbodies on-site as well as off-site. The practices must be in place from the start of land disturbance activities to establishment of permanent stabilization.
 - a. The off-site impacts of erosion and sedimentation from the development site shall not be any greater during and following land disturbance activities than under pre-development conditions.
 - b. Water in stream reaches on-site and downstream of construction areas shall not have substantial visible contrast relative to color, taste, odor, turbidity and sediment deposition from the water in reaches upstream of the construction area.
 - c. Sediment laden runoff shall not be allowed to enter any waterbody and result in deposition on the bottom of the waterbody, degrade its natural biological functions, or be deleterious to the classified usage of the water.
3. Erosion and sediment control measures shall be constructed prior to beginning any land disturbances. All runoff from disturbed areas shall be directed to the sediment control devices. These devices shall not be removed until the disturbed land areas are stabilized.
4. Specific guidance.
 - a. Exposure Restrictions: No more than 10 acres of unprotected soil shall be exposed at any one time. Previous earthwork shall be stabilized in accord with approved design standards and specifications referenced in Section 4.h before additional area is exposed.
 - b. Grading: Perimeter grading shall blend with adjoining properties.
 - c. Vegetative Protection: Where protection of trees and/or other vegetation is required, the location shall be shown on a Erosion Control Plan or on the drawings for the proposed development project. The method of protecting vegetation during construction shall conform to the design specifications referenced in Section 4.h.
 - d. Drainage Control.
 - 1) Surface runoff that is relatively clean and sediment free shall be diverted or otherwise

prevented from flowing through areas of construction activity on the project site. This will greatly reduce sediment loading in surface runoff.

2) A fill associated with an approved temporary sediment control structure or permanent stormwater management structure, shall not be created which causes water to pond off-site on adjacent property, without first having obtained ownership or permanent easement for such use from the owner of the off-site or adjacent property.

3) In general, natural drainage channels shall not be altered. Pursuant to Article 15 of the Environmental Conservation Law, a protected stream and banks thereof shall not be altered or relocated without the approval of the Department of Environmental Conservation.

4) Runoff from any land disturbing activity shall not be discharged or have the potential to be discharged off-site or into storm drains or into water courses unless such discharge is directed through a properly designed, installed and maintained structure, such as a sediment trap, to retain sediment on-site. Accumulated sediment shall be removed when it takes up 60% of the storage capacity of the sediment retention structure. (See Section 4.h below for design specifications.)

5) For finished grading, adequate gradients shall be provided so as to prevent water from standing on the surface of lawns for more than 24 hours after the end of a rainfall, except in a swale flow area which may drain as long as 48 hours after the end of rainfall.

6) Permanent swales or other points of concentrated water flow shall be stabilized. Biotechnical approaches using certain types of grasses, such as reed canary grass, are preferable to using sod, gabions and rip-rap where water quality enhancement is a high priority and the swale design allows. However, sod, gabions, or rip-rap may be used to stabilize swales where soils and gradient preclude the use of reed canary grass. Use of grasses may require an erosion control matting as provided for in the design specifications referenced in Section 4.h below.

7) Surface lows over cut and fill slopes shall be controlled as provided for in the design specifications for vegetating waterways referenced in Section 4.h.

e. Timing.

1) Except as noted below, all sites shall be seeded and mulched with erosion control materials such as rye grass, straw mulch, jute, or excelsior (wood shavings) within 15 days of initial disturbance. If construction has been suspended, or sections completed, areas shall be seeded immediately and stabilized with erosion control materials. Maintenance shall be performed as necessary to ensure continued stabilization.

2) For active construction areas, such as borrow or stockpile areas, roadway improvements, and areas within 50 feet of a building under construction, a perimeter sediment control system consisting, for example, of silt fencing or hay bales, shall be installed and maintained to contain soil.

