

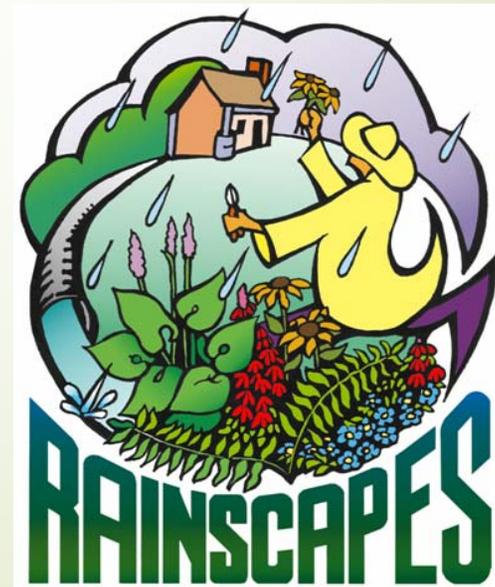
Kensington Estates

Healthy Watersheds Start at Home

June 8, 2016



Working together for a cleaner, greener
economically vibrant community



Today's Topics

- RainScapes Program Overview/How we fit with the rest of DEP
- Community Profile: Kensington Estates
- What does a RainScape look like
- Types of RainScapes and resources



Federal



State



County



EPA

Clean Water Act
1972

Expanded to
require
municipalities to
get permits for
stormwater runoff
discharge

1987

NPDES MS4
Permit Program

Maryland
Stormwater Act
2007, as
amended in 2009
requires

ESD to the MEP

effective May
2010 with new
Chapter 5 and
local ordinances

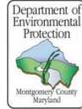
Montgomery
County

NPDES MS4

Stormwater
Discharge Permit
2010-2015

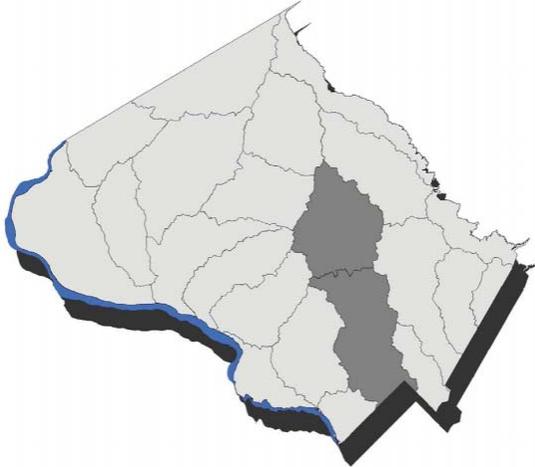
Requires 4300 IA
not controlled to
have controls
added

Roadmap to fix the watershed



ROCK CREEK IMPLEMENTATION PLAN

PREPARED FOR:
MONTGOMERY COUNTY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 Rockville Pike, Suite 120



January 2012

Rock Creek Implementation Plan

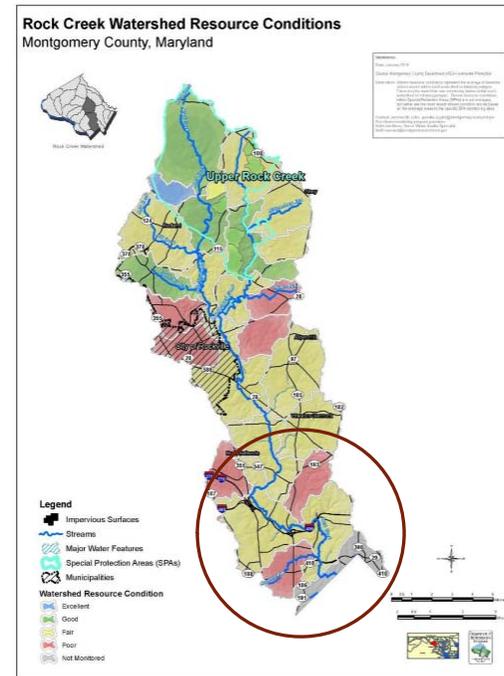


Figure 2: Stream Resource Conditions for the Rock Creek Watershed

January, 2012

Page 7 of 40

MC-DEP Mission: Green Communities, Blue Water



We do Green Infrastructure!



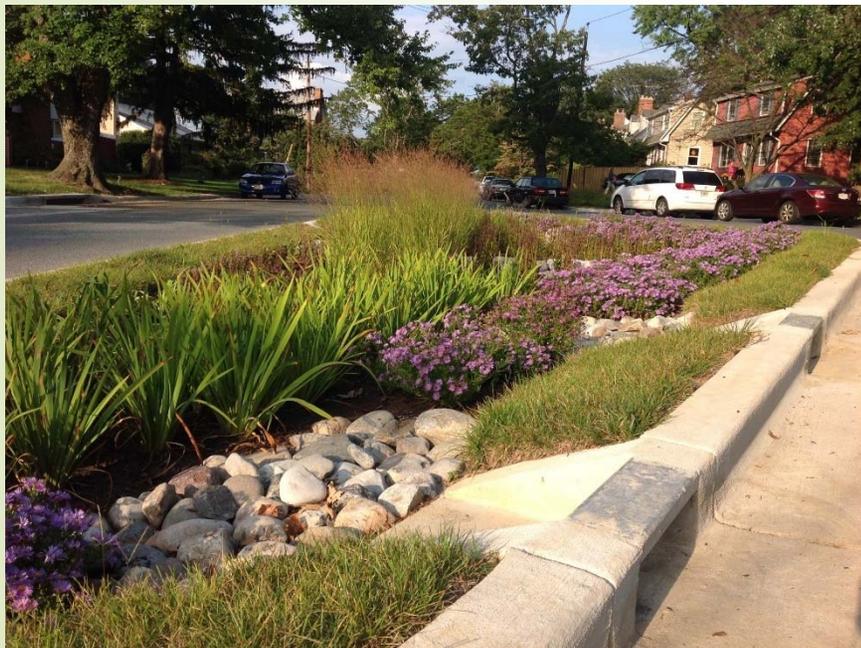
Montgomery County Approaches in the Green Infrastructure Retrofit Toolbox

Approach 1

Public Property /CIP

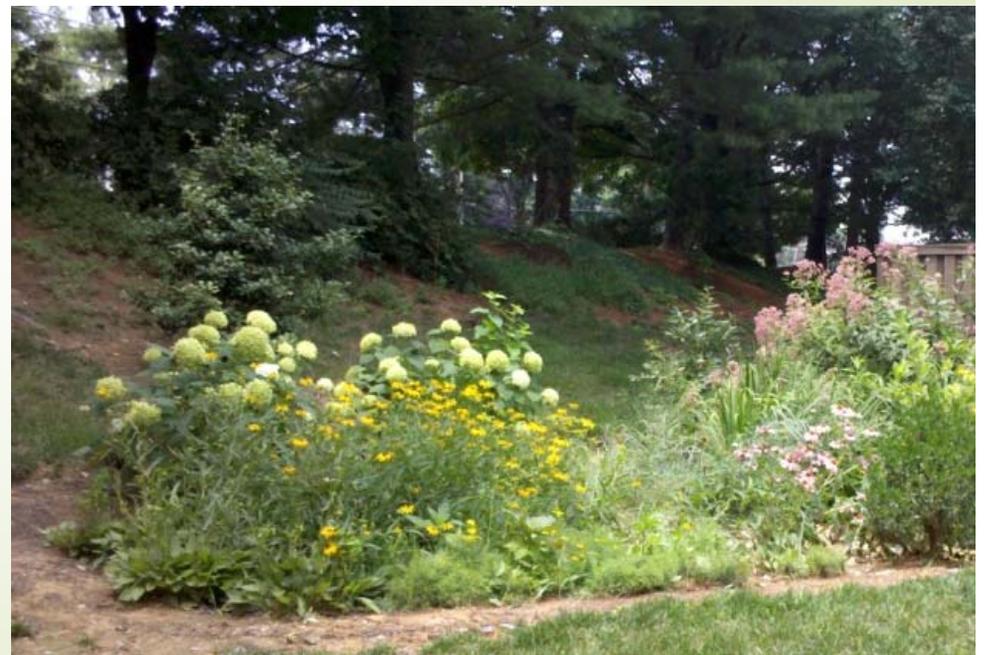
Capitol Improvements in
Infrastructure

Private Property Pond
Retrofits – CIP



Approach 2

Small Scale / Private Property
RainScapes



RainScapes Techniques

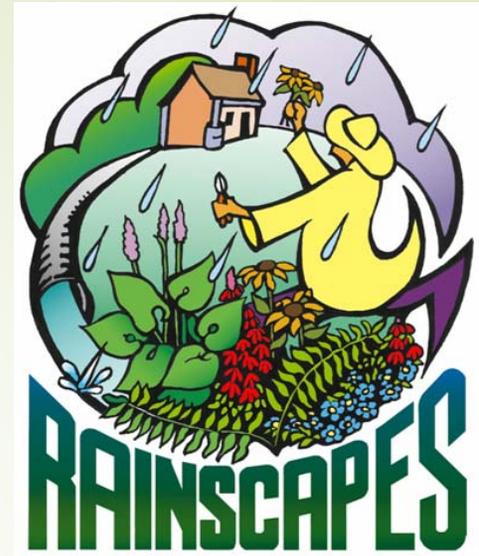
Small scale (vegetative) practices integrated throughout the site as close to the source as possible



RainScapes = LID = ESD

RainScapes mission:

To educate and incentivize private property owners to act to reduce impervious surface stormwater runoff pollution from their property that is contributing to the degradation of our streams and the Chesapeake Bay.





RainScapes

Getting to the Source



Small Scale Stormwater Management

- Treatment Train approach to site level issues
- Retrofitting sites to function better

Supports

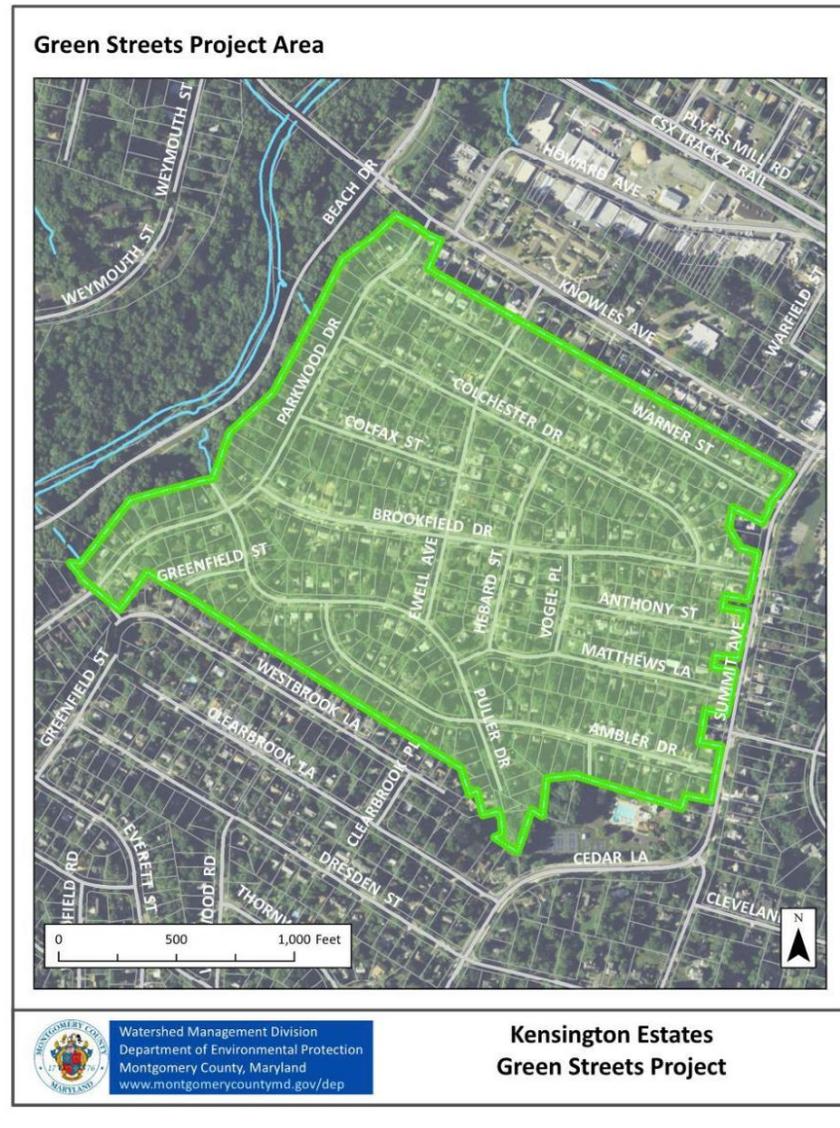
- Healthy Watersheds
- Water Conservation
- Habitat Diversity
- Empowering Individual Actions



