

GREEN INFRASTRUCTURE

Training Needs Survey

Sponsored by the
Stormwater Coalition of Albany County

WHY A SURVEY....NOW?

The Stormwater Coalition of Albany County (hereinafter, the Coalition) is an inter-municipal partnership working together to meet NYSDEC and EPA guidelines and requirements for stormwater management. The Coalition membership includes municipalities and others in the County who own and maintain a separate storm sewer system. Coalition members have passed legislation promulgating rules requiring the proper handling of storm water as well as enforcement powers. In order to effectively enforce the local legislation, municipal Boards and staff involved in the planning process need to understand the rapid mandated changes taking place in the stormwater management field.

In the most recent changes to the NY State Stormwater Management Design Manual, site planning for both new construction and redevelopment requires a reduction in runoff by applying green infrastructure techniques. Green infrastructure techniques or practices seek to either preserve “critical” green space or engineer natural means of treating or storing stormwater. Critical green spaces are those that currently treat stormwater onsite due to the presence of ideal soils and conditions. Engineered infrastructure may require installing natural elements to treat, store and/or direct water. The NYS Stormwater Design Manual includes a list of 12 green infrastructure techniques or practices.

The Coalition received a NYSDEC grant to create a model local law to be used by local municipalities and others who maintain a separate storm system in order to foster green infrastructure practices during development or redevelopment of land. The grant includes a provision for training of municipal/MS4 staff and board members. In order to develop the most useful and informative training, the Coalition developed a survey to assess the current level of understanding of the State stormwater permit and green infrastructure practices. As people on the front line of land use planning and stormwater management, your feedback is critical to developing training that adequately addresses these important issues.

For information about this survey, individual stormwater management programs, and the Stormwater Coalition, see below.

Coalition Members	Contact	Phone Number	Email (Survey Info)
Albany County	Margaret Della Rocco/Leslie Lombardo	765-2786/447-5644	llombardo@albanycounty.com
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City of Cohoes	Garry Nathan/Melissa Ashline-Heil	233-2131	mashline-heil@ci.cohoes.ny.us
T. of Colonie	John Dzialo/Mike Lyons	783-6292/783-2741	lyonsm@colonie.org
V. of Colonie	Carl Fleshman	869-0312	DPW@colonievillage.org
V. of Green Island	Sean Ward	273-2201	seanw@villageofgreenisland.com
T. of Guilderland	Rodger E. Stone, II	356-1980 ext 1066	stoner@townofguilderland.org
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T. of New Scotland	Paul Cantlin	439-1215	pcantlin@townofnewscotland.com
V. of Voorheesville	Gerald Gordinier	765-2698	gordinier@nycap.rr.com
City of Watervliet	David Dressel/Rosemary Nichols	785-7082/270-3800	rosemary@watervliet.com
SUNY Albany	William Dosch	442-3436	wdosch@uamail.albany.edu
Stormwater Coalition	Nancy Heinzen	447-5645	nheinzen@albanycounty.com



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1. Municipal/MS4 name: _____
2. What is your position in the municipality/MS4?
Planning Board member _____
Zoning Board member _____
Legislative Board _____
Staff _____ Title/Department _____
Consultant _____
TDE _____
Other _____
3. Are you familiar with the requirements for stormwater management that your community must follow under the NYS DEC Municipal Separate Storm Sewer System (MS4) permit? Yes ____ or No ____.

If Yes, are you familiar with stormwater management issues?
Yes _____ or No _____.

4. Read the list of green infrastructure practices/methods below (from NYS Stormwater Design Manual):
 - ____(a) Conservation of natural areas
 - ____(b) Sheetflow to riparian buffers or filter strips
 - ____(c) Vegetated open swales
 - ____(d) Tree planting/tree boxes
 - ____(e) Downspout disconnection (of rooftop runoff)
 - ____(f) Stream daylighting
 - ____(g) Rain garden
 - ____(h) Green roof
 - ____(i) Stormwater planters
 - ____(j) Rain barrels/cisterns
 - ____(k) Porous pavement
 - ____(l) Standard Stormwater Management Practices:
 - Infiltration-Trench, Basin, Dry Well
 - Bioretention
 - Dry swale (open channel)

Which of these practices/methods have you heard of? Please check off.

Are you familiar with the benefits of each practice/method and how they are used?
If so, list the corresponding letter(s) to the practice you are familiar with
here _____

5. Which of these green infrastructure practices would you like to learn more about in order to help you assess project reviews? For information about each practice, see Question #5 Handout. Please check off as many as apply.

- ___(a) Conservation of natural areas
- ___(b) Sheetflow to riparian buffers or filter strips
- ___(c) Vegetated open swales
- ___(d) Tree planting/tree boxes
- ___(e) Downspout disconnection (of rooftop runoff)
- ___(f) Stream daylighting
- ___(g) Rain garden
- ___(h) Green roof
- ___(i) Stormwater planters
- ___(j) Rain barrels/cisterns
- ___(k) Porous pavement
- ___(l) Standard Stormwater Management Practices
 - Infiltration-Trench, Basin, Dry Well
 - Bioretention
 - Dry swale (open channel)

6. In your opinion what is the biggest roadblock to green infrastructure (GI) applications or use in your community?

Developers don't include GI in their plans _____
Zoning Code and site plan review procedure does not specify
GI _____
Not sure _____

7. Have you ever been presented with, or approved a project that included green infrastructure practices? Yes___ or No___.

