

RainScapes Techniques Manual for Montgomery County

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What are we covering today?

- The Project Team
- Green Infrastructure Overview
- RainScapes Program
- RainScapes Modules
- Current Tasks
- Future Goals

Project Team

At the forefront of innovative stormwater management approaches

Montgomery County
Department of
Environmental
Protection



URS Corporation

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Green Infrastructure

Defined as:

- Natural and managed green areas in both urban and rural settings
- Strategic connection of open green areas
- Treating rainwater as a resource and not as trash to be discarded as quickly as possible
- Transforming “grey” infrastructure to green by restoring watersheds to slow and store water
- Providing multiple benefits for people

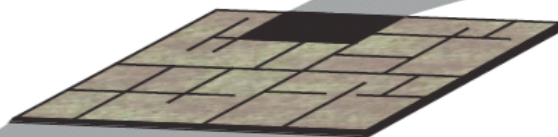
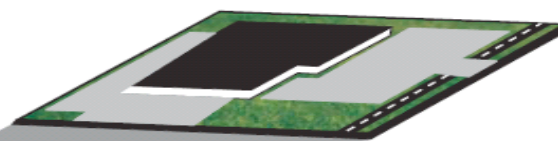
SITE LEVEL

Where can BMPs be incorporated into typical sites?

Which are most effective locally?

What density is required to meet performance objectives?

Constructability and Cost



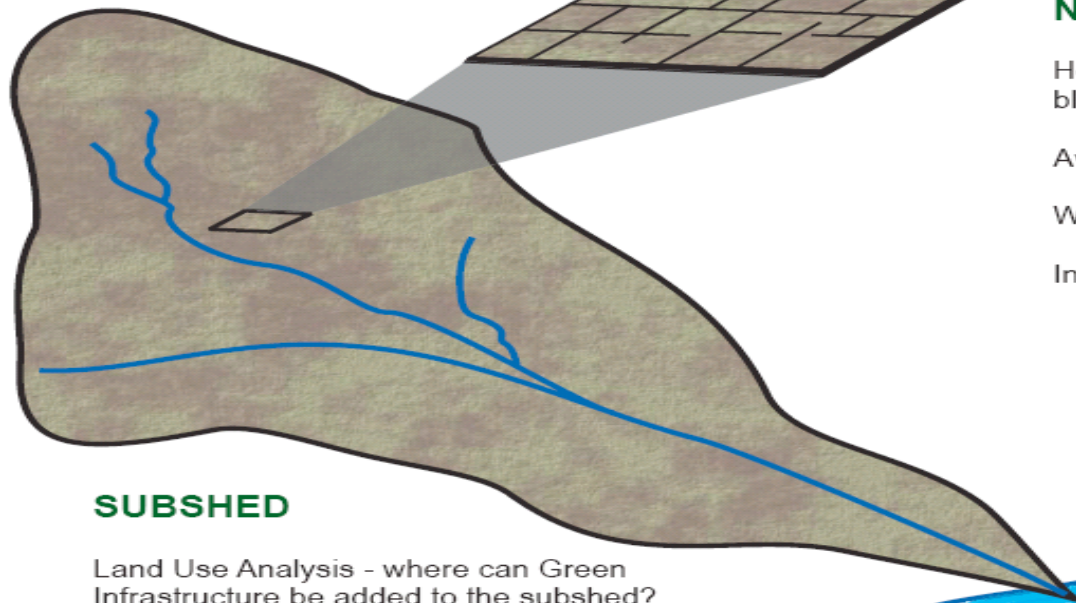
NEIGHBORHOOD

How to scale up from the site level to city blocks?

Available public space

Working with private property owners

Incentives



SUBSHED

Land Use Analysis - where can Green Infrastructure be added to the subshed?

- Drainages
- Public lands
- Property lines
- Greenspace
- Open space on public or private lands
- Soil Types

Hydrologic Studies - what density of BMPs will make a difference?



