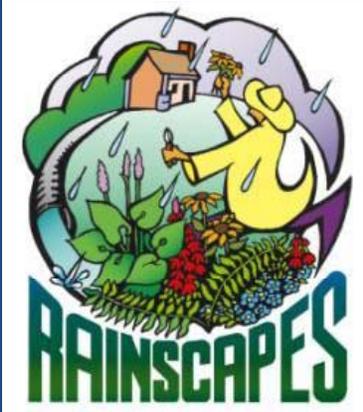


# Resources

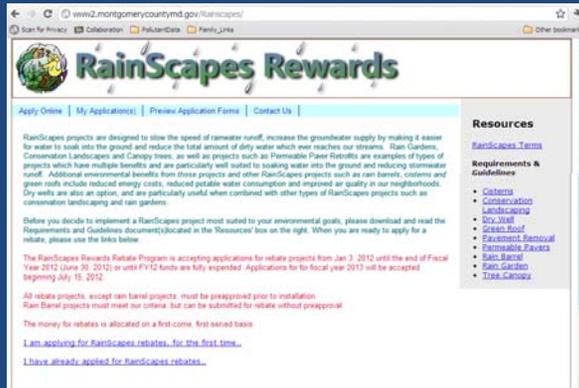


## Landscape Professionals Training Series

Montgomery County Department of Environmental Protection  
Watershed Management Division  
January 23, 2013

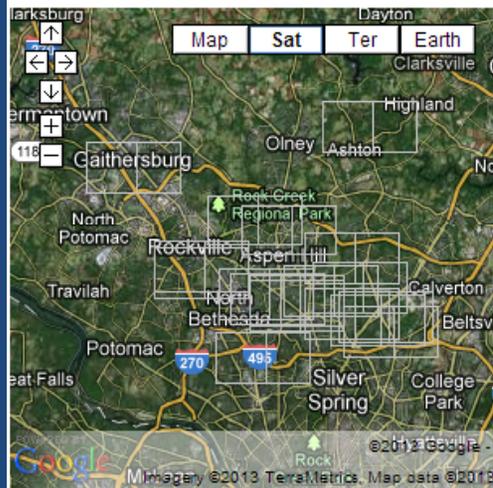


# ONLINE RESOURCES



## RainScapes/LID Self-guided Tour

- See RainScapes in the County [Details and directions can be found in the flyer.](#)



View [RainScapes Tour 2012](#) in a larger map

www6.montgomerycountymd.gov/content/dep/downloads/rainscapes/contractor.pdf

Design Construction Companies and Professionals Who Have Attended One or More of the RainScapes Training Classes for Landscape Professionals as of 7/1/11  
(See Disclaimer below)

| Firm                                | Last Name   | First Name | Title                                   | Street Address               | Town/State        | Zip        | Phone                               | E-Mail                        | Company Website              | Credentials |
|-------------------------------------|-------------|------------|---|------------------------------|-------------------|------------|-------------------------------------|-------------------------------|------------------------------|-------------|
| A. Morton Thomas & Associates, Inc. | Streagle    | Andrew     | Senior Project Landscape Architect      | 25110 Old Hundred Rd.        | Dickerson, MD     | 20842      | 301-881-2545                        | astreagle@amtengeerinc.com    | www.amtengeerinc.com         |             |
| A.W. Landscapes, Inc.               | Walcoff     | Alan       | President                               |                              | Dickerson, MD     | 20842      | 301-349-2605                        | Alan@awlandscapes.com         | www.awlandscapes.com         |             |
| Aldertree                           | Caprioglio  | Lisa       | Owner                                   | PO Box 5603                  | Takoma Park, MD   | 20913      | 301-563-6227                        | lisac@aldertreegardens.com    | www.aldertree.com            |             |
| Allentuck Landscaping Co.           | Gravish     | Ron        | Residential Manager                     | 24320 Frederick Rd.          | Clarksburg, MD    | 20871      | 301-515-1900                        | ron@allentucklandscaping.com  | www.allentucklandscaping.com |             |
| AInergy LLC.                        | Sobande     | Gabriel    |   | 800 3rd st SW                | Washington, DC    | 20024      | 202-318-1581<br>703-348-4607        | gabriel@ainergy.com           |                              |             |
| American Landscaping                | Martin      | James      |   | 15530 Peach Orchard Rd.      | Silver Spring, MD | 20905      |                                     |                               |                              |             |
| American Plant - Landscape Division | Altmann     | Susana S.  | Landscape Designer                      | PO Box 1725                  | Rockville, MD     | 20849      | 301-762-6301                        | susana@apl-garden.com         | www.aplgarden.com            |             |
| American Plant - Landscape Division | Evans       | Donna      | Landscape Designer                      | PO Box 1725                  | Rockville, MD     | 20849      | 240-388-3752 (cell)                 | donnae@apl-garden.com         | www.aplgarden.com            |             |
| American Plant - Landscape Division | Lightbourne | Anthony    | Landscape Designer                      | PO Box 1725                  | Rockville, MD     | 20849      | 301-762-6301                        | tony@apl-garden.com           | www.aplgarden.com            |             |
| AMT Engineering                     | Torgenson   | Steven     | Project Manager/<br>Landscape Architect | 12750 Twinbrook Parkway      | Rockville, MD     | 20852      | 301-881-2545<br>240-599-6683 (Cell) | storgenson@amtengeerinc.com   | www.amtengeerinc.com         | RLA         |
| Apple Landscaping, Inc.             | Apple       | David      |   | 28601 Clarksburg Rd.         | Damascus, MD      | 20872      | 301-253-0404                        |                               |                              |             |
| Arbor Landscapers                   | Fritzges    | John       |   | 2214 Spencerville Rd         | Spencerville, MD  | 20878      | 800-310-6479                        |                               |                              |             |
| ArborCare, Inc.                     | Kevin       | Kevin      |   | 18001 Bowie Mill Rd          | Rockville, MD     | 20855      | 301-570-6033                        | sk@arborcare-inc.com          | www.thecareofrees.com        |             |
| Artery Homes                        | Weaver      | Jim        |   | 9639 Dr. Perry Rd. Suite 108 | Ijamsville, MD    | 21754      |                                     | jweaver@arteryinnovations.com | www.arteryinnovations.com    |             |
| Audubon Landscaping                 | Christie    | John       |   | PO Box 58                    | Boyd's, MD        | 20841      | 301-515-8667                        |                               |                              |             |
| Audubon Landscaping                 | LeFave      | Bill       |   | PO Box 58                    | Boyd's, MD        | 20841      | 301-515-8667                        |                               |                              |             |
| Backyard Bounty                     | Fordyce     | Scott      | Foreman                                 | 615 McNeill Road             | Silver Spring, MD | 20910      | 301-221-4931                        | edamar@backyardbounty.com     |                              |             |
| Backyard Bounty                     | Mattei      | Edmarie    | Owner                                   | 615 McNeill Road             | Silver Spring, MD | 20910      | 301-221-4931                        | edamar@backyardbounty.com     |                              |             |
| Bartlett Tree Experts               | Carr        | Kevin      |   | 12200 Nebel St.              | Rockville, MD     | 20852-2687 | 301-881-8550                        | kcarr@bartlett.com            | http://www.bartlett.com      |             |
| Behnkes                             | Dencker     | Alex       |   | 3801 Terrawood Ct.           | Rockville MD      | 20853      | 301-440-8426                        | adencker@behnkes.net          |                              |             |