3) On cut sides of roads, ditches shall be stabilized immediately with rock rip-rap or other non-erodible liners, or where appropriate, vegetative measures such as sod. When seeding is approved, an anchor mulch shall be used and soil shall be limed and fertilized in accord with recommendations referenced in Section 4.h.

4) Permanent seeding shall optimally be undertaken in the spring from April 1 through June 15, and in late summer from August 1 to October 15. During the peak summer months and in the fall after October 15 when seeding is found to be impracticable, an appropriate mulch shall be applied. Permanent seeding may be undertaken during summer if plans provide for adequate watering of the seedbed.

Option 4A: Ground cover can be required as stated in the above subsection during the winter months;

Option 4B: Stricter requirements for ground cover and erosion control for late autumn - early spring construction can be put in place to make it more difficult to build in the non-growing season;

Option 4C: A moratorium for construction in the winter months could be established.

5) All slopes steeper than 15%, as well as basin or trap embankments, and perimeter dikes shall, upon completion, be stabilized with sod, seed and anchored straw mulch, or other approved stabilization measures. Areas outside of the perimeter sediment control system shall not be disturbed. Maintenance shall be performed as necessary to ensure continued stabilization.

6) Temporary sediment trapping devices shall be removed within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be made permanent within this time period as well. Accumulated sediments removed from temporary sediment traps or permanent stormwater management facilities shall be disposed of such that they will not erode and enter a waterbody.

- f. Stream Corridor Management. The bed and banks of all on-site and off-site streams which may be impacted by land clearing, grading, and construction activities shall be protected to prevent sedimentation, stream bank erosion, stream enlargement, or degradation of loss of fisheries habitat. Measures for protecting the bed and/or banks of a stream may include gabion baskets, rip-rap, log cribbing, and vegetative measures. Whenever possible, vegetative stream bank stabilization practices are recommended over structural practices such as rip-rap and gabion linings that may unnecessarily alter the existing stream ecosystem. Native species of vegetation shall be used for stream bank stabilization wherever practical. In undertaking stream bank stabilization activities for protected streams, the Applicant shall comply with appropriate protection of water provisions in Article 15 of the Environmental Conservation Law.
- g. Maintenance

7) All points of construction ingress and egress shall be protected to prevent the deposition of materials onto traversed public thoroughfares either by installing and maintaining a stabilized construction entrance or by maintaining a vehicle wash area in a safe disposal area to wash vehicle shells and undercarriage. All materials deposited onto public thoroughfares shall be removed immediately. Proper precaution shall be taken to assure that the removal of materials deposited onto public thoroughfares will not enter catch basins, storm sewers, or waterbodies.

8) Accumulated sediment shall be removed when 60% of the storage capacity of sediment retention structures is reached. All removed sediment shall be disposed of in a spoil area where it can be graded, mulched and seeded to prevent erosion and sedimentation.

- h. Design specifications. The designs, standards and specifications for controlling erosion and sedimentation found in the most recent version of the following publication are acceptable for use and shall be identified and shown in the Erosion Control Plan: A New York Guidelines for Urban Erosion and Sediment Control, Urban Soil Erosion and Sediment Control Committee.

Pollutant Concentration in Highway Runoff

In addition to sediment, runoff from roadways can contain heavy metals, oxygen demanding material, and nutrients. There is a strong relationship between the volume of traffic carried on a roadway and the event mean concentration of pollutants in runoff as shown in the table below.

Pollutant Concentration in Highway Runoff (source: Driscoll et al. 1990, Federal Highway Administration)

Pollutant	EMC* in runoff, <30,000 vehicles per day (mg/l)	EMC* in runoff, >30,000 vehicles per day (mg/l)
Total suspended solids	41	142
Volatile suspended solids	12	39
Total organic carbon	8	25
Chemical oxygen demand	49	114
Nitrite and nitrate	0.46	0.76
Total Kjeldahl N	0.87	1.83
Phosphorus	0.16	0.40
Copper	0.022	0.054
Lead	0.080	0.400
Zinc	0.080	0.329

*EMC is event mean concentration