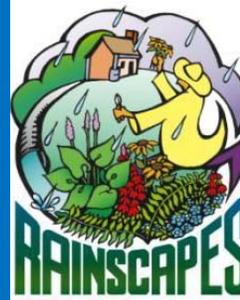


Landscape Professionals Training

**Montgomery County
LID Stormwater Facility
Maintenance and RainScapes**



RAINSCAPES PROGRAM

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

RAINSCAPES GOALS

- Source Control
- Residential urban stormwater management
 - Reduce runoff volume
 - Reduce pollutants in runoff
 - Provide groundwater recharge

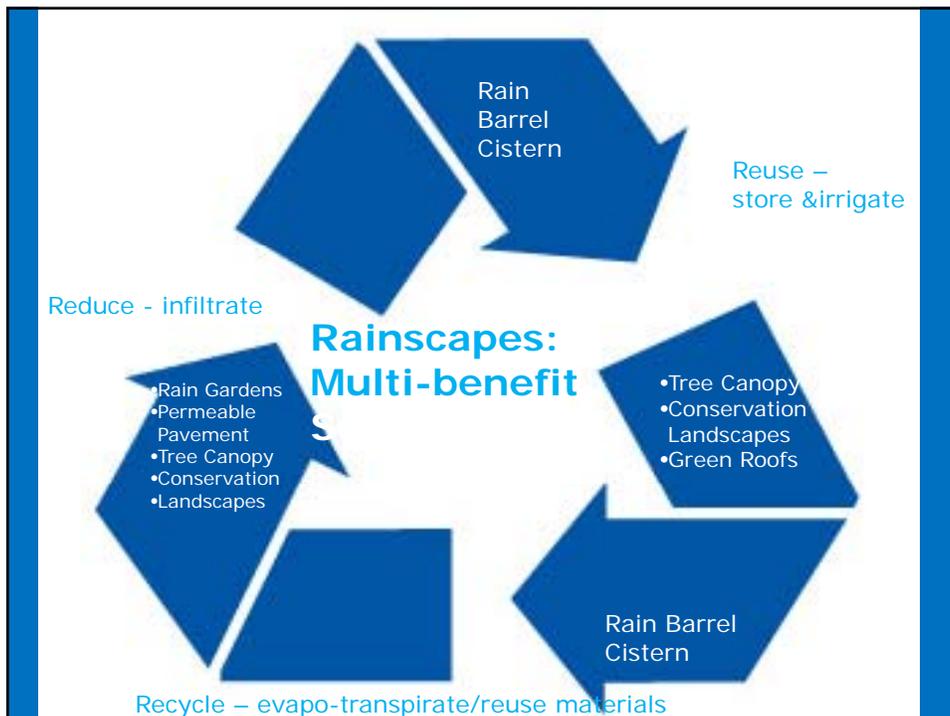


- Water Conservation and Reuse
- Habitat diversity and hardiness
- Individual stewardship*

RAINSCAPES: GETTING TO THE SOURCE

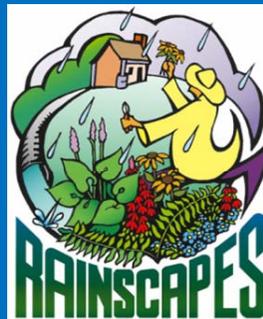
Urban Stormwater Management

- Slow It Down
- Spread It Out
- Soak It in



RainScapes Implementation

- **RainScapes Neighborhoods**
 - Contractor-installed projects
 - Measurable goal and monitoring
 - Paired with other departmental efforts
- **RainScapes Rewards Rebates**
 - Rain Gardens
 - Conservation Landscaping
 - Urban Tree Canopy
 - Permeable Pavers
 - Pavement Removal
 - Green Roofs
 - Water Harvesting
 - Cisterns
 - Rain Barrels
 - Dry Wells
- **RainScapes for Schools**
- **RainScapes for Landscape Professionals**
- **RainScapes Partnerships with Watershed Groups**
- **Resources for Residents**



Landscape Professionals series

Classroom instruction

- Program overview
- Rain Garden specifics

Rain Garden Site Assessment & Design Charette

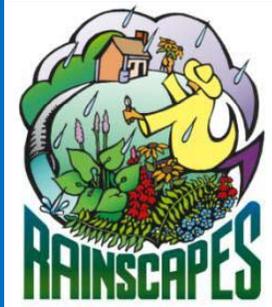
- Classroom + Field work
- & Design exercise

Rain Garden Field Day

- Hands on Site assessment & Rain Garden build

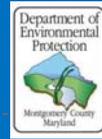


RainScapes Rewards Rebate Program



Dan Somers
RainScapes Rewards Rebate Planner

Montgomery County Department of Environmental Protection
Watershed Management Division
RainScapes Program



What Does a RainScape Look Like?