8. Which design elements (landscaping, traffic, drainage, lighting, etc.) do you look at when reviewing a project?

9. Have you been provided with any training in stormwater management regulations or water quality issues? Yes___ or No ____.

If yes, were green infrastructure practices included in the training session?
Yes___ or No___.
Who sponsored the training? _____

10. Does stormwater drainage from your municipality impact another municipality downstream? Yes ___or No____. If yes, do you know which one? _____

11. Are you aware of the concept of a stream watershed? Yes ___ or No____
12. What natural resources are you most concerned about in your community?
Open space, drinking water, farmland, other?

13. Are there any specific training topics you would like to attend?

PLEASE RETURN SURVEY TO _____BY _____.

THANK YOU!

Stormwater Coalition of Albany County

Albany County, City of Albany, Town of Bethlehem, City of Cohoes, Town of Colonie,
Village of Colonie, Town of Guilderland, Village of Green Island, Village of Menands,
Town of New Scotland, City of Watervliet, Village of Voorheesville, SUNY Albany



Green Infrastructure Practices/Methods

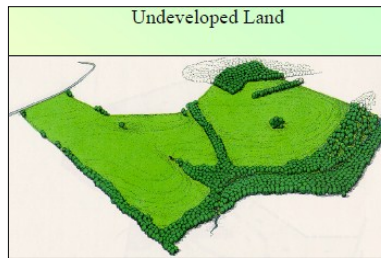
Listed in the NYSDEC Design Manual 2010

Handout for Survey Question #5

a. Conservation of Natural Areas

OPEN SPACE DESIGN (Example)

(Also called clustering and
conservation design)

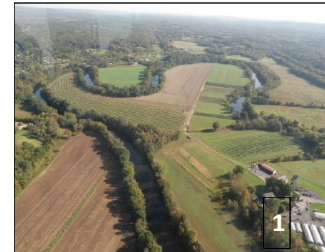


SOURCE: Arendt, Randall, Conservation Design for Subdivisions

NATURAL AREAS

To Restore Or Permanently Conserve

Tree, Canopy, and Woody Areas



Stream Buffers

Pocket Wetlands



Vegetated Buffers

Images

1) NYS DEC "Going Green" powerpoint

2) NYS SW Design Manual 2010

3) CWP Webcast Better Site Design Gets Better

SPECIFIC PRACTICES (Chapter 3, Table 3.1)

Preservation of Undisturbed Areas
Preservation of Buffers
Reduction of Clearing and Grading
Locate Development in Less Sensitive Areas
Open Space Design
Soil Restoration

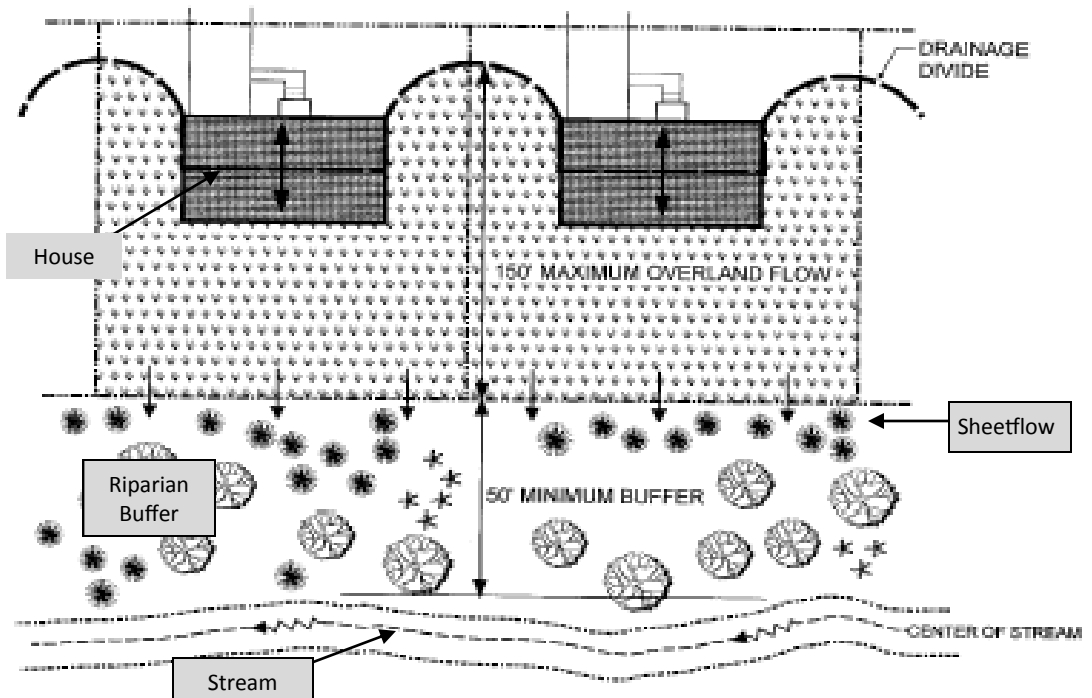
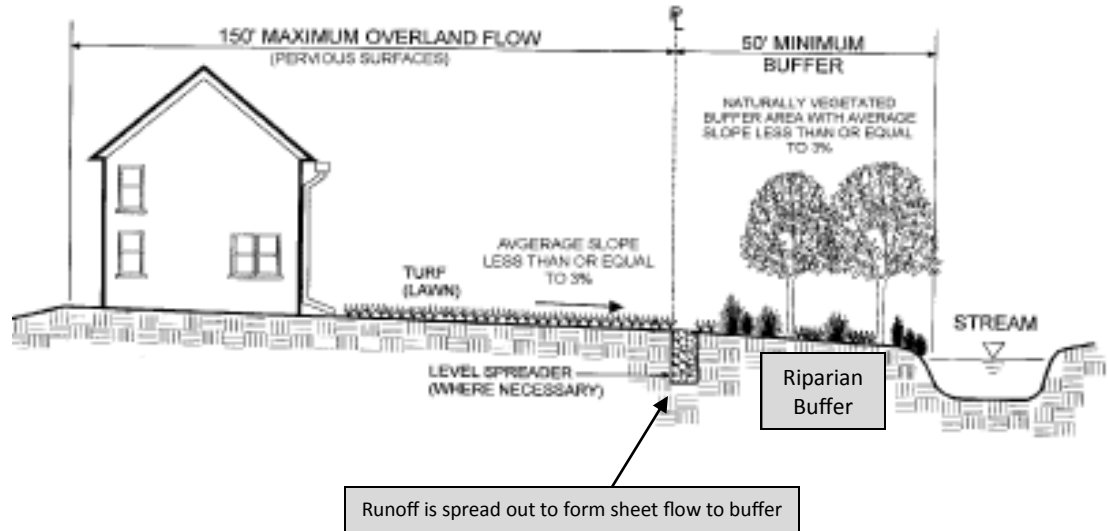
Green Infrastructure Practices/Methods