REGIONAL ISSUES

Political Cooperation

Community Acceptance

Consistent Policies, Codes, and Ordinances

RainScapes Program Goals



- Engage the public
- Provide technical guidance
 - ▶ Design
 - ▶ Installation
- Encourage voluntary installation
- Track results
- Show progress

RainScapes Program Benefits

- **Environmental Benefits**

- ▶ Less runoff
- ▶ Pollutant removal
- ▶ Aesthetics
- ▶ Learning experiences
- ▶ Cumulative benefits

- **Financial incentives**

- ▶ Residential (\$1,200 max. rebate)
- ▶ Commercial, multi-family, and institutional applications (\$5,000 max. rebate)

Design and Installation Manual

- Complete set of modules
- User-friendly
- Accessible
- Effective
- Balance of graphics, photos, diagrams, and text

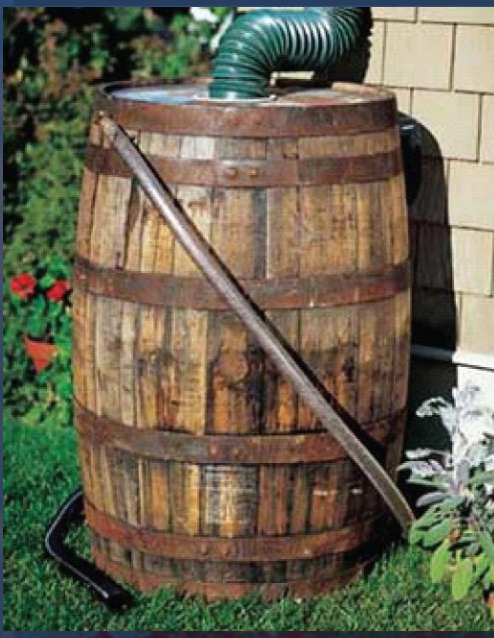
Module Content

- Technique definition
- Benefits
- Incentives
- How to...
- Costs
- Maintenance
- Different applications
- For more information