**Disclaimer:** inclusion of this list does not confer certification or an official endorsement or approval by the Montgomery County Government or any of its agencies.

1

Montgomery County Water x

www6.montgomerycountymd.gov/dectmpl.asp?url=/content/dep/water/rainlandscaping.asp

Scan for Privacy Collaboration PollutantData Family\_Links FamilyTree Bookmarklet For other browsers

Text Version January 22, 2013

**MONTGOMERY COUNTY** MARYLAND  
montgomerycountymd.gov

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SEARCH

RESIDENTS GOVERNMENT BUSINESSES CULTURE & LEISURE

DEP Home Water RainScapes Home Landscape Professionals

ADD THIS

**Department of Environmental Protection**

**Landscape Professionals**

Landscape professionals are key to the success of widespread adoption of RainScapes on private property throughout the County. RainScapes is an example of environmental site design, a key required element in the [County's stormwater permit](#). This page offers information on training offered to landscape professionals to install RainScapes.

**Classroom Courses**

The RainScapes Program offers a Contractor Training seminar for the purpose of educating contractors who are interested in or who have been providing services pertaining to RainScapes practices, whether it is design, installation, or materials supply.

Course content includes information on rebate funding, the application process, and our evaluation criteria for projects. Additional material covered includes an introduction to low impact development, stormwater management, and RainScapes techniques, information on the scope of the impact of stormwater on Montgomery County and the opportunities for landscape contractors to work in the stormwater management field. Information on appropriate plants for stormwater management, rain garden construction, types of green roofs, permeable pavement systems, and water harvesting systems are also covered.

Find a [list of contractors](#) who have attended the RainScapes Contractor Training Classroom course below. There may be other contractors in the county who are qualified to perform services related to the RainScapes Program but they did not attend the seminar. Please check references of all service providers.

[Return to Top](#)

**Field Days**

Field days are a way to take the material covered in the classroom and apply it at an actual site. During a field day, site evaluation skills for placing a rain garden, conservation landscape, water harvesting and other ESD practices will be reviewed on-site and then the class will either construct a rain garden using materials provided by DEP or participate in a site assessment - rain garden/RainScapes design charette. Bringing tools and wheelbarrows is recommended for this class. A list of suggested equipment will be sent to registered participants prior to class.

**Quick Links**

**On this page**

- [Classroom Courses](#)
- [Field Days](#)
- [Seminars](#)
- [List of Contractors](#)
- [Design Guideline/Resources](#)
- [RainScapes Gazette](#)

**Related topics**

- [RainScapes Program](#)
- [Select a RainScapes Technique](#)
- [Design Manuals](#)
- [Rebates and Application](#)
- [RainScapes Neighborhood Program](#)
- [Calendar \(RainScapes Events\)](#)
- [Partners](#)
- [Schools](#)
- [Resources](#)
- [Gallery](#)

Subscribe to the email bulletin [RainScapes for Landscape Professionals and RainScapes Gazette](#)

**The Paperless Airplane**

**My Montgomery**  
Find County Service Locations Near You

**Ride On**  
Montgomery County Transit

**CountyStat**

## Field Days

Field days are a way to take the material covered in the classroom and apply it at an actual site. During a field day, site evaluation skills for placing a rain garden, conservation landscape, water harvesting and other ESD practices will be reviewed on-site and then the class will either construct a rain garden using materials provided by DEP or participate in a site assessment - rain garden/RainScapes design charette. Bringing tools and wheelbarrows is recommended for this class. A list of suggested equipment will be sent to registered participants prior to class.

View our [Calendar \(RainScapes Events\)](#) for upcoming field days.

## Seminars

View our [Calendar \(RainScapes Events\)](#) for upcoming seminars.

## List of Contractors

Find a [list of contractors](#) who have attended the RainScapes Contractor Training Classroom course.

[Return to Top](#)

## Design Guideline and Resources

- [Guidance for Permeable Interlocking Concrete Paver Retrofits on Residential Properties](#) (PDF, 27 pp, 1.5 MB)  
This document is for landscape contractors to use for guidance on the design and installation of permeable paver retrofit projects on residential sites. It is not intended as a replacement for industry certification.

[Return to Top](#)

## RainScapes Gazette for Landscape Professionals

- [December 2012](#) (PDF, 3 pp, 1.77M)
- [January 2012](#) (PDF, 3 pp, 26K)
- [Summer 2011](#) (PDF, 3 pp, 98K)
- [Spring 2011](#) (PDF, 3 pp, 90K)



## Department of Environmental Protection

### RainScapes Program

The RainScapes program promotes and implements projects on residential, institutional, and commercial properties to reduce [stormwater pollution](#). The County offers technical and financial assistance (in the form of rebates) to encourage property owners to implement [eligible RainScapes techniques](#) on their property.