Kensington Estates Conditions

Rock Creek Watershed

- 93.32 AC, 29.58 IA
- Built in the 1940s with redevelopment beginning in the 2000's
- Average lot size is 7852 SF/ Median is 7119 SF
- Many "potential sites" will have conflicts with utilities, trees or other factors and will not be suitable



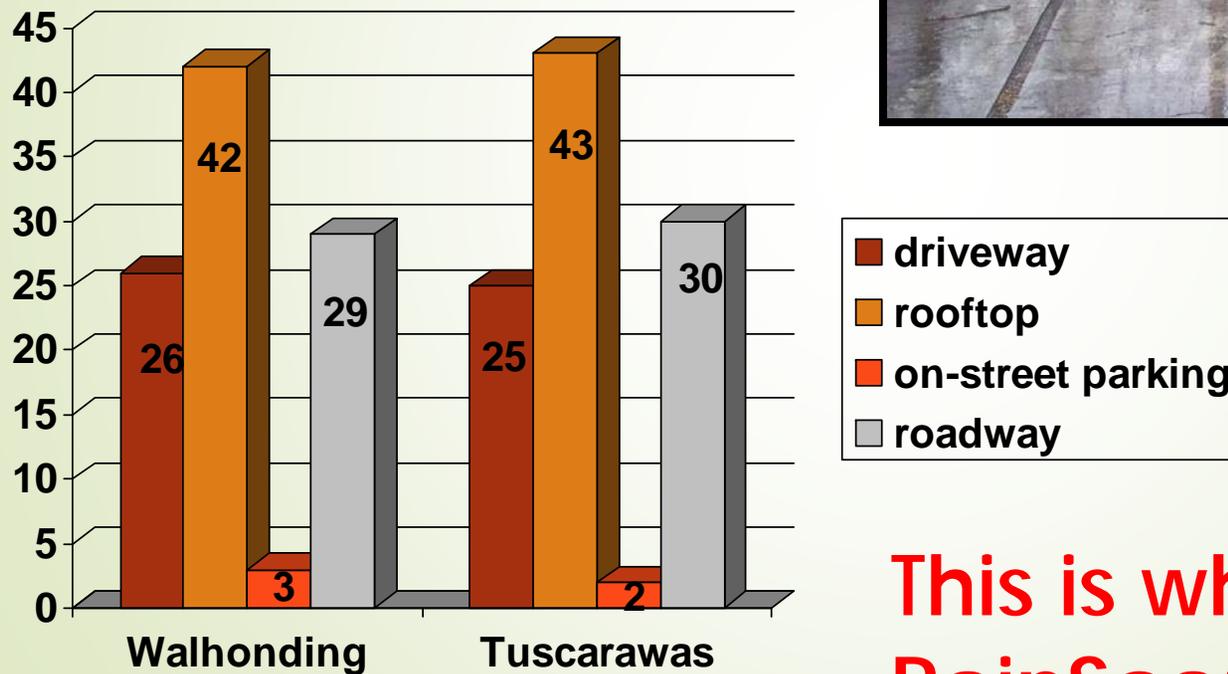
Runoff from roofs and driveways flows into the Right of Way



Green Streets could (if all sites identified could be installed) control a maximum of **50%** of the WQv for 29.12 IA draining to BMPs (57,194 CF of water)

In a neighborhood –

Where is all the
impervious area??



**This is why
RainScapes can
make a difference**

Healthy Neighborhoods start at home



Corrugated black plastic downspout extensions



Corrugated black plastic downspout extensions



Container breeders only breed in very small pools of water

Drainage, mosquitoes, & Stormwater management on Private Property

Mosquitoes to know

	Prevalence	Vector For...	Active (Bites) Primarily in the...	Preferred Breeding Habitat
Aedes albopictus (Asian Tiger Mosquito)	Common	Zika, Dengue, and Chikungunya viruses	Day	'Container breeders' preferring temporary small pools of water around houses in; pots, watering cans, rain barrels, trash cans, birdbaths, clogged gutters, soda cans, etc.
Aedes aegypti (Yellow Fever Mosquito)	Uncommon	Zika, Dengue, and Chikungunya viruses	Day	'Container breeders' preferring temporary small pools of water around houses in; pots, watering cans, rain barrels, trash cans, birdbaths, clogged gutters, soda cans, etc.
Culex pipiens (Common House Mosquito)	Common	West Nile Virus	Night	Prefers permanent pools of stagnant water

<http://www.montgomerycountymd.gov/mosquito/>

Container breeding – what does that mean?





Check for breeding areas

Clean your gutters

Cover your surcharge openings



<http://www.montgomerycountymd.gov/DEP/Resources/Files/PostersPamphlets/Buried-Dry-Well-Maintenance.pdf>

Be a good neighbor

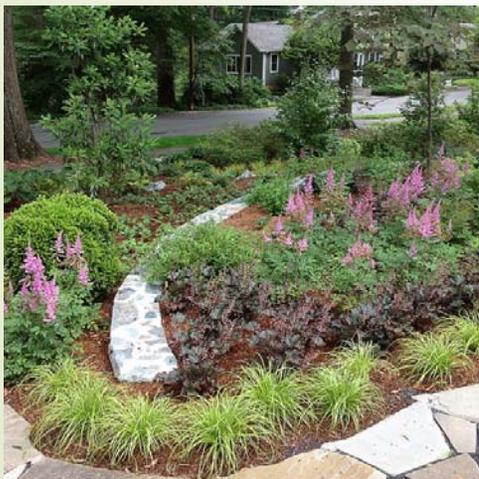


Backyard drainage challenges exacerbated by fencelines and new construction extremely close to lot lines



Inspect your property to make sure you don't have prolonged standing water

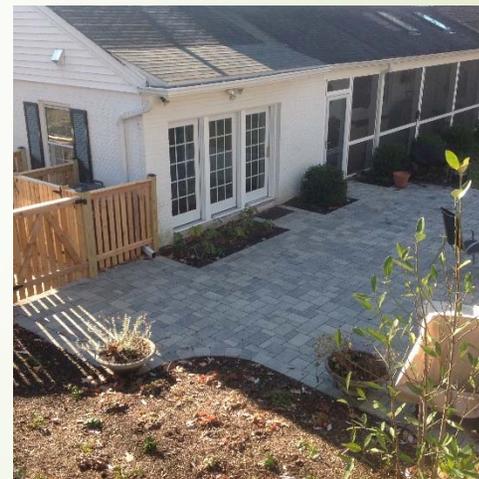
What Does a RainScape Look Like?



Conservation Landscape



Rain Garden



Permeable Pavement



Often, like an attractive dish shaped garden



Other times, like a pink cloud....



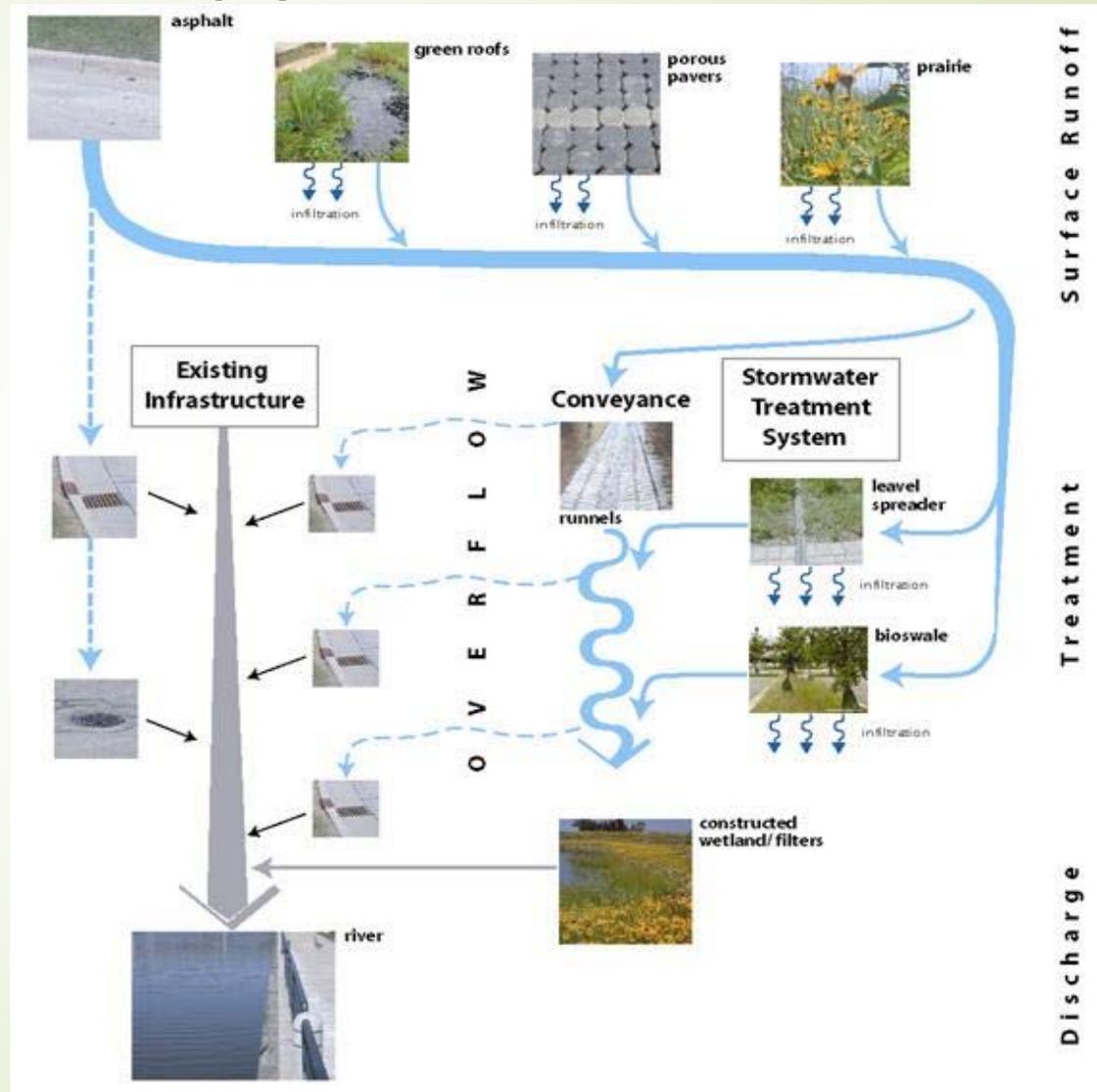
Sometimes like a big tank

Multiple Benefits



Achieving Green Infrastructure : Treatment train approach

*Distributed vs.
Centralized*



Treatment Train Tools: Rain garden

A garden that captures and filters stormwater runoff from impervious surfaces. It provides temporary ponding for a small drainage area (10,000 max., 2000 SF typ) and drains in 24-48 hours.