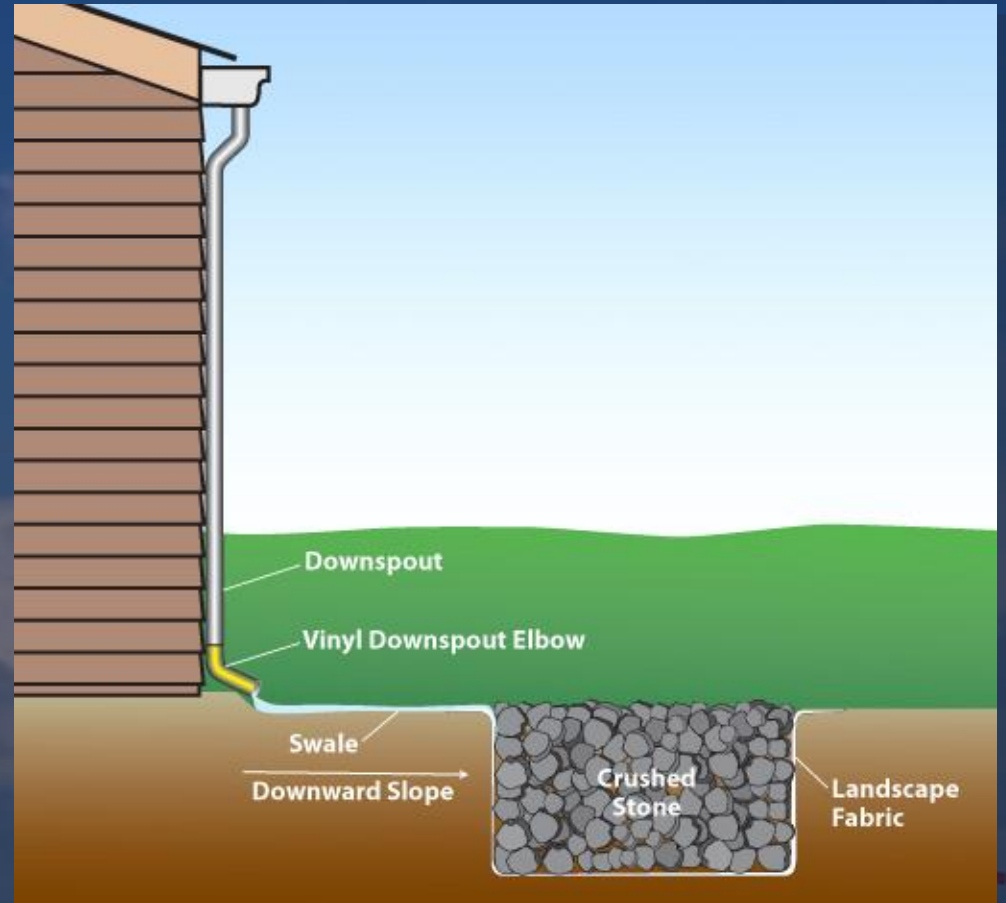
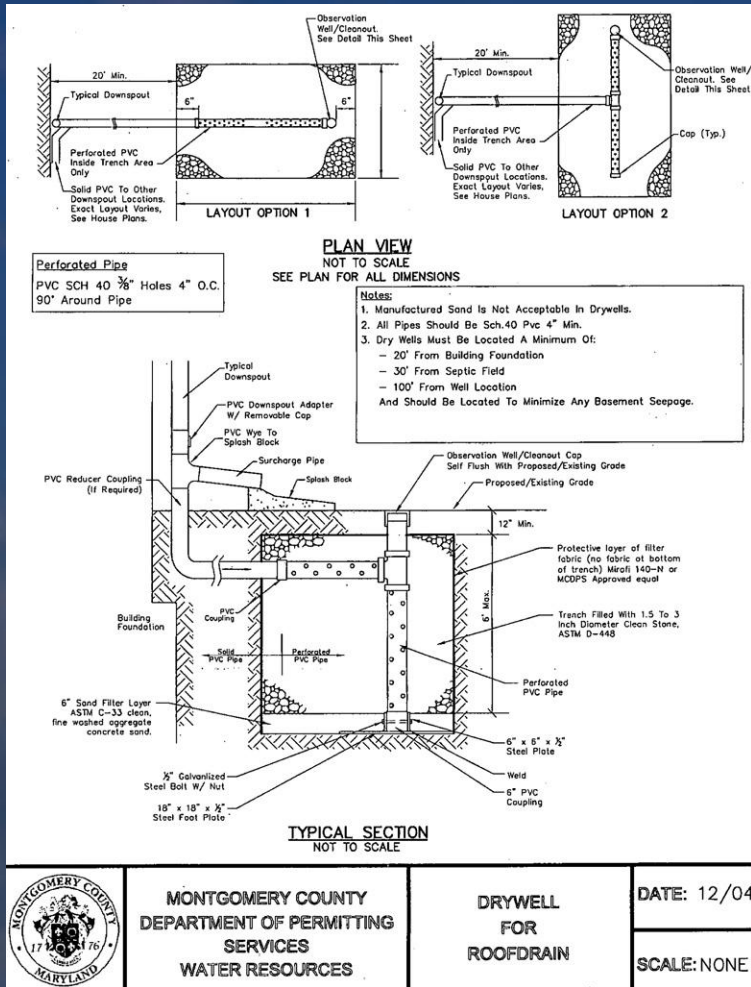
Design and Installation Manuals

- Overview
- Rain Barrels and Cisterns
- Dry Wells
- Rain Gardens
- Conservation Landscaping
- Driveway Retrofits
- Tree Canopy
- Green Roofs

Rain Barrels and Cisterns



Dry Wells



Philadelphia Water Department, "A Homeowner's Guide to Stormwater Management" January 2006.



MONTGOMERY COUNTY
DEPARTMENT OF PERMITTING
SERVICES
WATER RESOURCES

DRYWELL
FOR
ROOFRAIN

DATE: 12/04

SCALE: NONE

Rain Gardens





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Rain Garden Reserve - A Cuyahoga Falls Community Conservation Rainscape

Arbor Day Dedication 4/25/08



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Conservation Landscaping



Driveway Retrofits: Permeable Pavers / Porous Concrete



Tree Canopies



Green Roofs



Developing the Modules

- National URS experience
- Existing industry standards and public resources
- Customize for Montgomery County
- Avoid “reinventing the wheel”

Where are we now?



Future Goals

- Available on Montgomery County's Web site for download
- Public outreach campaign
- Measure results

Questions?