There are two ways for private homeowners/businesses to participate:

1. [RainScapes Rewards Rebate Program](#)
2. [Targeted Neighborhoods Program](#)

RainScapes are a vital component of the [County's watershed restoration efforts](#), which are required by law (under the [County's NPDES Stormwater Permit](#)). Please note that even if you are not yet ready to install a RainScape on your property we recommend [everyday steps to reduce polluted stormwater runoff from your yard](#).

### Environmental Benefits

Most rainfall on urban surfaces such as roofs, driveways, roads, parking lots and patios ends up as [stormwater runoff](#). In contrast rainfall on natural surfaces (e.g., forests and meadows) soaks into the ground where it can replenish groundwater and recharge streams. RainScapes techniques include rainfall capture and holding, rainfall interception, and simulating good, natural drainage which help to:

- Reduce stormwater runoff volumes from individual properties
- Reduce drainage problems on a property
- [Prevent stormwater pollution](#) from entering our streams
- Reduce water consumption during dry spells
- Reduced need for mowing, fertilizer and pesticide applications
- Enhance yard aesthetics
- Enhance wildlife habitat
- Reduce energy costs to heat and cool your home
- Increase property values

[Learn more about selecting appropriate RainScapes techniques for your property.](#)

# Resources on Website

**Quick Links**

**On this page**

- [Environmental Benefits](#)
- [Eligible Techniques](#)
- [Who Can Participate?](#)

**Related Topics**

- [Select a RainScapes Technique](#)
- [Design Manuals](#)
- [Rebates and Application](#)
- [Targeted Neighborhood Program](#)
- [Calendar \(RainScapes Events\)](#)
- [Partners](#)
- [Landscaping Professionals](#)
- [Schools](#)
- [Resources](#)
- [Gallery](#)

**Get Help**

**For questions about RainScapes, contact DEP: 240.777.7770**

Email: [askdep@montgomerycountymd.gov](mailto:askdep@montgomerycountymd.gov)

Subscribe to the occasional email bulletin  
[RainScapes Gazette](#)



## Department of Environmental Protection

### RainScapes Resources

This page lists helpful resources such as plant lists, how-to instructions, sales notices, and other tools to help you get your project underway. Please email us at [RainScapes.Application@montgomerycountymd.gov](mailto:RainScapes.Application@montgomerycountymd.gov) with any questions or inquiries.

#### Plant Sales & Selections

Have you ever thought: Where can I find the proper native plants for my RainScapes project? or What are the plants best suited for my location? This list should help you.

- [Plant Sales in the Area](#) (PDF, 4 pp, 303K)
- [RainScapes Suggested Plant List](#) (PDF, 6 pp, 56K)
- [Deer-Resistant sunny sites](#) (PDF, 1 pp, 103K)
- [RainScapes plants for school projects](#) (PDF, 11 pp, 221K)
- [Butterfly gardens](#) (PDF, 6 pp, 522K)
- [Fern gardens](#) (PDF, 1 pp, 86K)
- [Wildflowers and Ferns for Native Gardens in the Piedmont](#) (PDF, 3 pp, 29K)
- [Natural Associations of Trees and Shrubs for the Piedmont](#) (PDF, 4 pp, 30K)

[Return to Top](#)

**Quick Links**

**On this page**

- [Plant Sales & Selections](#)
- [Rain Barrel Resources](#)
- [RainScapes Program Presentations](#)
- [Contractor Directory](#)
- [Additional References](#)

**Related Topics**

- [RainScapes Program](#)
- [Select a RainScapes Technique](#)
- [Design Manuals](#)
- [Rebates and Application](#)
- [Targeted Neighborhood Program](#)
- [Calendar \(RainScapes Events\)](#)
- [Partners](#)
- [Landscaping Professionals](#)
- [Schools](#)
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Subscribe to the occasional email bulletin  
[RainScapes Gazette](#)

# Application Process – online form



# RainScapes

Environmentally Friendly Landscapes for Healthy Watersheds

## Overview

### The RainScapes Program

RainScapes is an educational program that provides information and guidance to property owners who are interested in protecting the environment. Much of the program is available on the County's website. The County's program provides information and guidance to property owners who are interested in protecting the environment. Much of the program is available on the County's website.

How does rain affect the environment? Rain is a natural part of the water cycle. It provides water for plants and animals. However, too much rain can cause flooding and damage to property. RainScapes provides information and guidance to property owners who are interested in protecting the environment. Much of the program is available on the County's website.

Why should I install a rain garden? Rain gardens are attractive landscapes features constructed to capture stormwater runoff from hard surfaces such as roofs, driveways, patios, or sidewalks. A rain garden is a garden with a shallow depression that captures runoff from the surrounding area. Rain gardens help to reduce the amount of stormwater runoff that enters the stormwater system. They also provide a natural habitat for plants and animals.



# RainScapes

Environmentally Friendly Landscapes for Healthy Watersheds

## Rain Gardens

### Why should I install a rain garden?

One inch of rain falling over a 1,000 square foot area can produce a small stream that flows over a 1,000 gallon of stormwater runoff. Typically, most drainage water runoff flows into the stormwater system. Rain gardens help to reduce the amount of stormwater runoff that enters the stormwater system. They also provide a natural habitat for plants and animals.

What is a rain garden? Rain gardens are attractive landscapes features constructed to capture stormwater runoff from hard surfaces such as roofs, driveways, patios, or sidewalks. A rain garden is a garden with a shallow depression that captures runoff from the surrounding area. Rain gardens help to reduce the amount of stormwater runoff that enters the stormwater system. They also provide a natural habitat for plants and animals.



Photo by: [Name]



# RainScapes

Environmentally Friendly Landscapes for Healthy Watersheds

## Pavement Removal

### Why should I remove pavement from my property?

Removing pavement from your property can help reduce stormwater runoff and improve water quality. It also provides a natural habitat for plants and animals.