A rain garden mimics the ecological function of a forest or meadow on a small scale using:

SOIL FILTRATION

DEEP, FIBROUS ROOTED
NATIVE PLANTS

MULCH LAYER



RainScapes rain garden size : usually 50 sf- 200 sf

- The target is to capture between 1.0" and 2.7"
- Why?
 - Provides water quality protection at the lower end, and channel protection at the higher end
 - 90% of rain storms in this area are less than an inch



Changing turf to something more absorbent

Slow it down

Soak it up

example:
Conservation
landscape and
stone dissipator
direct and soak up
the water

Photos



3. Silling of low spot in yard.



6. Stone dissipator at inflow



4. Install the plant material



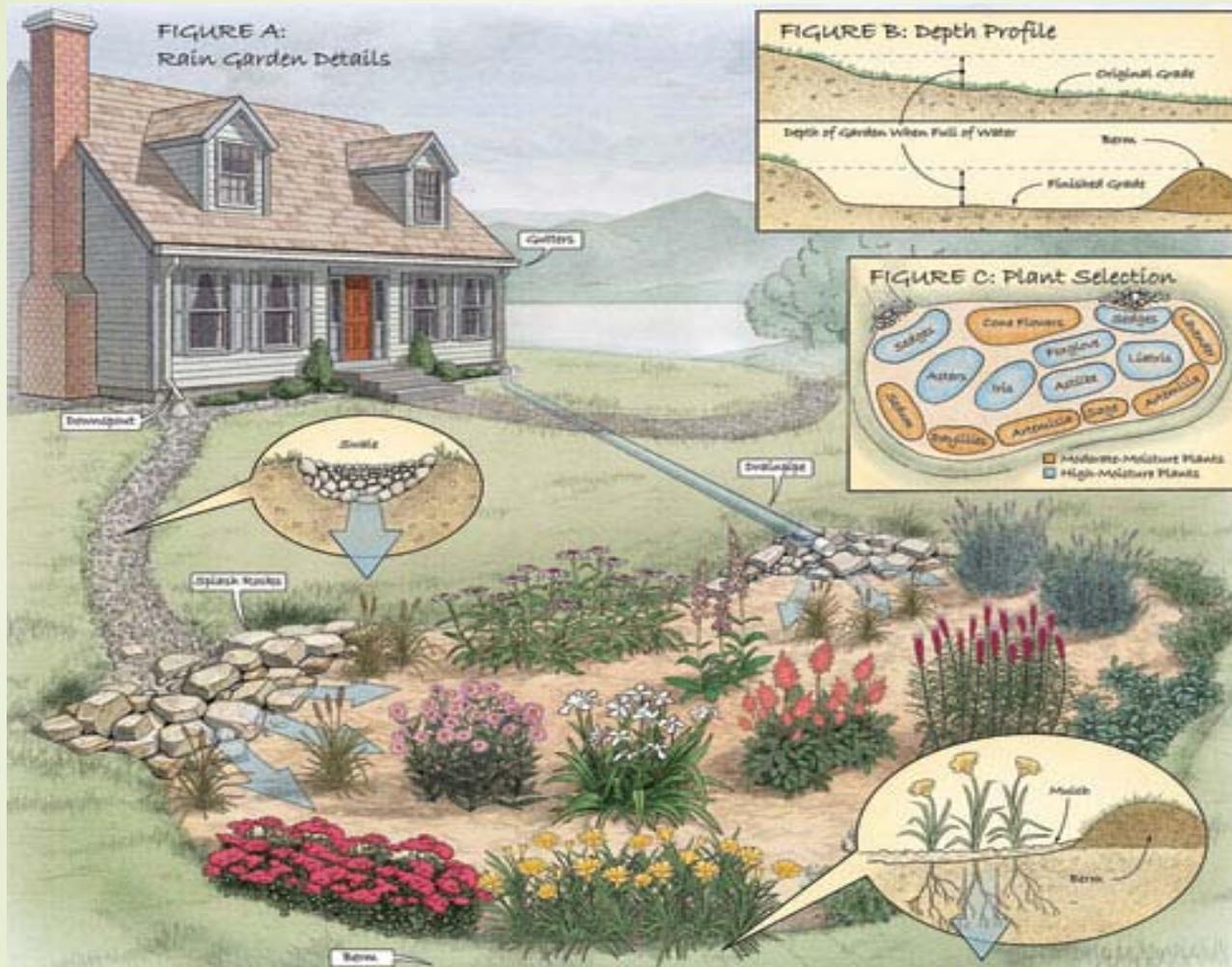
7. Inflow



5. Planting below inflow

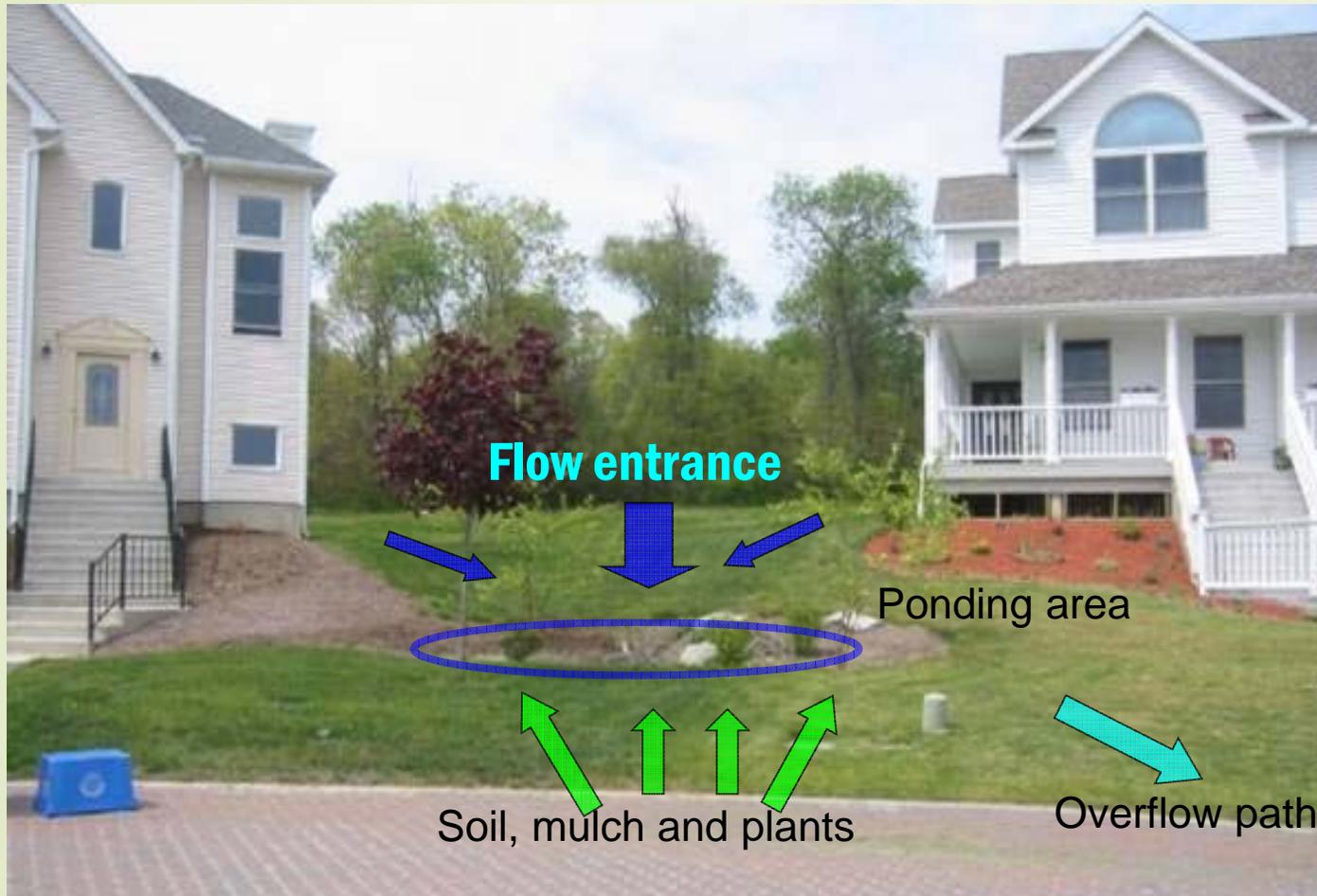


8. Low end of CL



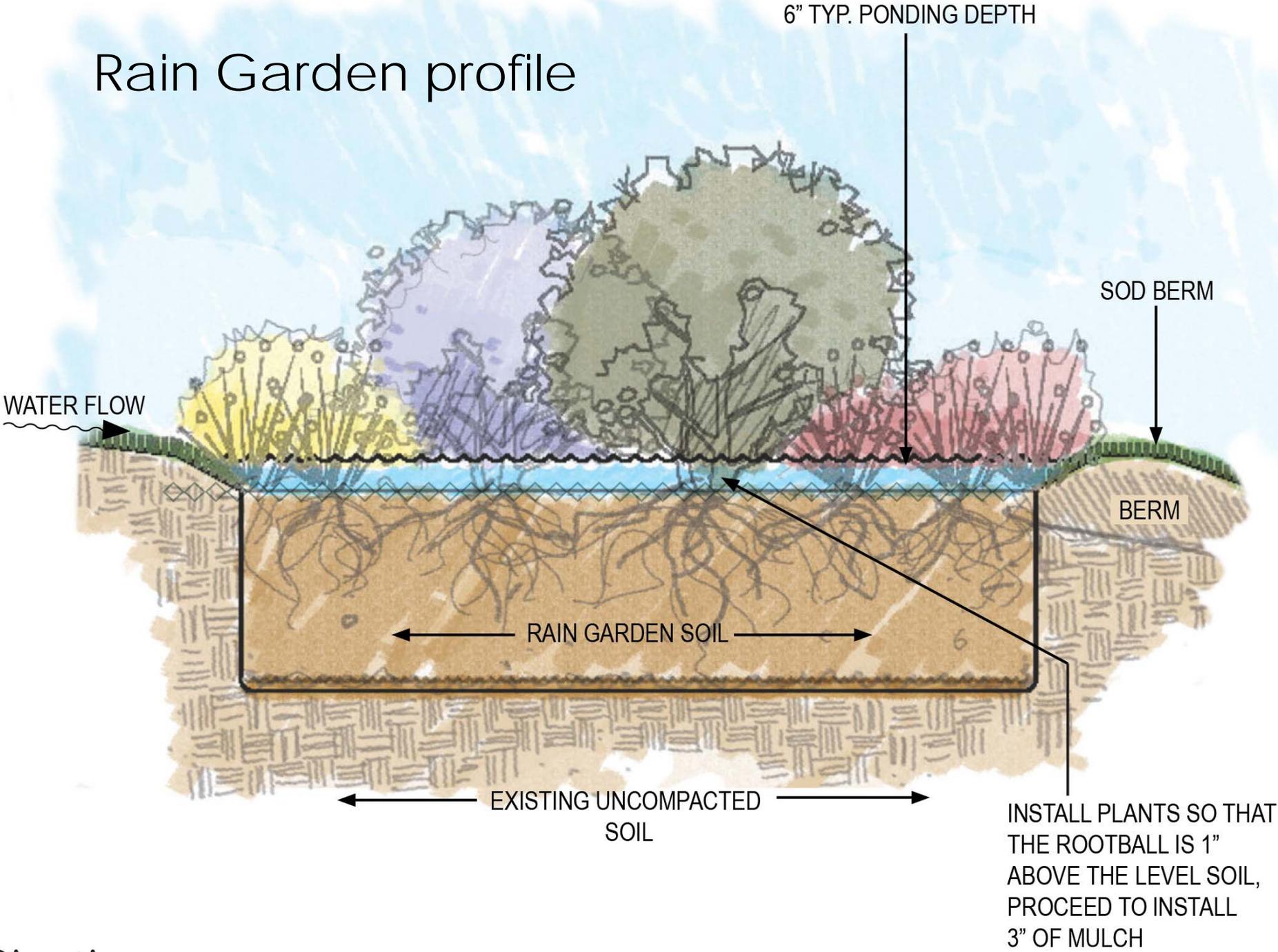
Rain Garden basics

Rain Garden Features



Vegetated areas designed to infiltrate and process stormwater

Rain Garden profile



Yard lawn conversions to Rain Garden and Conservation Landscapes



Multiple lots of drainage in a modern garden solution



Front yard conversion to rain garden and conservation landscape



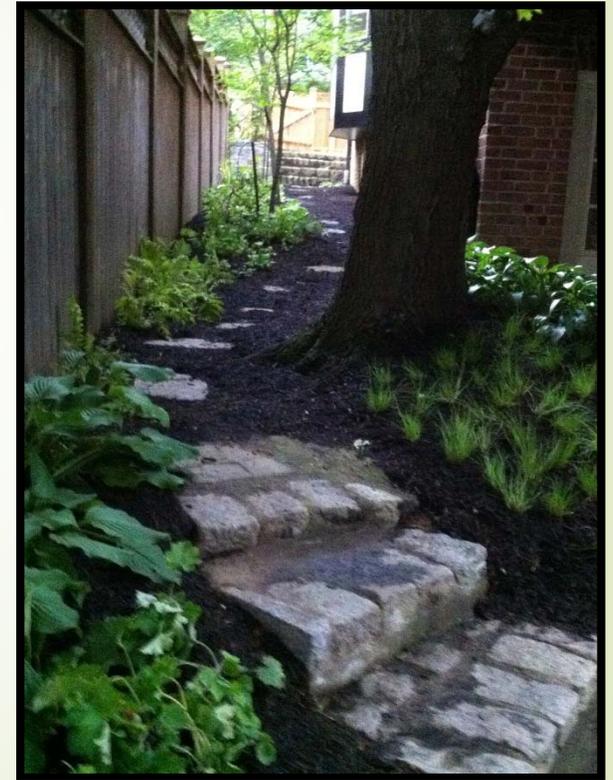
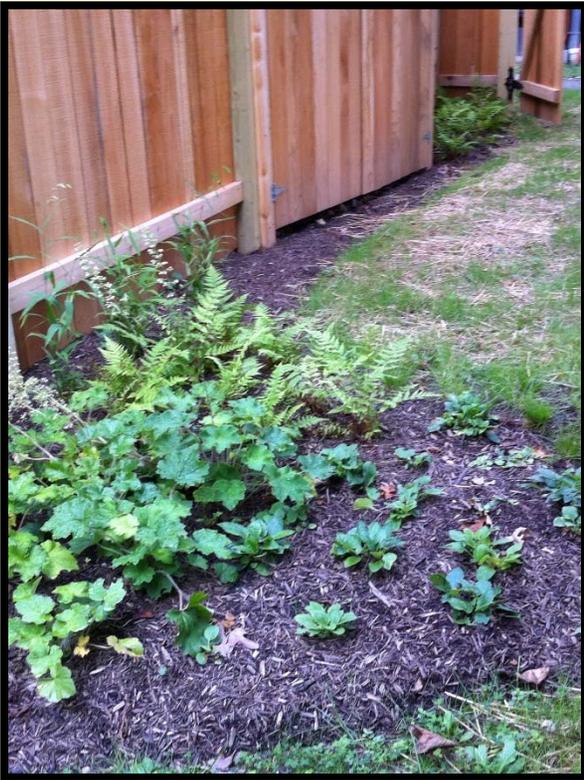