Listed in the NYSDEC Design Manual 2010

Handout for Survey Question #5 (cont'd)

b. Sheetflow to Riparian Buffers or Filter Strips

CROSS SECTION



PLAN VIEW

Image
NYS SW Design
Manual 2010

Green Infrastructure Practice/Methods

Listed in the NYSDEC Design Manual 2010

Handout for Survey Question #5 (cont'd)

c. Vegetated open swales

Images

1) NYS DEC "Going Green" powerpoint

2) www.bfenvironmental.com/pdfs/veggieSwale.pdf



d. Tree Planting/ Tree Boxes

Images

1) NYS DEC "Going Green" powerpoint

2) <http://greenvalues.cnt.org/national/>



e. Downspout Disconnection

Images

1) NYS DEC "Going Green" powerpoint

2) NYS SW Design Manual 2010



Green Infrastructure Practice/Methods

Listed in the NYSDEC Design Manual 2010

Handout for Survey Question #5 (cont'd)

f. Stream Daylighting

Images

Center For Watershed
Protection;
Urban SW Restoration
Manual 4, p. 167



Source: Dekalb County Parks Department



Figure 1: Stream channel daylighting – Before (a) and After (b)

g. Rain Garden

Images

NYS DEC "Going Green"
powerpoint

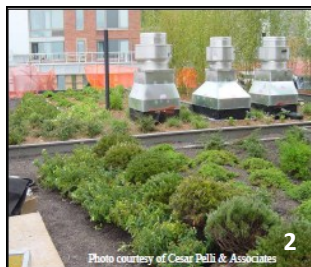


h. Green Roof

Images

1) NYS DEC "Going Green"
powerpoint

2) www.dec.ny.gov/docs/water_pdf/swdm2010entire.pdf



Green Infrastructure Practice/Methods

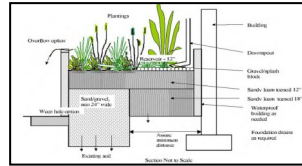
Listed in the NYSDEC Design Manual 2010

Handout for Survey Question #5 (cont'd)

i. Stormwater Planters

Images

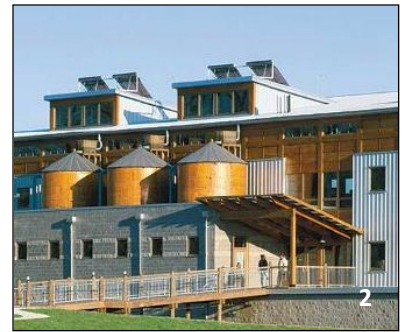
- 1) NYS DEC "Going Green" powerpoint
- 2) www.dec.ny.gov/docs/water_pdf/swdm2010entire.pdf



J. Rain Barrels/ Cisterns

Images

- 1) www.rainbarrelguide.com/
- 2) NYS DEC "Going Green" powerpoint



k. Porous Pavement

Images

NYS DEC "Going Green" powerpoint



Handout for Survey Question #5