What are the benefits and incentives? The RainScapes Rewards Incentive Program offers a rebate payment for the removal of pavement. The program is available for residential properties and a minimum of 200 square feet of pavement must be removed. The program is available for residential properties and a minimum of 200 square feet of pavement must be removed.

How do I remove pavement from my property? The process involves several steps, including obtaining a permit, removing the pavement, and installing a replacement surface. The process involves several steps, including obtaining a permit, removing the pavement, and installing a replacement surface.



Photo by: [Name]



# RainScapes

Environmentally Friendly Landscapes for Healthy Watersheds

## Permeable Pavers

### Why should I choose permeable pavers for my hard surfaces?

Permeable pavers allow water to infiltrate the ground, reducing stormwater runoff and improving water quality. They are also aesthetically pleasing and durable.

What are the benefits and incentives? Permeable pavers provide a sustainable alternative to traditional pavement. They are also aesthetically pleasing and durable. Permeable pavers provide a sustainable alternative to traditional pavement. They are also aesthetically pleasing and durable.



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



# RainScapes

Environmentally Friendly Landscapes for Healthy Watersheds

## Rain Barrels and Cisterns

### Why should I install a rain barrel or cistern?

Rain barrels and cisterns collect rainwater from your roof, providing a sustainable source of water for irrigation and other uses. They also help reduce stormwater runoff.

What are the benefits and incentives? Rain barrels and cisterns provide a sustainable source of water for irrigation and other uses. They also help reduce stormwater runoff. Rain barrels and cisterns provide a sustainable source of water for irrigation and other uses. They also help reduce stormwater runoff.



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



# RainScapes

Environmentally Friendly Landscapes for Healthy Watersheds

## Tree Canopy

### Why should I plant trees?

Planting trees in your yard can provide many benefits, including shade, privacy, and improved air quality. Trees also help reduce stormwater runoff.

What is a tree canopy? A tree canopy is the area covered by the leaves and branches of trees. It provides shade and privacy, and helps improve air quality. A tree canopy is the area covered by the leaves and branches of trees. It provides shade and privacy, and helps improve air quality.



Photo by: [Name]



Photo by: [Name]



# RainScapes

Environmentally Friendly Landscapes for Healthy Watersheds

## Green Roofs

### Why should I install a green roof?

Green roofs are roofs that are covered with vegetation. They provide many benefits, including improved air quality, reduced energy costs, and increased property value. Green roofs also help reduce stormwater runoff.

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Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



Photo by: [Name]



# RainScapes

Environmentally Friendly Landscapes for Healthy Watersheds

## Conservation Landscaping Techniques

### Why should I implement conservation landscaping?

Conservation landscaping techniques help reduce water consumption and improve water quality. They also provide a natural habitat for plants and animals.

What is conservation landscaping? Conservation landscaping is a type of landscaping that focuses on reducing water consumption and improving water quality. It involves using drought-tolerant plants, mulch, and other techniques to conserve water. Conservation landscaping is a type of landscaping that focuses on reducing water consumption and improving water quality. It involves using drought-tolerant plants, mulch, and other techniques to conserve water.

How do I implement conservation landscaping? The process involves several steps, including choosing drought-tolerant plants, mulching, and using other techniques to conserve water. The process involves several steps, including choosing drought-tolerant plants, mulching, and using other techniques to conserve water.



Photo by: [Name]



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# RainScapes

Environmentally Friendly Landscapes for Healthy Watersheds

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Photo by: [Name]

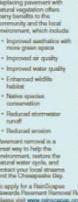


Photo by: [Name]



### RainScapes Rain Garden Workshop

Learn how you can transform your yard into a natural ecosystem to help soil capture and filter rainwater. Use RainScapes techniques to evaluate your yard and gain the knowledge needed to create a rain garden.

\$10.00 Registration is required  
Fri. 3/1/13 & Sat. 3/2/13 10am – 1pm  
@ Brookside Gardens

### \*RainScapes Rain Barrel Workshop

Learn how gathering water from your rooftops can help control stormwater impacts from your yard. Rain barrel with fittings and easy instructions for installation are provided.

\$10.00 Registration is required  
Fri. 4/12/13 & Sat. 4/13/13 10am-1pm  
@ Brookside Gardens

\*Course has not been posted yet. Course #'s are 19299 (Fri) and 219300 (Sat) [Parkpass.org](http://Parkpass.org)

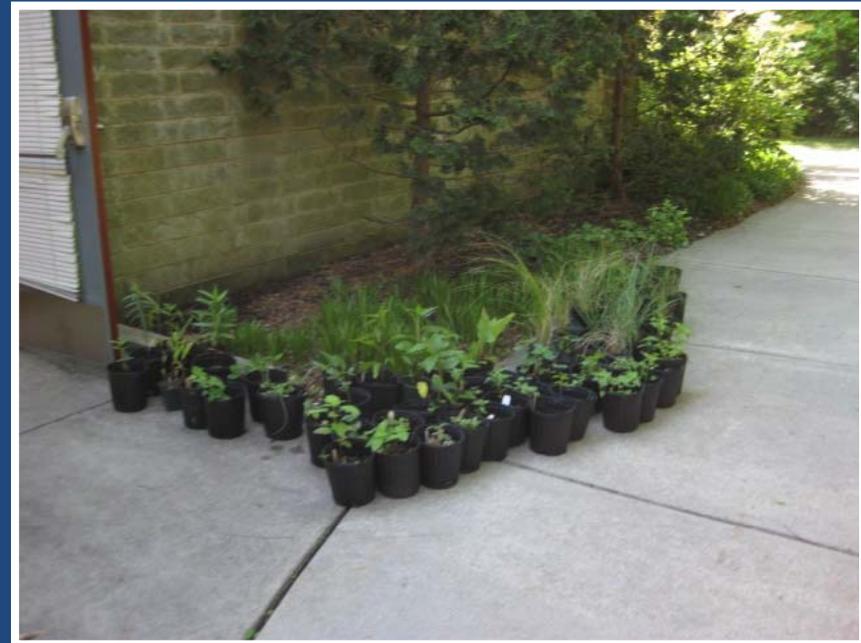
### \*RainScapes Conservation Landscape Workshop

Learn how conservation-based landscaping techniques can beautify your yard. We'll go over how to design and install a conservation landscape.