Swale directs flow to front yard conservation landscape

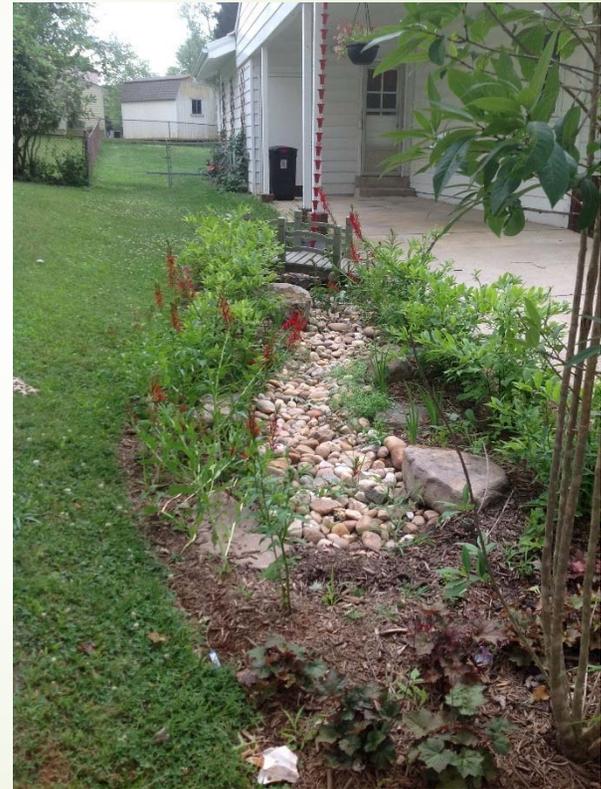
Multiple lots of drainage treated in the rain garden and other tools



Road runoff slowed and directed through a narrow side yard conservation landscape



Conservation Landscape swale before/ after



Rain Garden intercepting Sheetflow – from several houses



Rain Garden Planter



Front yard conversion from turf to a conservation landscape garden



First the rain garden was installed....

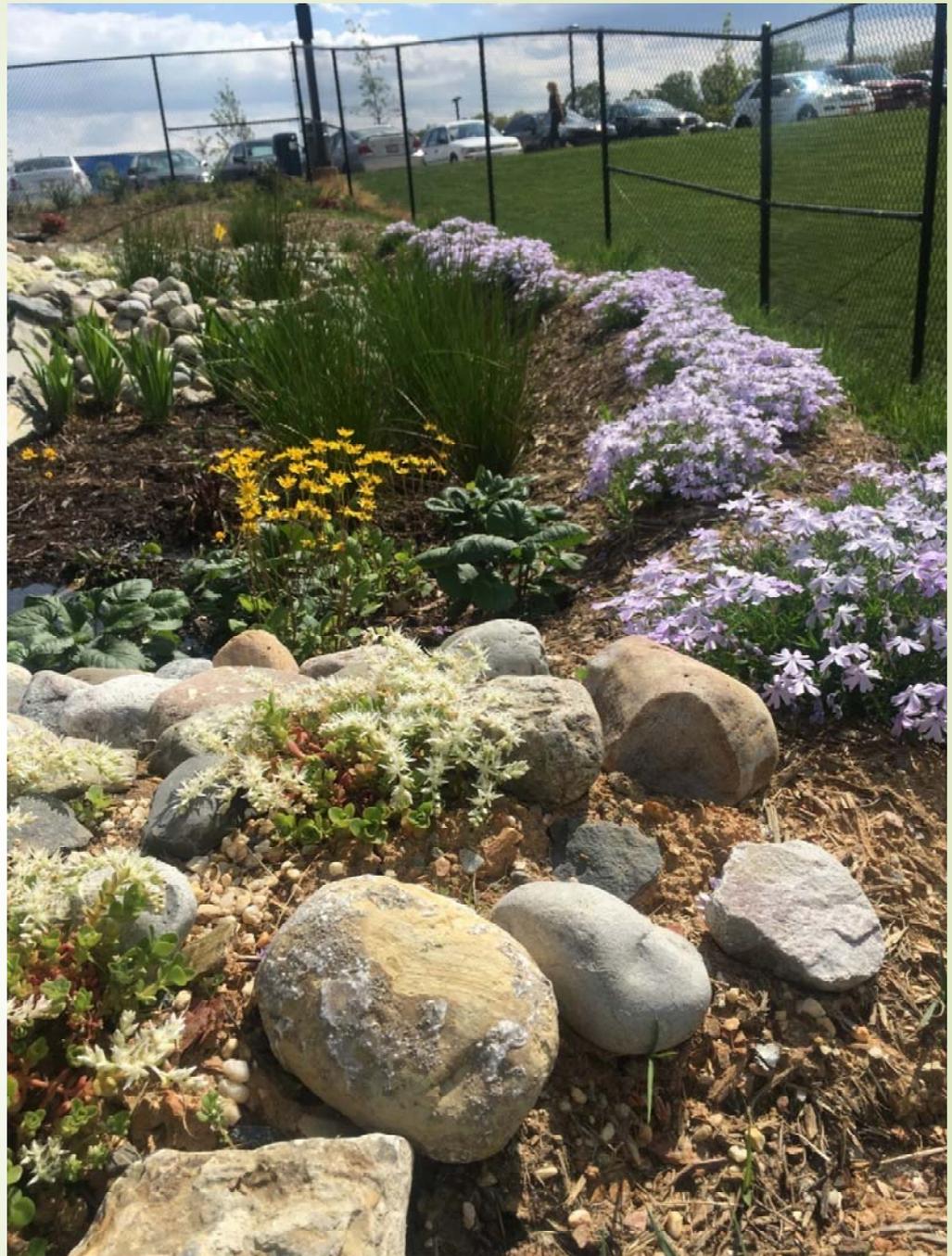


Now the whole yard is transformed



Slowing the flow in a swale

- Functional beauty



RainScapes convert yard spaces into attractive and functional landscapes that soak up the rainwater



Asphalt Drive before



What was lawn is now a Rain Garden



Permeable Pavement after

RainScapes convert yard spaces into attractive and functional spaces that soak up the rainwater