Commercial / Institutional examples



Ultra-urban



Slope by parking lot



Preferential parking and slope stabilization



Many scales and settings



200 square foot of planting area by a patio



US-EPA HQ DC

Sometimes it looks like part of the hardscape



Rain garden/ stormwater planter



Cistern

RainScapes Techniques in Action

Green Roof
 * 623 gallons of water falls on each sq. ft. of roof during the during a normal rainstorm of 1". A 1000 sq. ft. conventional roof can shed 623 gallons when there is an inch of rain. Green roofs reduce and clean this stormwater runoff before it hits the ground.

Conservation Landscape
 Loosened and improved soil, planted with easy-to-maintain native plants that soak up the rain.

Dry Well
 collects stormwater from rooftops or driveways and filters the rainwater through a small stone-filled pit, then into the underlying soils.

Cistern
 Larger than a rain barrel, cisterns perform the same water harvesting benefits and are no more aesthetically intrusive than an air conditioner.

Rain Barrels
 collects and stores rain water from rooftops

Permeable Surfaces
 allow rainwater to rapidly infiltrate and enter the ground where it is naturally filtered

Canopy Trees
 Leaves intercept raindrops and retain them, thus reducing stormwater runoff

Pavement Removal
 allows more water to soak into the ground when you plant native plants.

Rain Gardens
 A spoon-like, concave area filled with a special soil mix that collects rainfall and allows it to filter into the ground.

RAINSCAPES

RainScapes Rewards Incentive Program



- **Rebates for single family residences:**
 - \$2,500 per property with lifetime project caps
- **Rebates for multi-family/commercial / institutional:**
 - \$10,000 per property with lifetime project caps
- All County property owners **outside** of municipalities Rockville, Gaithersburg and Takoma Park are eligible for rebates

RainScapes Practice	Residential \$2,500 maximum (per parcel)	Commercial, Multi-Family, or Institutional \$10,000 maximum (per parcel)
Rain Gardens	\$1,200 per garden or \$5-\$9 per square foot (whichever is greater).	\$2,500 per garden or \$5-\$9 per square foot (whichever is greater)
Conservation Landscaping	\$3.50 per square foot Minimum 250 square feet Must replace turf or invasives Designed to intercept stormwater	\$3.50 per square foot Minimum 350 square feet Must replace turf or invasives Designed to intercept stormwater
Urban Tree Canopy	\$200 per tree. # of trees determined by available space. Must shade or cover impervious surface	\$200 per tree. # of trees determined by available space. Must shade or cover impervious surface
Permeable Pavers	\$1,200 or \$4 per square foot. (whichever is greater) 100 square foot minimum	\$5,000 or \$4 per square foot. (whichever is greater) 100 square foot minimum
Pavement Removal	\$2 for replacement with turf \$4 for replacement with conservation landscape. 100 square foot minimum	\$2 for replacement with turf \$4 for replacement with conservation landscape. 300 square foot minimum
Green Roofs	\$10 per square foot. 250 square foot minimum	\$10 per square foot. 300 square foot minimum
Rain Barrels	\$200 (must capture 200 gallons) Maximum rebate is \$200	\$200 (must capture 200 gallons) Maximum rebate is \$200
Cisterns	\$1 per gallon. 250 gallon minimum Maximum rebate is \$500	\$1 per gallon. 250 gallon minimum Maximum rebate is \$2,000
Dry wells	\$1 per gallon. Maximum rebate is \$600	\$1 per gallon Maximum rebate is \$600

Rewards Rebate Program:

Rain Gardens

- Whichever is greater **\$1,200** per garden or
 - 1' of excavation = **\$5.00** a square foot
 - 2' of excavation = **\$7.00** a square foot
 - 3' of excavation = **\$9.00** a square foot