\$10.00 Registration is required  
Fri. 5/31/13 & Sat. 6/1/13 10am-1pm  
@ Brookside Gardens

\*Course has not been posted yet. Course #'s are 19299 (Fri) and 219300 (Sat) [Parkpass.org](http://Parkpass.org)

# RainScapes Workshops for the General Public



# Landscape Professionals series

## *Classroom instruction*

Program overview  
Rain Garden specifics

## *Rain Garden Site Assessment & Design Charette*

Classroom + Field work  
& Design exercise

## *Rain Garden Field Day*

Hands on Site  
assessment & Rain  
Garden build





Partnership with  
Montgomery College  
Landscape Technology  
Program to expand  
offerings

- Bioretention Maintenance (intro 2011)
- Bioretention Renovation (intro 2012)

# STAFF AND E-NEWSLETTERS

- Rainscapes:  
<http://www.montgomerycountymd.gov/rainscapes>
- NEW DEP RainScapes Landscape Architect
- RainScapes for Landscape Professionals and  
RainScapes Gazette E-newsletters

# MAINTENANCE RESOURCES

- MC Stormwater Facility Maintenance:  
<http://www.montgomerycountymd.gov/stormwater>
- NEW DEP Maintenance Landscape Architect
- BMP Maintenance E-newsletters - Quarterly

## Stay Connected!

Subscribe to the occasional email bulletin [Stormwater BMP Maintenance Newsletter](#)

## View our quarterly newsletters

- [November 2012](#) (PDF, 3 pp, 328K)
- [July 2012](#) (PDF, 3 pp, 355K)
- [May 2012](#) (PDF, 2 pp, 61K)
- [February 2012](#) (PDF, 2 pp, 141K)
- [November 2011](#) (PDF, 2 pp, 128K)
- [July 2011](#) (PDF, 2 pp, 102K)
- [April 2011](#) (PDF, 2 pp, 92K)
- [January 2011](#) (PDF, 2 pp, 547K)
- [October 2010](#) (PDF, 2 pp, 30K)

## Stormwater BMP Maintenance E-Newsletter



Summer Edition, July 2012

**In this E-Newsletter:**  
**Summer Maintenance Tips**  
**Feature Topic – Serious Pond Structural Failure**  
**Fall 2012 Contractor Training Added**  
**New 2012 Maintenance Fact Sheets - Coming August 2012!**  
**Stream Steward Volunteer Opportunities!**  
**Resources for More Information**

### Summer Maintenance Tips

- ✓ **Avoid the use of fertilizers, pesticides, and herbicides in and around your stormwater facilities — these products pollute our streams.** If manual removal of invasive weeds has been ineffective, limited applications of aquatic-friendly herbicide may be applied by a qualified professional certified by the State of Maryland.
- ✓ **Removing non-native invasive weeds as soon as you see them in your bioretention facility or sand filter will help to prevent more significant repairs later on.** Ask DEP for a copy of your bioretention design if you are unsure what plants should be there. Replenishing mulch to a 3 inch depth (but no deeper) can also help to reduce weeds.



Well maintained bioretention with native plants



Poorly maintained bioretention with mostly non-native invasives



# MAINTENANCE CONTRACTOR LISTS

Services & Info.  
County Cable 6

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DEP Home Page

- Air
- Climate Change
- Community Concerns
- Energy
- Trash & Recycling
- Water

Contact DEP

I Need Assistance

News

Local Green News

Videos

Calendar of Events

Internships

About DEP



## Department of Environmental Protection

### Stormwater Facility Maintenance: Contractor Resources

The Department of Environmental Protection's (DEP) Stormwater Facility Maintenance Program relies on skilled and knowledgeable contractors to perform maintenance on stormwater management facilities. A company that performs maintenance on a stormwater management facility must hold a certificate of attendance from an approved training program. DEP offers a list of all the companies that have completed the required training.

Download a [list of contractors approved by the County for maintenance of aboveground structures](#)  (PDF, 4 pp, 50K)

Download a [list of contractors approved by the County for maintenance of underground structures](#)  (PDF, 3 pp, 34K)

#### How Can My Company Become Certified To Perform Maintenance in Montgomery County?

Montgomery County regulations require that a company that performs repair or maintenance on a stormwater management facility must:

... have demonstrated experience in stormwater management facility construction.

#### Quick Links

**On this page**

- [How Can My Company Become Certified?](#)
- [DEP Stormwater Facility Maintenance Contractor Training](#)
- [DEP Training Materials](#)
- [Interim Certification Test](#)

**Related Topics**

- [Stormwater Pollution](#)
- [Stormwater Facility Maintenance Maintenance Transfer Process](#)