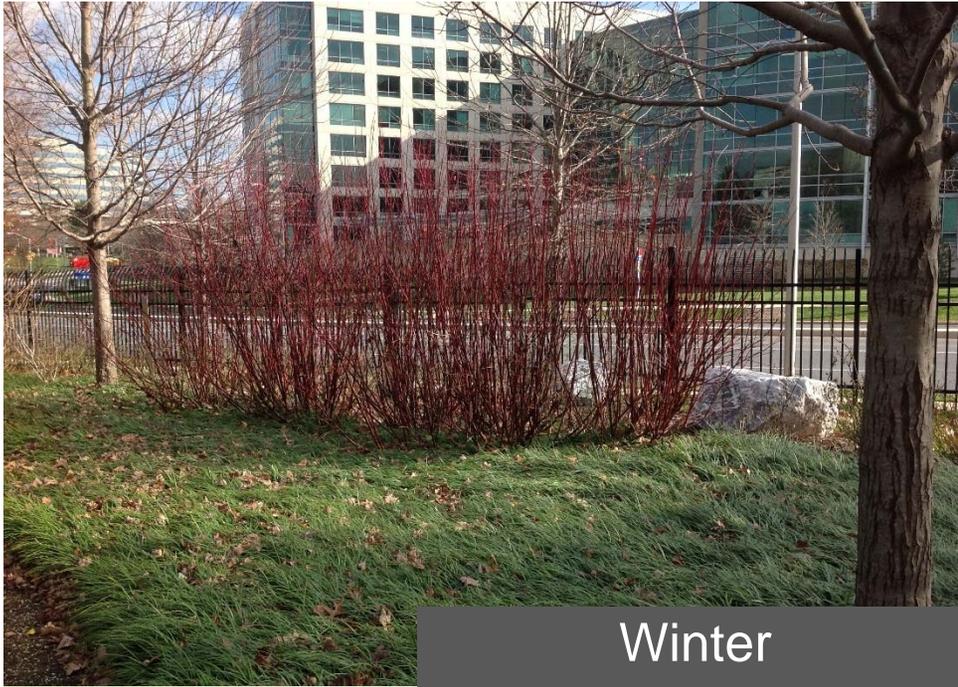
Look at Challenges as opportunity











Winter



Spring



Summer



Fall



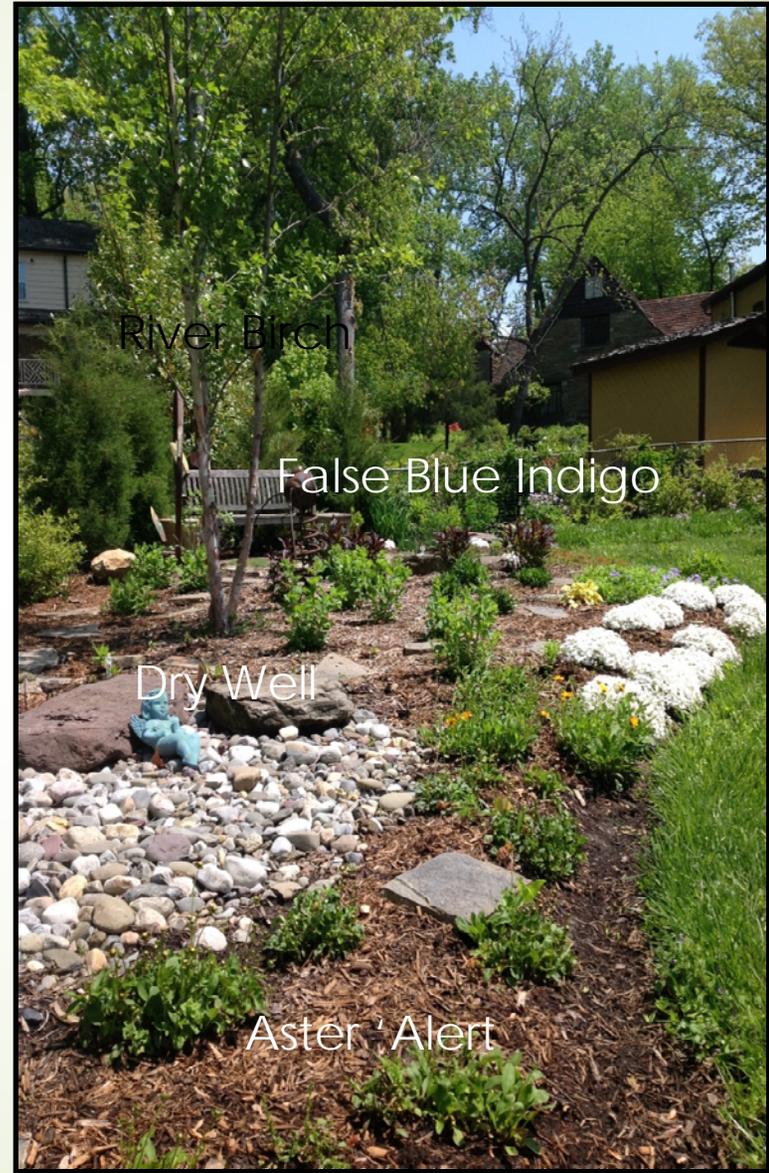
Eastern Red Cedar (screening

Penstemon Husker Red

Blue Eyed Grass

Dwarf Crested Iris

Creeping Phlox



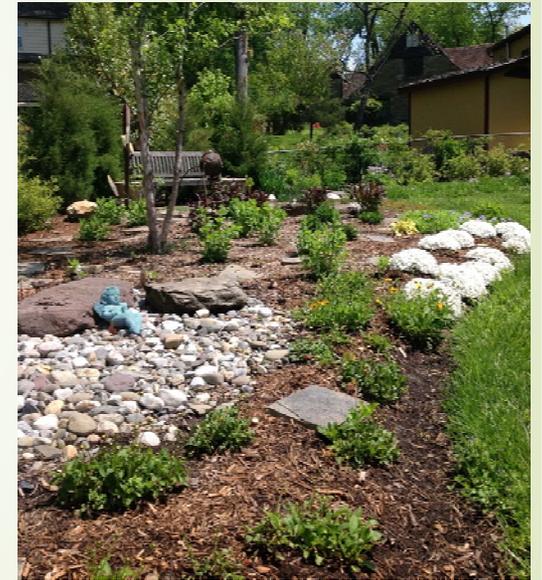
River Birch

False Blue Indigo

Dry Well

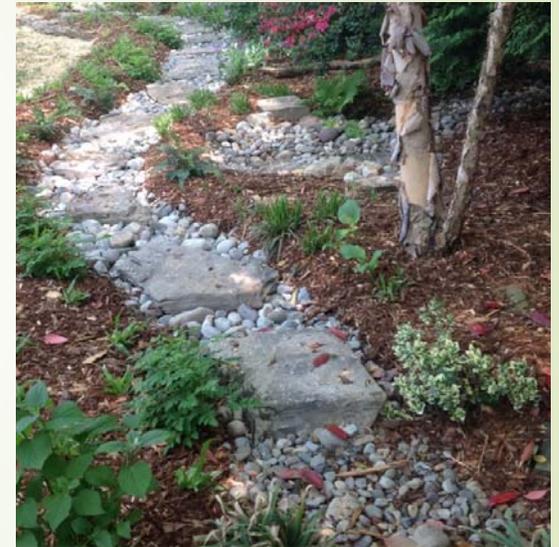
Aster 'Alert

Drywells and Conservation Landscapes working together



Directing the flow using

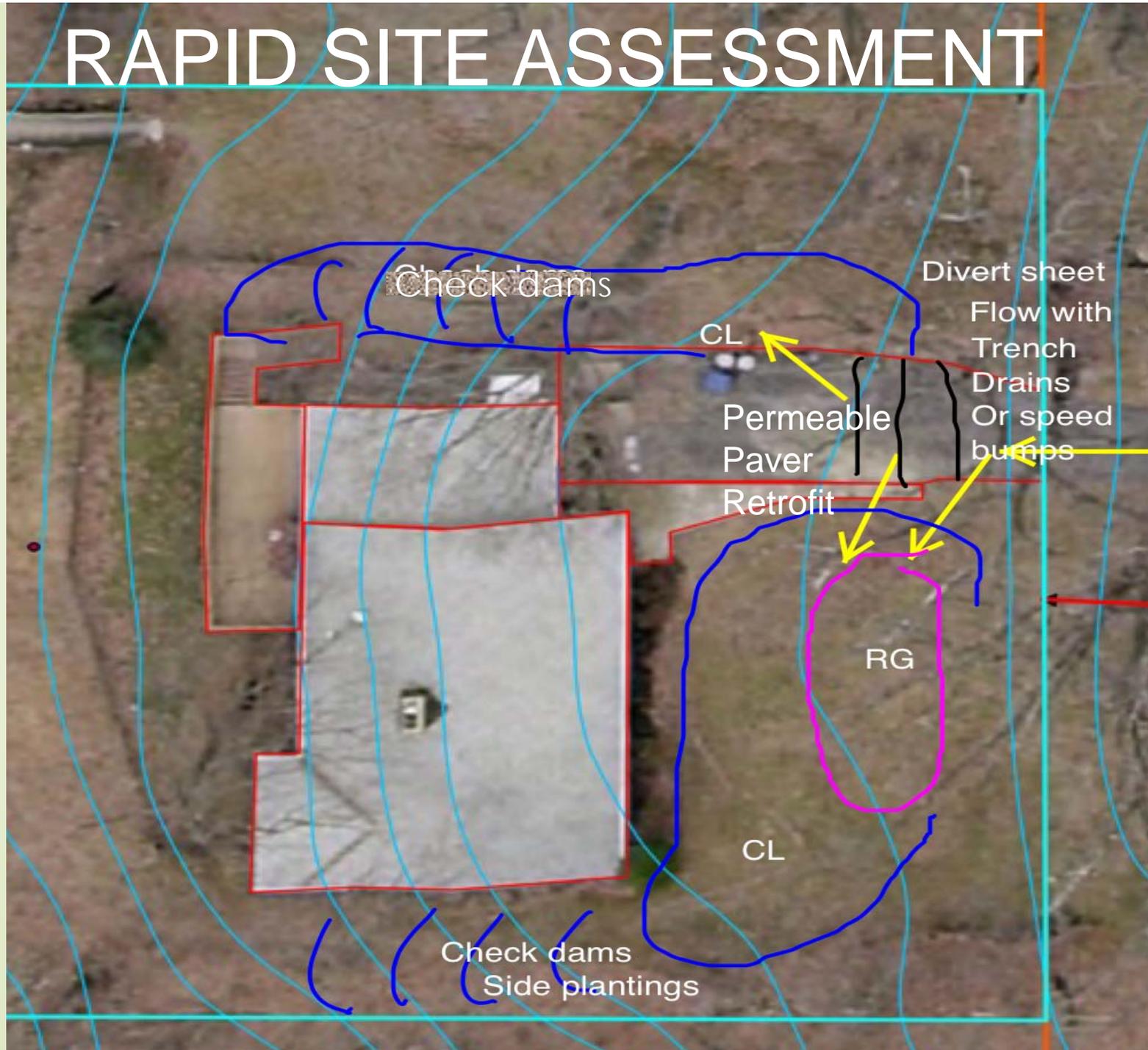
- Trench drains,
- Dry stream beds
- Linear dry wells



Or... consider a Permeable Paver Retrofit



RAPID SITE ASSESSMENT



RAINSCAPES SITE ASSESSMENT- finding the treatment train options

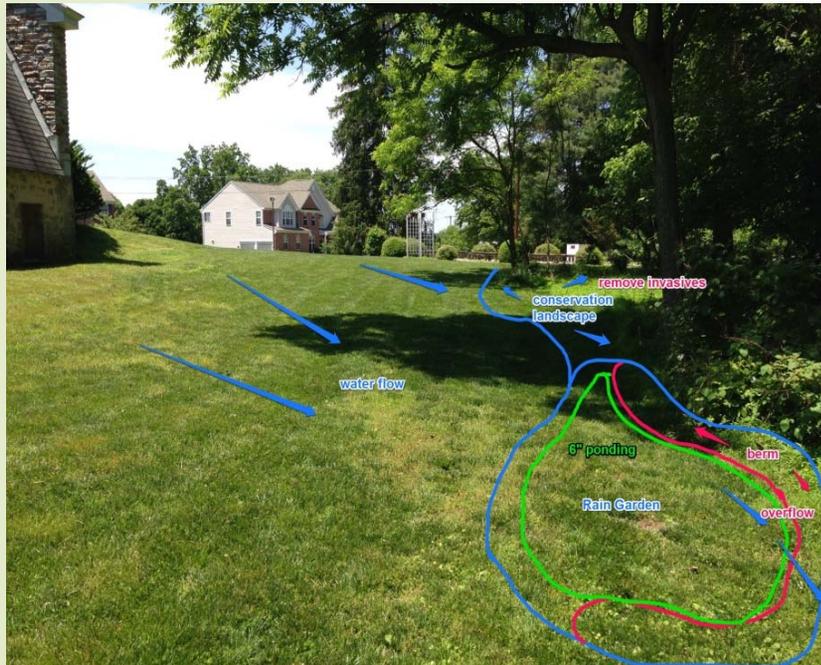
➤ IDENTIFY :

- IMPERVIOUS SURFACES – location and size
- DOWN SPOUTS location/dischARGE
- DIRECTION of Water Flow?
- What is growing in the property green space now? Slope?
- Place for safe overflow?
- Is there drainage from adjacent properties?