Rewards Rebate Program:

Conservation Landscaping

- **\$3.50** per square foot
- Minimum 250 square foot conversion of turf area or invasive species.
- Soil must be de-compacted 9" with 2" of compost added
- Must be designed to intercept stormwater



Rewards Rebate Program:

Tree Canopy

- \$200 per tree
- Number of trees determined by available space
- Must be providing shading or cover to impervious surface
- Must be on our canopy tree list



Rewards Rebate Program: Permeable Paver Retrofits

- \$1,200 or \$4.00 a square foot. Whichever is greater.
- Must be for conversion of existing hardscape and be a minimum area of 100 sf



Rewards Rebate Program: Pavement Removal

- \$4 per square foot for conversion to a conservation landscape
- \$2 per square foot for conversion to turf.
- 9" of de-compaction and 2" of compost required
- Must be for conversion of existing hardscape and be a minimum area of 100 sf



Rebate Program: Green Roofs

- \$10 per square foot
- Must be on an existing roof and cover either ¼ of the roof area or 250 square feet
- Requires approval letter from structural engineer





Rebate Program: Rain Barrels

- \$200 per property
- Must capture 200 gallons
- Maximum rebate is \$200



Rewards Rebate Program: Cisterns

- \$1 per gallon
- 250 gallon minimum
- \$500 maximum rebate
- Exterior irrigation only



Rewards Rebate Program: Dry Wells

- \$1 per gallon
- \$600 maximum rebate
- Can be a DIY linear drywell
- Can be a contractor installed conventional drywell



HOA – Before and after RainScapes Rewards Conservation Landscape Project



Removing invasive species and replacing with native species and other acceptable non-invasive ornamentals

Combined RainScapes Rewards
project types
Conservation Landscape + Rain Garden
@ Leisure World Mutual 11



Inkberry
Ilex glabra
"Shamrock"



Sweetspire
Itea virginica
"Little Henry"



Fothergilla
Fothergilla major
"Mt Airy"



Witch Hazel
Hamamelis virginiana



Serviceberry
Amelanchier canadensis



Viburnum
Viburnum dentatum
"Blue Muffin"



Dogwood
Cornus florida



Red Bud
Cercis canadensis
"Forest Pansy"



Fringe Tree
Chionanthus virginicus



Oak Leaf Hydrangea
Hydrangea quercifolia
"Pee Wee"



Oak Leaf Hydrangea
Hydrangea quercifolia
"Alice"



Hydrangea
Hydrangea arborescens
"Annabelle"



Chokeberry
Aronia arbutifolia
"Brilliantissima"



Winterberry
Ilex verticillata
"Red Sprite"



Red Twig Dogwood
Cornus sericea
"Baileyi"



Red Maple
Acer rubrum
"Sunset"



Red Oak
Quercus rubra



Honey Locust
Gleditsia
triacanthosinermis



Black Eyed Susan
Rudbeckia fulgida
"Goldstrum"



Coreopsis
Coreopsis verticillata
"Moonbeam"



Purple Cone Flower
Echinacea purpurea
"Kim's Knee High"



Meadow Phlox
Phlox paniculata
"David"



Obedient Plant
Physostegia virginiana
"Miss Manners"



Blazingstar
Liatris spicata
"Kobold"



Christmas Fern
Polystichum
achrostichoides



Coral Bells
Heuchera americana



Foam Flower
Tiarella cordifolia



DEP Home > Water > RainScapes Program

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 Neighborhood 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 RainScapes 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.](#)

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: 240.717.7772
Email: 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 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
- [Drier-Resistant sunny sites](#) PDF 1 pp. 103K
- [RainScapes plants for school projects](#) PDF 11 pp. 221K
- [Butterfly gardens](#) PDF 6 pp. 122K
- [Fern gardens](#) PDF 1 pp. 89K
- [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

Quick Links

On this page

- [Plant Sales & Selections](#)
- [Rain Scapes Resources](#)
- [RainScapes Program Presentation](#)
- [Computer Directory](#)
- [Additional References](#)

Related Topics

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- [Select a RainScapes Technique](#)
- [Design Manuals](#)
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Application Process – online form – click on Quick link

Check out our website for more info on techniques



On-line application



Questions?



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- 240-777-7756