#### Get Help

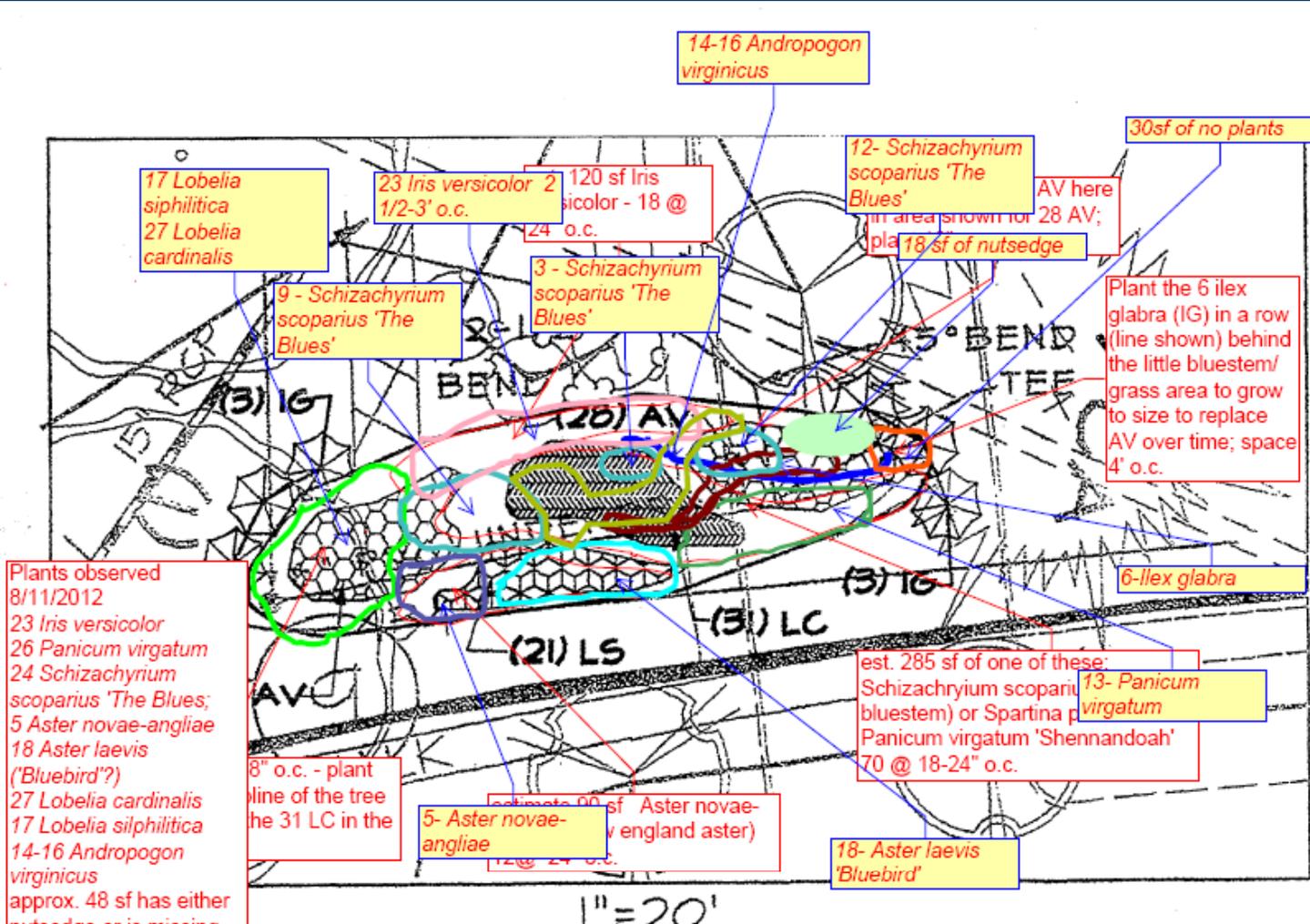
**For questions about contractor resources and training, contact DEP:**

311  
Email: [askdepr@montgomerycountymd.gov](mailto:askdepr@montgomerycountymd.gov)





# ASK DEP FOR EXISTING PLANS / DESIGNS



Plants observed 8/11/2012  
 23 *Iris versicolor*  
 26 *Panicum virgatum*  
 24 *Schizachyrium scoparium* 'The Blues';  
 5 *Aster novae-angliae*  
 18 *Aster laevis* ('Bluebird?')  
 27 *Lobelia cardinalis*  
 17 *Lobelia siphilitica*  
 14-16 *Andropogon virginicus*  
 approx. 48 sf has either nutsedge or is missing plants

at 900 sf; if 24" o.c. typical spacing, then 196 plants would be required; if 18" o.c. 335 plants would be required. indicate 111 plants in the facility and 6 *Ilex glabra* on the perimeter. Notes reflect adding 103 more plants, 3/12/2012

# OTHER MAINTENANCE OUTREACH

- Property Management Company communications
- Individual and direct communication to property owner when maintenance/repair is needed
- 4 Inspectors directly work with property owners

The screenshot shows a web browser displaying the Department of Environmental Protection (DEP) website. The page is titled "Stormwater Facility Maintenance Program". The navigation bar includes links for RESIDENTS, GOVERNMENT, BUSINESSES, and CULTURE & LEISURE. The main content area features a search bar, a "NEW I Want To ..." link, and a sidebar with various service categories like Air, Climate Change, and Water. The main text describes the program's role in inspecting and maintaining stormwater facilities. It lists "Current Maintenance Projects" for Lake Whetstone and Gunners Lake, each with a link to a "Material Testing Report". A "Quick Links" section provides additional resources, and a "Get Help" section offers contact information for DEP.

SEARCH

RESIDENTS GOVERNMENT BUSINESSES CULTURE & LEISURE

NEW I Want To ...

DEP Home : [Water](#) : Stormwater Facility Maintenance Program

ADD THIS

Department of Environmental Protection

## Stormwater Facility Maintenance Program

The Stormwater Facility Maintenance Program is responsible for inspecting and ensuring maintenance of all public and private stormwater management facilities within Montgomery County. The program is paid for by the [Water Quality Protection Charge](#). It is vital that the structures be maintained in working order so they function as intended, providing protection and stormwater management for our parks, schools, and businesses.

### Current Maintenance Projects

#### Lake Whetstone

A public meeting was held on Tuesday evening, December 13th 2011.

- [Meeting Presentation](#)
- [Material Testing Report](#)

#### Gunners Lake

- [Material Testing Report](#)

### What are stormwater facilities?

Stormwater management facilities are structures that are used to remove pollutants, prevent stream damage and erosion, prevent flooding, and protect public health. The structures can be on the surface (e.g., wet and dry ponds, bioretention basins, sand filters) or underground (e.g., infiltration trenches, oil grit separators, and

#### Quick Links

**On this page**

- [Where are the County's Stormwater Facilities?](#)
- [How do Stormwater Facilities work?](#)
- [Inspection and Maintenance](#)
- [Common Problems](#)
- [Maintenance Responsibilities](#)
- [Common Questions](#)
- [Current Projects](#)
- [Related Links](#)
- [Laws and Regulations](#)
- [Stay Connected!](#)

**Related Topics**

- [Contractor Resources](#)
- [Easements and Maintenance](#)
- [Maintenance Transfer Process](#)
- [Stormwater Pollution](#)
- [What To Do About Problems](#)

#### Get Help

**For questions about stormwater facility maintenance, contact DEP:**  
311  
Email: [askdep@montgomerycountymd.gov](mailto:askdep@montgomerycountymd.gov)

The Paperless Airplane

MyMontgomery Find County

# SCHEDULED CONTRACTOR TRAINING SESSIONS

- RainScapes  
Spring training for Professionals will be announced via the RainScapes Gazette for Landscape Professionals

- **Thursday, March 7, 2013**  
Montgomery County  
Executive Office  
Building, Lobby  
Auditorium,  
101 Monroe Street  
Rockville, MD. 20850.