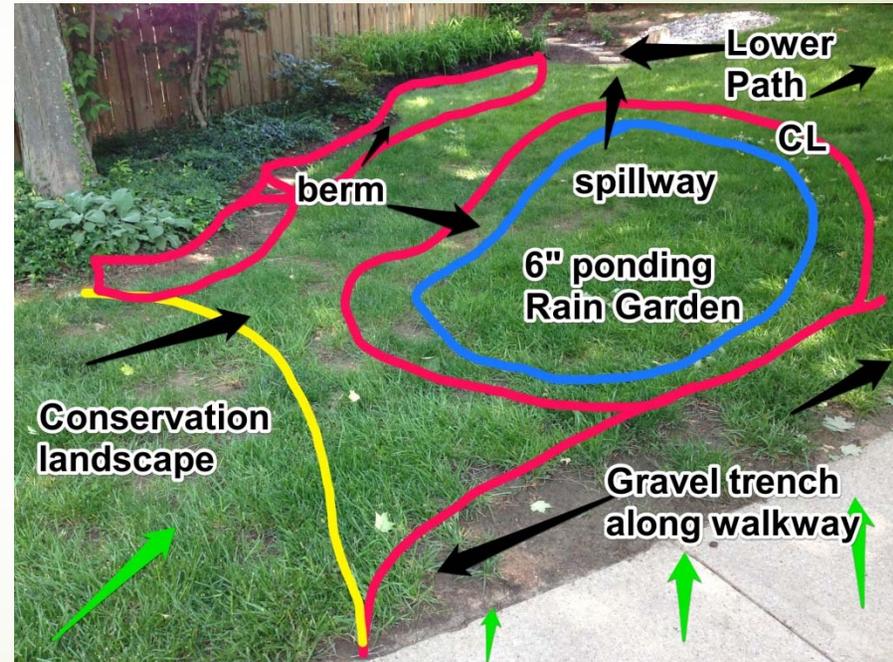
➤ MAP

- Treatment train options

Treatment Train approach to managing Stormwater with the landscape



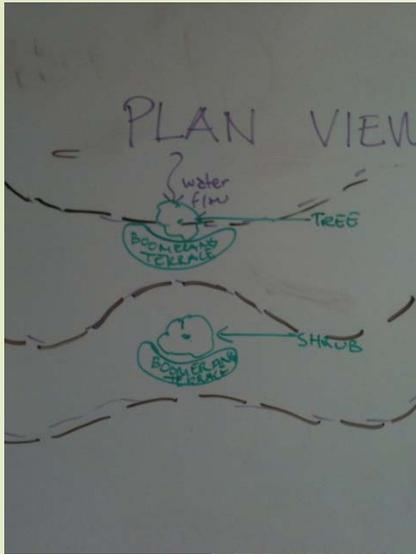
Church Property



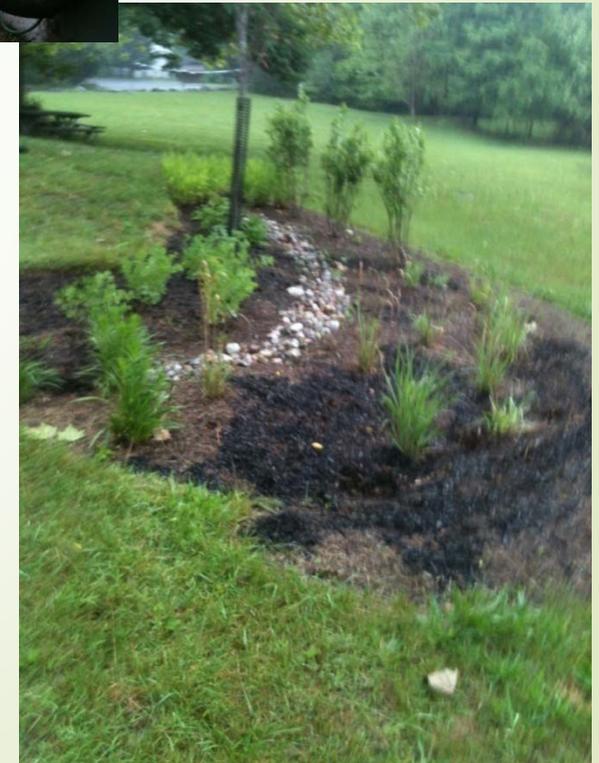
HOA Property

Commercial / Institutional Scale Site Assessment

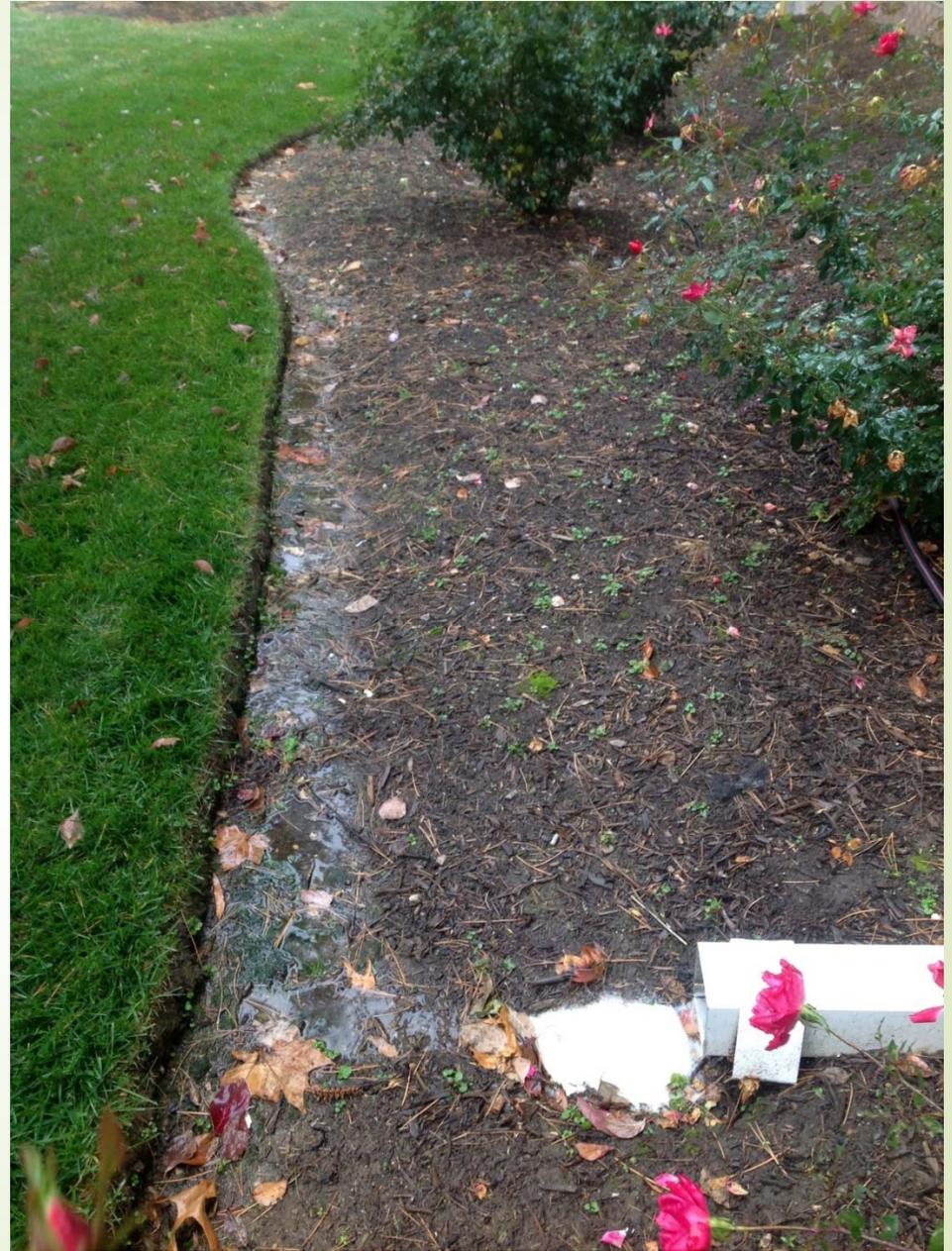
What if you want to slow the flow without removing or regrading the whole slope?



Contour gardening directing the flow through stacked gardens.



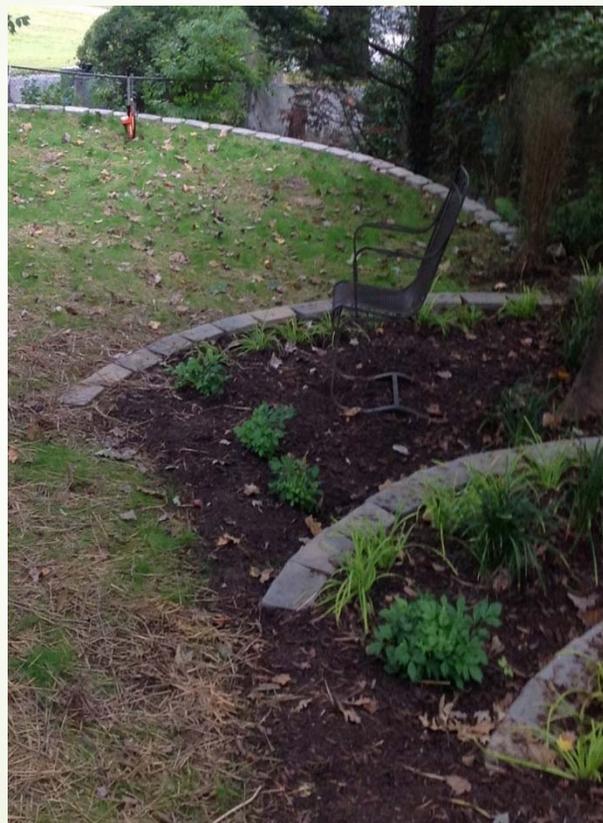
So are you looking
at something
Like this?



Or something like this?



Micro-berms and Check Dams slow the flow in Conservation Landscapes and to Drywell





Big challenges

What it took...



Poor Drainage Site



Where could a RainScape fit?



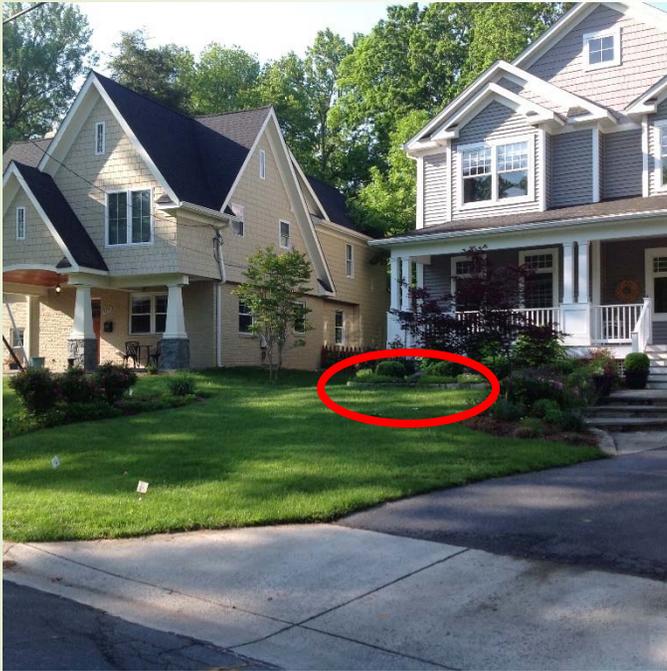
RainScapes are a both a Stormwater tool and a landscape amenity



Similar sites/ different neighborhoods – front yard rain garden



What is....what could be



Works at many scales

Residential potential



Rain Barrel/ RG combo



Can you find the rain garden?



Backyard drainage must be renovated after all these years and changes



Possible changes:

Combinations!

- Canopy Trees
- Conservation Landscapes
- Rain Gardens

Rain Garden that soaks up what it can and then safely conveys drainage in existing flowpath



Before and after – treatment train- 3 lots of drainage captured

Conservation landscape and
dry wells plus underdrained
rain garden above

Very compacted turf



90 Square Foot Rain Garden

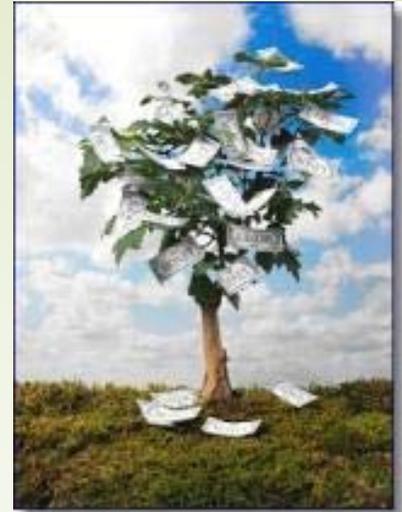


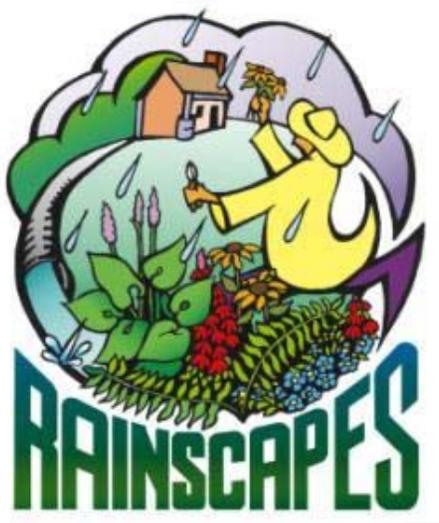
250 Gal. Rain Tank



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 Techniques in Action

Green Roof

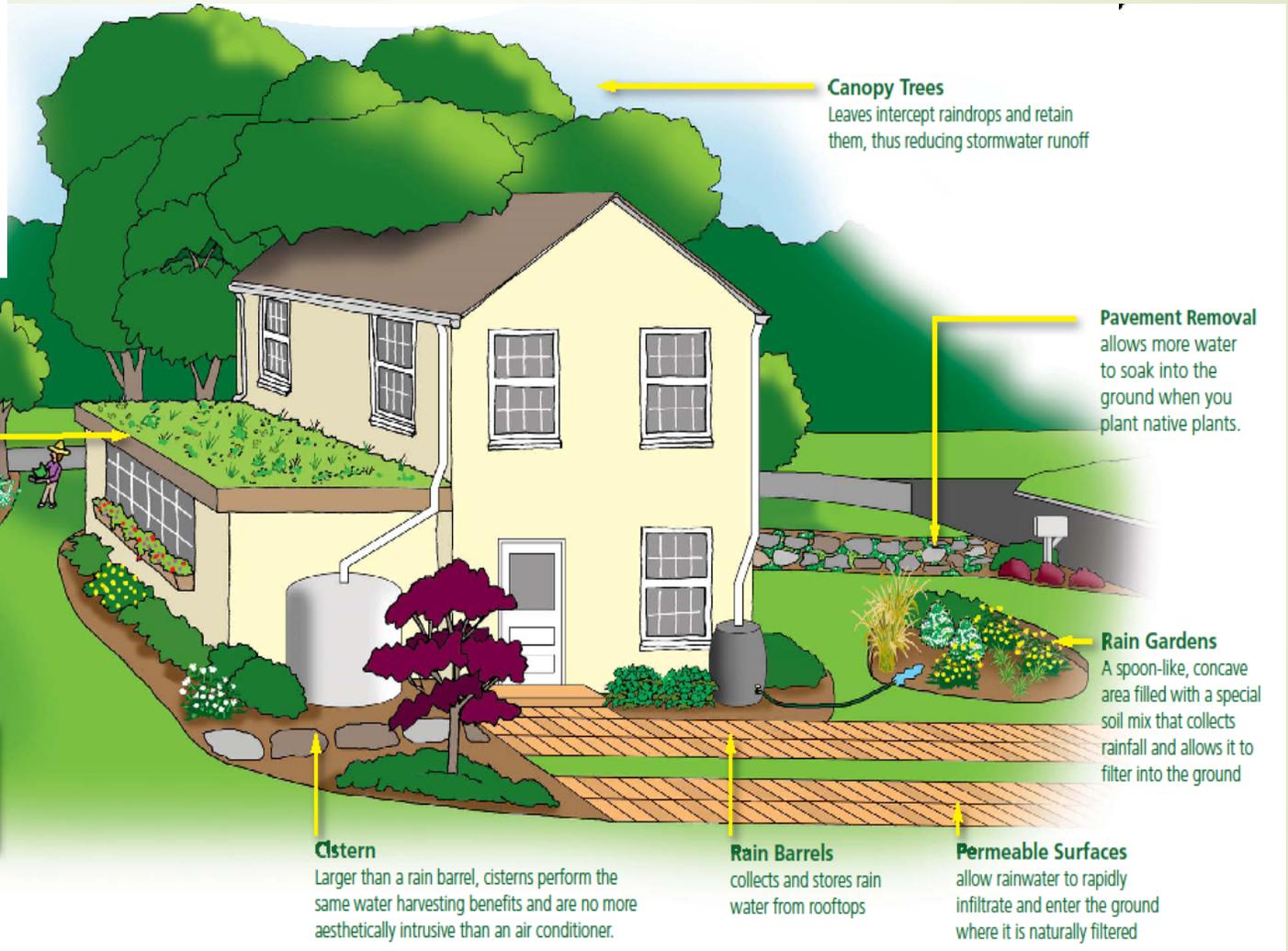
" .623 gallons of water falls on each sq. ft. of roof during the during a normal rainstorm of 1". A 1000 sq. ft conventional roof can shed 623 gallons when there is an inch of rain. Green roofs reduce and clean this stormwater runoff before it hits the ground.