# PICP resources/ training

- Fact Sheets
- Training Program
- Presentations

- [www.ncsu.edu/picp](http://www.ncsu.edu/picp)
- [www.lowimpactdevelopment.org](http://www.lowimpactdevelopment.org)
- [www.icpi.org](http://www.icpi.org)

**PERMEABLE INTERLOCKING CONCRETE PAVEMENT (PICP) RESIDENTIAL AND COMMERCIAL DEVELOPERS FACT SHEET**

**Stormwater Benefits**

- Reduces or eliminates stormwater detention and retention ponds, storm sewers, drainage opportunities and related costs
- Increased permeability from increased infiltration due to reduced stormwater volume required
- Pavement surface increases curb appeal
- Provides 100% permeable runoff (passing through sand, or graded aggregate-filled openings with high-strength, durable, non-porous)
- Helps meet local, state and provincial stormwater design criteria and provides compliance with U.S. National Pollutant Discharge Elimination System (NPDES) regulations
- Meets U.S. Environmental Protection Agency stormwater performance criteria as a structural best management practice (BMP) while providing parking, pedestrian surfaces
- LEED point contributor to Sustainable Sites, Water Efficiency, Materials & Resources and for Innovative Design Credits (Green Score) points
- May be used on sloped sites and driveways

**Environmental Quality Improvements**

PICP fits "curves" or available double curbs.

PICP may be combined with other LID in rain gardens and vegetated swales.

Permeable pavements remove the impurities (oil, silt, sediment) suspended sediment, by reducing runoff into the base of water and storm drains.

**ICPI V 2.0 Attractive**



Permeable interlocking concrete pavement at this fast food restaurant in Baltimore MD treats stormwater before entering the Chesapeake Bay.

**PERMEABLE INTERLOCKING CONCRETE PAVEMENT (PICP) MUNICIPAL OFFICIALS FACT SHEET**

**Stormwater Benefits**

- Reduces pollutants from rainwater runoff
- Complements buildings and visually unifies infrastructure, many storm sewers
- LEED points eligible for Sustainable Sites, Water Efficiency, Materials & Resources and for Innovative Design Credits (Green Score) points
- Meets U.S. Environmental Protection Agency stormwater performance criteria as a structural best management practice (BMP) while providing parking, pedestrian surfaces
- Helps meet local, state and provincial stormwater design criteria and provides compliance with U.S. National Pollutant Discharge Elimination System (NPDES) regulations
- Reduces runoff from impervious surfaces by as much as 100% eliminates need for public and local flooding
- Prevents street use disruption
- Less maintenance on permeable areas and drains, reducing fire hazards
- Save money with optimal material quantities, reduced winter salt use, de-icing salt use and snow removal cost
- 30 year life cycle for surface
- Compatible with underground stormwater storage systems, many stormwater BMPs and C&S credits
- Governments may offer an incentive utility fee reduction, expedited permit or a demonstration project to encourage
- No mixing is required. The may be used when installed designed to slope on site
- PICP typically reduces need for conventional management ponds
- Save money with typical equipment, reduced winter de-icing salt use and snow
- Reduce runoff temps when increasing snowmelt
- Infiltrates, filters and treats runoff from conventional impervious surfaces
- PICP typically reduces need for conventional management ponds

**Design Software Available**

New software for pavement and age drainage integration two range of urban sites is available. Contact ICPI for further information.

**ICPI V 2.0 Attractive**



**PERMEABLE INTERLOCKING CONCRETE PAVEMENT (PICP) SCHOOLS AND UNIVERSITIES FACT SHEET**

**Stormwater Benefits**

- Helps meet local, state, provincial stormwater design criteria and provides compliance with the U.S. National Pollutant Discharge Elimination System (NPDES) regulations
- Durable construction, low fire hazard, fire resistant an environment and safety
- Pilot projects offer research opportunities for faculty and students
- LEED point eligible for Sustainable Sites, Water Efficiency, Materials & Resources and for Innovative Design Credits (Green Score) points
- Meets U.S. Environmental Protection Agency stormwater performance criteria as a structural best management practice (BMP) while providing parking, pedestrian surfaces
- No mixing is required. The may be used when installed designed to slope on site
- PICP typically reduces need for conventional management ponds
- Save money with typical equipment, reduced winter de-icing salt use and snow
- Reduce runoff temps when increasing snowmelt
- Infiltrates, filters and treats runoff from conventional impervious surfaces

**PERMEABLE INTERLOCKING CONCRETE PAVEMENT (PICP) DESIGN PROFESSIONALS FACT SHEET**

**Stormwater Benefits**

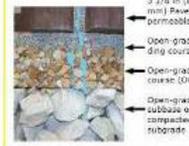
- Infiltrates, filters and decreases stormwater runoff rate and reduces Time to Maximum Daily Loss (TMDL)
- LEED point contributor to Sustainable Sites, Water Efficiency, Materials & Resources and for Innovative Design Credits (Green Score) points
- Meets U.S. Environmental Protection Agency (EPA) stormwater performance criteria as a structural best management practice (BMP) while providing parking, road and pedestrian surfaces
- Helps meet local, state and provincial stormwater design criteria and provides compliance with the U.S. National Pollutant Discharge Elimination System (NPDES) regulations
- Provides 100% permeable surface by runoff passing through sand, aggregate-filled openings between solid high-strength durable concrete pavers
- Reduces or eliminates stormwater detention and retention ponds, storm sewers, drainage opportunities and related costs
- May be used on sloped sites with proper design
- The modular concrete units allow for project phasing, open-graded base and subbase materials are typically available locally
- Capable of storing water for on-site irrigation or building grey water use
- May be designed with underground stormwater storage systems, over many slower-cracking clay soils and in cold climates
- Processes and reduces pollutants from vehicular or dripping

**Pollutant removal efficiencies**

(Compared to impervious pavement runoff)

Zinc: 60-85%  
Copper: 50-55%  
Total Suspended Solids: 60-90%  
Total Phosphorus: 85%

**ICPI V 2.0 Attractive Durable Environmentally Compliant**



Permeable interlocking concrete pavement (PICP) with open-graded base and subbase for infiltration and storage.

**PICP is a cost effective LID stormwater management tool**



Permeable interlocking pavement at a fast food restaurant in Baltimore, MD

**APPLICATION OPPORTUNITIES**

- Urban: Office plazas, sidewalk replacement, street tree planting areas, parking lots, parks and outdoor seating areas
- Suburban: Walking trails, parks, driveways, parking lots on roadsides, suburban roads and sidewalks
- Redevelopment Sites: Parking areas, plazas and public spaces, sidewalks and brownfields

# DIRTY WATER POISONS LIFE – ALL LIFE



Turtle hatchling



Baltimore  
Checkerspot  
caterpillar



Northern Green Frogs



*Cabarus diogenes*



Peeper frog





**SO PLANT PLANTS!**

# WE ALL BENEFIT!



(& The fish thank you)

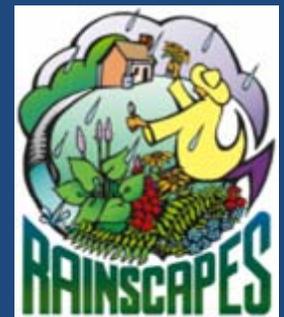
# Summary: ESD/LID SWM and RainScapes add stormwater management to a site beautifully but they need active maintenance

- Tools
  - Rain Gardens
  - Conservation Landscapes
  - Cisterns
  - Tree Canopy
  - Rain Barrels
  - Green Roofs





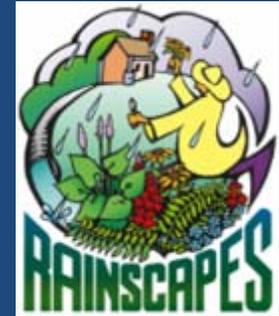
Where could you do some retrofitting?  
Where is your next maintenance opportunity?



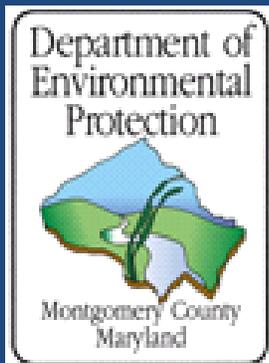
# STAFF

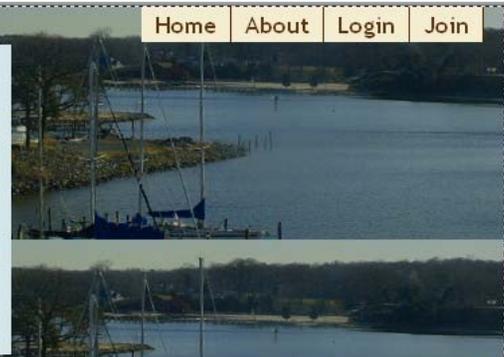
| Program                        | Name                | Title                         | Contact info |
|--------------------------------|---------------------|-------------------------------|--------------|
| Stormwater Maintenance Program | Amy Stevens         | Manager                       | 240-777-7766 |
| Stormwater Maintenance Program | Christy Ciaramatero | Planner                       | 240-777-7720 |
| Stormwater Maintenance Program |                     | Landscape Architect           |              |
| RainScapes                     | Ann English         | Program Coordinator           | 240-777-7702 |
| RainScapes                     | Pamela Rowe         | Planner                       | 240-777-7714 |
| RainScapes                     | Daniel Somers       | Planner                       | 240-777-7756 |
| RainScapes                     | JL Fisher           | Landscape Architect           |              |
| Watershed Outreach             | Ana Arriaza         | Planner                       | 240-777-7778 |
| Watershed Management Division  | Susan Koenig        | Prinicpal Administrative Aide | 240-777-7702 |

# Questions?



- [www.rainscapes.org](http://www.rainscapes.org)
- [rainscapes@montgomerycountymd.gov](mailto:rainscapes@montgomerycountymd.gov)
- a





## Baywide Design Specifications

The updated design specifications below were released for each practice in July 2009 to support stormwater implementation efforts in Virginia. Designers in other Bay states can use these specifications, but may need to modify them to refer to the appropriate sizing and material references for their states.

- [Rooftop Disconnection](#)
- [Filter Strips](#)
- [Grass Channels](#)
- [Soil Compost Amendments](#)
- [Green Roofs](#)
- [Rain Tanks](#)
- [Permeable Pavers](#)
- [Infiltration](#)
- [Bioretention](#)
- [Dry Swales](#)
- [Urban Bioretention](#)
- [Filtering Practices](#)
- [Constructed Wetlands](#)
- [Wet Ponds](#)
- [ED Ponds](#)

### *All things Stormwater*

[CSN Stormwater Updates Calendar](#)

### *Tools for...*

- Bay Stormwater Advocates
- Plan Reviewers & Designers
  - [Baywide Design Specifications](#)
  - [Policy Design Issues](#)
  - [Bay Stormwater Training](#)
  - [Training Events](#)
- Local Stormwater Managers
  - [Resources You Can Use](#)
  - [Links](#)
- Stormwater Science & Practice
- Bay Residents

### **Chesapeake Stormwater Network**

117 Ingleside Avenue  
Baltimore, Maryland 21228  
Phone: 410-608-7117