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



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

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

Rewards Rebate Program: Rain Gardens

- Residential: **\$1,200** per garden or a square foot amount based on soil depth , which ever is greater
 - Commercial : **\$2,500** per garden or a square foot amount based on soil depth, which ever is greater
- Sized for 1.2" rainfall volume minimum
 - 75% plants must be native
 - **Site must pass a perc test**



Rewards Rebate Program: Conservation Landscaping

- ▶ **\$2.00-\$3.00 per square foot/microberms**
- ▶ Minimum 250 square foot conversion of turf area or invasive species.
- ▶ Impervious surface must drain into site
- ▶ 75% Native Plants



Rewards Rebate Program: Tree Canopy Basic Requirements

- Will eventually shade or cover impervious surface-reduces heat pollution
- 10'-15' away from permanent buildings
- Tree is on our published canopy trees list
- Planted between September 15 and April 30th
- Root flare is exposed
- \$200.00/tree



Rewards Rebate Program: Permeable Paver Retrofit

- Installed by a certified ICPI contractor with an additional certification in PICP
- Replaces existing impervious surface
- A downspout filter must be used if the downspout is connecting into the pavement.
- If downspout is connected to the system add \$4.00/sq ft of impervious surface that downspout is handling

\$1,200 or \$4.00 a square foot IA treated.

Whichever \$ amount is greater.



Rewards Rebate Program: Pavement Removal

- \$4 per square foot for conversion to a conservation landscape
- \$2 per square foot for conversion to turf.



Rewards Rebate Program: Green Roofs

- **\$10/ SF**
- Minimum 250 square feet
- *Must be on an existing roof*



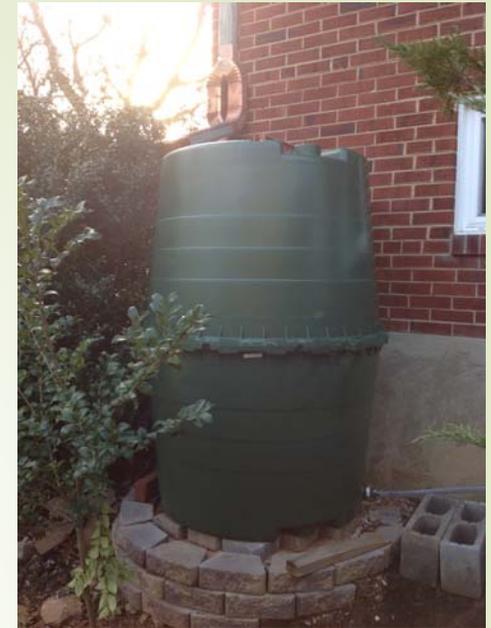
Rewards Rebate Program: Rain Barrels

- \$1.00 per gallon
- \$250 maximum per property
- *must capture 200 gallons*



Rewards Rebate Program: Water Harvesting: Cisterns

- \$1 per gallon
- 250 gallon minimum
- \$500 maximum rebate



Did you know? With every 1" of rain on 1,000 square feet of roof area you can collect around 600 gallons!

<http://www.harvestingrainwater.com/imagesvideoaudio/image-gallery/contemporary-water-harvesting-art/>

Rewards Rebate Program: Dry Wells



- \$1.00 per Gallon
- \$600 **per property**
- May be linear drywell – DIY
OR
- conventional drywell – contractor installed

Rebate Schedule on line

RainScapes Technique	Maximum Residential Rebates \$2500/parcel	Maximum Commercial, Multi-Family, HOA common land, and Institutional Rebates \$10,000/parcel
Canopy Trees	\$200/tree; # trees determined by space on parcel. Must shade or cover impervious area	\$200/tree; # trees determined by space on parcel. Must shade or cover impervious area
Conservation Landscaping - Replacement of turf or invasive species	\$2.00/square foot with no ponding \$3.00/square foot with 2" of ponding Project must replace turf or invasives Project needs to intercept runoff 250 square foot minimum	\$2.00/square foot with no ponding \$3.00/square foot with 2" of ponding Project must replace turf or invasives Project needs to intercept runoff 350 square foot minimum
Dry Wells	\$1.00 per gal ; \$600 maximum	\$1.00 per gal; \$600 maximum
Green Roofs	\$10/square foot, 250 square feet minimum	\$10/square foot; 300 square feet minimum
Permeable Pavers and Porous Concrete	\$4/square feet or \$1200, whichever is greater; 100 square feet minimum	\$4/square feet or \$5000, whichever is greater; 100 square feet minimum
Pavement Removal	\$4/square foot if replacing with conservation landscaping \$2/square foot if replacing with turf 100 square feet minimum	\$4/square foot if replacing with conservation landscaping \$2/square foot if replacing with turf 300 square feet minimum
Rain Garden	Based on square foot of ponding area and soil replacement (media)depth: 1' of media: \$5/ square foot 2' of media: \$7/square foot 3' of media; \$9/square foot or \$1200/ rain garden, whichever is greater – see RS design manual for sizing charts	Based on square foot of ponding area and soil replacement (media)depth: 1' of media: \$5/ square foot 2' of media: \$7/square foot 3' of media; \$9/square foot or \$2500/ rain garden, whichever is greater – see RS design manual for sizing charts
Water Harvesting: Cisterns	\$1/Gallon (minimum 250 gallons, up to 500 gallons)	\$1/ Gallon (minimum 250 gallons, up to 2000 gallons)
Water Harvesting: Rain Barrels	\$250 (must capture 200 gallons if single family home; 100 if Townhome); \$1/gallon	\$250 (must capture 200 gallons); \$1/gallon

STEP 1: Apply!

- **Wait** for Department of Environmental Protection RainScapes to contact you for a site visit.
- **Contact MISS UTILITY** and have the project area marked prior to site inspection.



[Apply Online](#) | [My Application\(s\)](#) | [Preview Application Forms](#) | [Contact Us](#)

RainScapes projects are designed to slow the speed of rainwater runoff, increase the groundwater supply by making it easier for water to soak into the ground and reduce the total amount of dirty water which ever reaches our streams. Rain Gardens, Conservation Landscapes and Canopy trees, as well as projects such as Permeable Paver Retrofits are examples of types of projects which have multiple benefits and are particularly well suited to soaking water into the ground and reducing stormwater runoff. Additional environmental benefits from those projects and other RainScapes projects such as rain barrels, cisterns and green roofs include reduced energy costs, reduced potable water consumption and improved air quality in our neighborhoods. Dry wells are also an option, and are particularly useful when combined with other types of RainScapes projects such as conservation landscaping and rain gardens.

Before you decide to implement a RainScapes project most suited to your environmental goals, please download and read the Requirements and Guidelines document(s) located in the 'Resources' box on the right. When you are ready to apply for a rebate, please use the links below.

**All rebate projects, except rain barrel projects, must be preapproved prior to installation.
Rain Barrel projects must meet our criteria, but can be submitted for rebate without preapproval.**

The money for rebates is allocated on a first-come, first-served basis.

[I am applying for RainScapes rebates, for the first time..](#)

[I have already applied for RainScapes rebates..](#)

[RainScapes Home](#) | [Privacy Policy](#) | [User Rights](#) | [Accessibility](#) | [Disclaimer](#) | [County Code](#) | [RSS](#) | [Blogs](#)
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STEP 2: Install the Project

Begin work upon verification of eligibility.

Install project within six months of the preliminary inspection date.



STEP 3: Project Completion

- ▶ **Contact** the DEP RainScapes program to schedule the mandatory final inspection.
- ▶ **Correct** installation of the project will be **verified**, and the project area will be photographed.
- ▶ **Submit** itemized receipts, contractor bills and/or invoices for project costs.
- ▶ **Sign and return** a signed property owner agreement.
- ▶ If all requirements are met, the rebate will be approved, and a check will be issued by the County Department of Finance within **three to six weeks**.



RESOURCES:

www.rainscapes.org

County Home Alerts Translate [A- | A | A+]

Montgomery County, MD Environmental Protection

Search
 DEP Website County Site

Home ▾ Water ▾ Trash & Recycling ▾ Energy ▾ Trees & Air ▾ Sustainability ▾ Have a Problem? ▾

What are RainScapes?

The RainScapes program promotes and implements projects which reduce **stormwater runoff** volume and improve water quality on properties within Montgomery County. The County offers technical and financial assistance (in the form of RainScapes Rewards Rebates) to encourage property owners to implement eligible RainScapes techniques on their property.

A RainScape is a landscape or design technique that helps reduce stormwater runoff from individual properties.

RainScapes can be installed on any kind of property, but those on private residential, institutional, and/ or commercial properties may be eligible for a **RainScapes Rewards Rebate**.

RainScapes is a program of the Watershed Restoration section of the Montgomery County Department of Environmental Protection. RainScapes are a vital component of the County's watershed restoration efforts, which are **required by law**.



Rain gardens are a common RainScape

On this Page...

- RainScapes
- Types of RainScapes
- Benefits of RainScapes
- Who Can Participate?
- Resources and Calendar
- Partnerships

Related Links...

- RainScapes Rewards Rebates
- RainScapes for Landscape Professionals

Getting Started with RainScapes

Check out our website for more info on designs



RainScapes

Unconventionally Friendly Landscapes for Healthy Watersheds

Overview

The RainScapes Program

RainScapes are watershed-friendly ways to reduce rainfall runoff. The County's RainScapes Program provides information and guidance to County property owners who are interested in protecting the environment. When it rains in Montgomery County, some of the water soaks in the ground. Unfortunately, most of that stormwater flows across hard surfaces like driveways, roofs and patios collecting pollution along the way, and reaching our streams. Runoff from hard

surfaces can account for 80 percent of the stormwater runoff in some areas. Runoff enters the County storm drain (i.e., storm sewer) system, and then enters our streams causing damage to the streams and ultimately the Bay by causing erosion, and mixing in other pollutants such as trash, nutrients and pet waste.

RainScapes projects are designed to slow the runoff, and reduce the amount of runoff and pollutants entering our streams. Stormwater that soaks into the ground is filtered by the soil and replenishes groundwater and stream levels, and keeps our streams healthy and able to support a wide

range of functions. Additional environmental benefits of these projects include reduced energy water consumption and improved air quality in our suburban landscape.

The Montgomery County Department of Environmental Protection (DEP) is offering rebates to encourage property owners (residential, commercial, and private institutional) to reduce runoff from their properties by using RainScapes techniques for natural drainage projects. RainScapes techniques are onsite stormwater management tools that reduce stormwater runoff, improve the County's water quality, and may add value to your property.

The RainScapes Rewards Rebate Program

The Montgomery County DEP RainScapes Rewards Rebate Program offers financial incentives in the form of rebates to property owners who install RainScapes techniques.

- Eligible drainage projects include:
- Planting rain gardens
 - Replacing turf grass with conservation landscaping
 - Planting new tree canopy
 - Replacing existing hard surfaces with permeable pavers

- Installing rain barrels, cisterns, dry wells or a green roof to replace an existing roof
 - Removing pavement
- A property is eligible for a rebate whether it is residential property or commercial, multi-family, or institutional property. Annual funds for the programs are limited, so rebates will be awarded on a first come first served basis.
- This manual provides planning and installation guidance for homeowners about the voluntary stormwater management practices

highlighted in the County's RainScapes Program. The RainScapes Program is funded by the County's Water Quality Protection Program. You must submit your project to DEP for approval prior to the construction of your project. After completion of an approved project, you will submit your receipts to receive your rebate check in the mail. For more information or to submit an application, please visit www.rainscapes.org.

Overview

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www.rainscapes.org



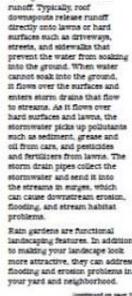
RainScapes

Unconventionally Friendly Landscapes for Healthy Watersheds

Rain Gardens

Why should I install a rain garden?

One inch of rain falling over a 1,800 square foot home on a small lot can produce over 6,000 gallons of stormwater runoff. Typically, roof downspouts release runoff directly onto lawns or hard surfaces such as driveways, streets, and sidewalks that prevent the water from soaking into the ground. When water cannot soak into the ground, it flows over the surface and enters storm drains that flow to streams. As it flows over hard surfaces and lawns, the stormwater picks up pollutants such as sediment, grease and oil from cars, acid pesticides and fertilizers from lawns. The storm drain pipes collect the stormwater and send it into the streams in runoff, which can cause downstream erosion, flooding, and stream habitat problems.

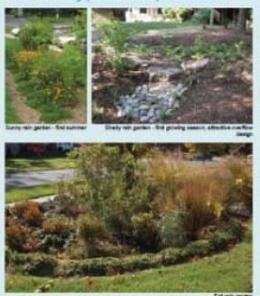


Rain Gardens

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What is a rain garden?

Rain gardens are attractive landscape features constructed to capture stormwater runoff from hard surfaces such as your roof downspout, patio, or sidewalk. A rain garden is a garden with a shallow depression that collects and drains stormwater. Rain gardens typically are planted with native plants with deep roots that loosen the soil, so stormwater can soak into the ground more easily. Rain gardens help to meet the RainScapes goal of using innovative natural approaches to reduce water pollution, stream channel erosion, and drainage problems caused by stormwater runoff.



Rain Gardens

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RainScapes

Unconventionally Friendly Landscapes for Healthy Watersheds

Conservation Landscaping Techniques

Why should I implement conservation landscaping?

Each year, Americans spend countless hours tending to over 20 million acres of grass on their lawns. Millions of pounds of pesticides and millions of tons of fertilizer are applied annually. Lawns mowers use a quart of gasoline each hour and emit as much as 10 times the amount of hydrocarbons as a typical car. Thousands of gallons of water are used to water a single yard twice a week. On the East Coast, an estimated 30 percent of residential water use is for lawn irrigation. Traditional lawn and garden care takes time and uses non-renewable resources. What if there was a way to reduce these practices while maintaining a healthy, aesthetically pleasing landscape? In Montgomery County, much of the native vegetation is stripped during the development process, and if that soil is not carefully replanted, many homeowners are left with soil that is mostly compacted clay. The clay is typically planted with non-native turf grasses which lack the deep roots to penetrate compacted

What is conservation landscaping?

Conservation landscaping is a type of landscaping that benefits the environment by improving water quality, preserving native species, and providing wildlife habitat. Conservation landscaping replaces some of the turf grass of a traditional lawn with native plants that have adapted to Montgomery County's local rainfall and soil conditions and require less water and maintenance than the lawn grasses. Montgomery County, Maryland is located in the Piedmont region.

1. Is designed to benefit the environment and function aesthetically for human use and well-being
2. Uses locally native plants that are appropriate for site conditions

3. Includes a management plan for the removal of existing invasive plants and prevention of future invasive plant incursions
4. Provides habitat for wildlife
5. Promotes healthy air quality and reduces air pollution
6. Conserves and cleans water
7. Promotes healthy soils
8. Is managed to conserve energy, reduce waste, and eliminate or minimize the use of pesticides and herbicides.



Conservation Landscaping Techniques

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Unconventionally Friendly Landscapes for Healthy Watersheds

Tree Canopy

Why should I plant trees?

What is a tree canopy? A tree canopy is the crown of one or many trees that create an overhead cover. The canopy and branches intercept rainfall, reduce air pollution, and provide shade. Planting trees is an effective way to increase the tree canopy. The better the ground and basement stormwater runoff. These plants are beneficial to the health, well-being and aesthetics of communities.



RainScapes

Unconventionally Friendly Landscapes for Healthy Watersheds

Green Roofs

Why should I install a green roof?

What is a green roof? A green roof is a roof partially or completely covered with a specially designed soil and vegetation system. Green roofs create long green spaces on rooftops that help to reduce runoff and increase water retention. They also help to reduce energy costs and improve air quality. They can be used to increase storage efficiency and decrease the footprint of the city.



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Dry Wells

Why should I install a dry well?

What is a dry well? A dry well collects stormwater from rooftops or hard surfaces and stores it in a storage tank or underground storage tank. The water then soaks into the ground. Dry wells collect stormwater from rooftops or hard surfaces and store it in a storage tank or underground storage tank. The water then soaks into the ground. Dry wells collect stormwater from rooftops or hard surfaces and store it in a storage tank or underground storage tank. The water then soaks into the ground.



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Unconventionally Friendly Landscapes for Healthy Watersheds

Permeable Pavers

Why should I choose permeable pavers for my hard surfaces?

What are permeable pavers? Permeable interlocking pavers are made from materials such as stone or concrete.



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Rain Barrels and Cisterns

Why should I install a rain barrel or cistern?

What are they? Rain barrels and cisterns collect and store a portion of the rainwater from your roof. The rainwater can be used for irrigation and other uses. Rain barrels and cisterns collect and store a portion of the rainwater from your roof. The rainwater can be used for irrigation and other uses.



RainScapes

Unconventionally Friendly Landscapes for Healthy Watersheds

Pavement Removal

Why should I remove pavement from my property?

What are the benefits and incentives? The RainScapes Rewards Rebate Program offers a rebate payment for removing pavement from your property. The rebate is based on the amount of pavement removed. The rebate is based on the amount of pavement removed.



RainScapes

Unconventionally Friendly Landscapes for Healthy Watersheds



RainScapes Landscape Professionals List

-Attended RainScapes Training-

Updated on:
Monday, March 11, 2013

Firm	# of Rainscapes	RainScapes Installed	Company Website	E-Mail	First Name	Last Name	Phone
Stadler Nurseries	80	Tree Canopy	http://www.stadlergardencenters.com/index.php	debbie.fried@gmail.com	Debbie	Friedmann	301-944-1190
Goshen Enterprises, Inc.	20	Tree Canopy	www.goshenenterprises.com	kevin@goshenenterprises.com	Kevin	Bohrer	301-869-8544
Backyard Bounty	9	Rain Garden, Conservation Landscape	www.backyardbounty.net	info@backyardbounty.net	Edamarie	Mattei	301-221-4931
John Shorb Landscaping Inc.	7	Rain Gardens, Conservation Landscapes	http://jsli.com	rasma@johnshorblandscaping.com	Rasma	Plato	301-897-3503 x105
American Plant Landscape Division	6	Rain Garden, Dry Well, Conservation Landscape, Tree Canopy	susy@apfgarden.com	dsaltmann@gmail.com	Susana S.	Altmann	301-351-9909
Father Nature Restorative Landscaping	5	Rain Garden, Conservation Landscape, Rain Barrels		info@father-nature.com	Luke	Jessup	240-602-1235
Fine Earth Landscape, Inc.	4	Conservation Landscape, Permeable Paver Retrofit	www.fineearth.com	Joel@fineearth.com	Joel	Haffner	301-370-0470
J & G Landscaping Design, Inc.	4	Permeable Paver Retrofit, Pavement Removal, Dry Well	www.jglandscape.com	jpotter@jglandscape.com	Jeffrey	Potter	301-476-7600
Matts Habitats	4	Conservation Landscape, Tree Canopy		thenaturalcapital@gmail.com	Matt	Cohen	202-841-1874
Rain Barrels by Aquabarrel.com	4	Rain Barrels, Cistern		info@aquabarrel.com	Barry	Chenkin	301-253-8855
American Plant	3	Rain Garden, Conservation Landscaping		donnae@apfgarden.com	Donna	Evans	(cell) 240-388-3752
AW Landscapes	3	Rain Garden		Alan@awlandscapes.com	Alan	Walcoff	

Water Quality Protection Charge (WQPC) Credit Program

Have a Stormwater facility or a RainScapes project ?

= eligible to apply for WQPC credit to reduce the charge

The screenshot shows a web browser window with the address bar containing 'A1'. The page title is 'Montgomery County Department of Environmental Protection WATER QUALITY PROTECTION CHARGE SINGLE FAMILY RESIDENTIAL CREDIT APPLICATION'. Below the title, it states 'Regulated by the Code of Montgomery County Regulations (COMCOR) 19.35.01.05'. A red notice reads: 'APPLICATION MUST INCLUDE A COPY OF PROPERTY TAX BILL AND SUPPORTING DOCUMENTATION INCLUDING PHOTOS OF THE PRACTICES FOR THE CREDIT'. The form includes fields for 'EMAIL TO:' (WQPC.Credits@montgomerycountymd.gov) and 'MAIL TO:' (WQPC Credits, Dept. of Environmental Protection, 255 Rockville Pike Suite 120, Rockville, MD 20850). There are checkboxes for 'Owner' and 'Authorized Agent'. Below this are several text input fields for 'Property Account No:', 'Owner Name:', 'Premise Address:', 'Owner/Agent Address:', 'Phone Number:', 'Phone Number (Premise):', and 'Email Address:'. An 'Application Checklist' section lists three items: 'Complete the stormwater treatment calculator', 'Complete the maintenance checklist/agreement', and 'Provide photos of stormwater treatment'. At the bottom, there are instructions to print and sign the application and submit it, along with a note about including photographs of stormwater management facilities. The browser's taskbar at the bottom shows several open tabs: 'Instructions', 'Application', 'SFR Credit Calculator', and 'Maintenance Checklist'.

<http://www.montgomerycountymd.gov/dep/water/wqpc-credits.html>

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ials

On this Page...

- [Benefits of RainScapes to Professionals](#)
- [Resources & Course Content](#)

Related Links...

- [What are RainScapes?](#)
- [RainScapes Rewards Rebates](#)
- [RainScapes at Schools](#)
- [RainScape Neighborhoods](#)

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Click "Sign up for The RainScapes Newsletter"

My Green Montgomery

Like us on Facebook and find us on Pinterest!

The image shows a screenshot of the My Green Montgomery website and a Pinterest board. The website header includes the logo, navigation menu (WHY GREEN MONTGOMERY?, GREEN PROJECTS, INCENTIVES & PROGRAMS, MY COMMUNITY, BLOG), and a 'Subscribe' button. The main content area features a featured article titled 'The Wildlife Habitat Council Building Partnerships for Conservation in Montgomery County'. Below this are sections for 'Featured Green Projects' and 'Find a project now!' with categories like Water, Lawn & Garden, Daily Choices, Featured, Transportation, and Energy. The Pinterest board, titled 'My Green Montgomery', displays a grid of boards including Conservation Landscapes, Rain Gardens, Rain Water Harvesting, Permeable Pavers, Tree Canopy, Green Roofs, and Native Plant Information. Each board contains images of green projects and the My Green Montgomery logo.

Healthy ecosystems benefit us all



Turtle hatchling



Peeper frog



Northern Green Frogs



Cabarus diogenes



Baltimore Checkerspot



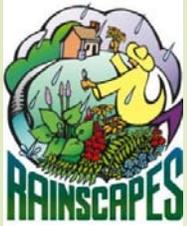
ESD/RainScapes benefits.... beyond stormwater management

- Improves air quality
- Reduces heat island effects
- Saves energy
- Provides habitat for beneficial wildlife
- Benefits human health
- Reduces emissions and fuel costs through maintenance practice change and frequency reduction
- Provides space for recreation and study in nature
- Improves on-site drainage issues





RainScapes: improving site ecological function one project at a time



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Questions?



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Montgomery County Department of Environmental Protection

Watershed Management Division

RainScapes Program

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