

Virginia Conservation Assistance Program (VCAP)

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Objectives

- ▶ Introduction to the program
- ▶ Discuss the 10 Urban Best Management Practices
- ▶ Preview Cost Share Rates

VCAP and Charlottesville

What is VCAP?

- Financial incentive program to encourage private homeowners to install Urban Best Management practices (BMPs)
- Covers 10 BMPs

Charlottesville (CCAP)

- \$32,000 annually funded through the Stormwater Utility Fee (2014)
- Complements credit system for stormwater utility

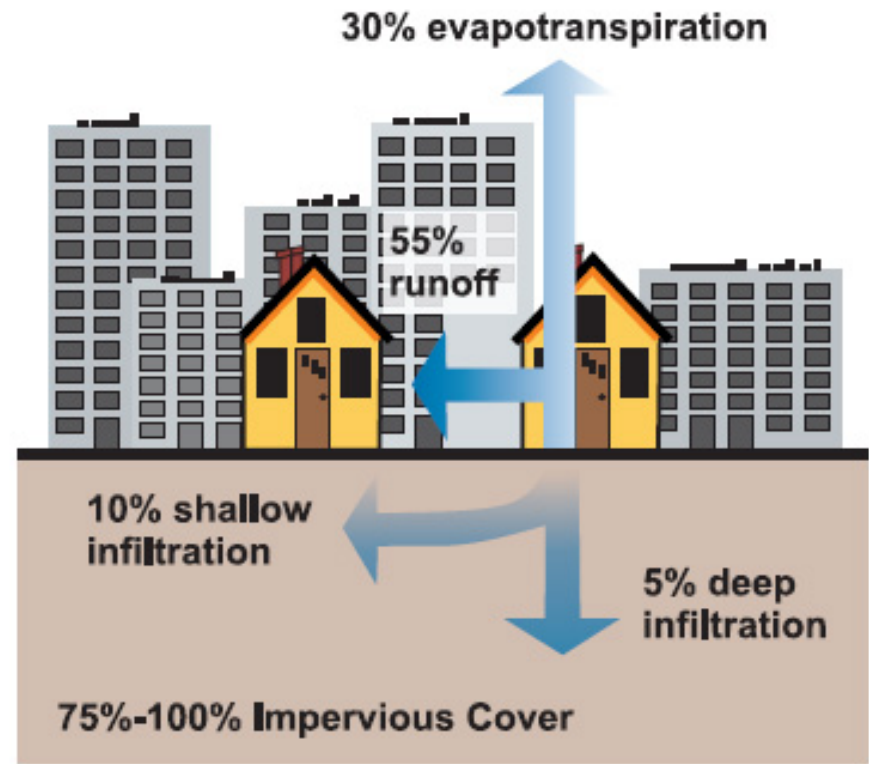
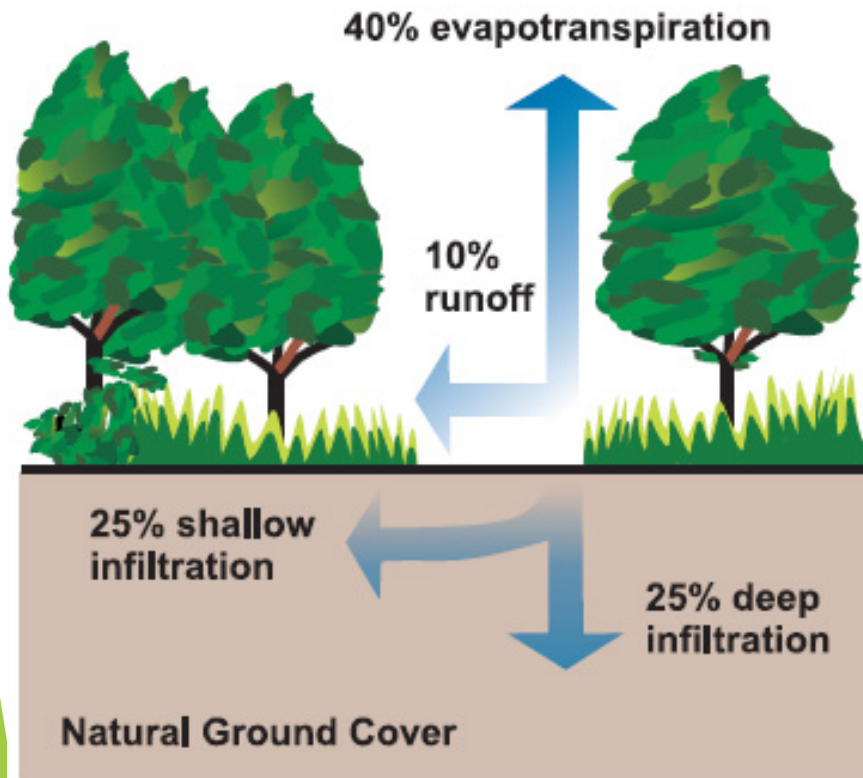


Charlottesville Rain Garden –
2015 BUBBA Residential Category

Accomplishments since 2016

- ▶ Has doubled its available cost share funding from \$250,000 (2016) to \$500,000 (2017). Aiming toward 1 million next year
- ▶ Grown from a 4 district operation, to a program that now functions within 20 districts throughout the state
- ▶ Holds a technical advisory committee every quarter to improve the manual and advise on spot checks
- ▶ By popular demand has added Living Shorelines to its list of BMP's

Effects of Urbanization:



VCAP BMPs



1. Conservation Landscaping
2. Rain Gardens
3. Bioretention Basins
4. Rainwater Harvesting
5. Impervious Surface Removal
6. Vegetative Conveyance Systems
7. Constructed Wetlands
8. Permeable Pavement
9. Green Roofs
10. Living Shoreline

Turf Conversion: WHY?

Irrigation:

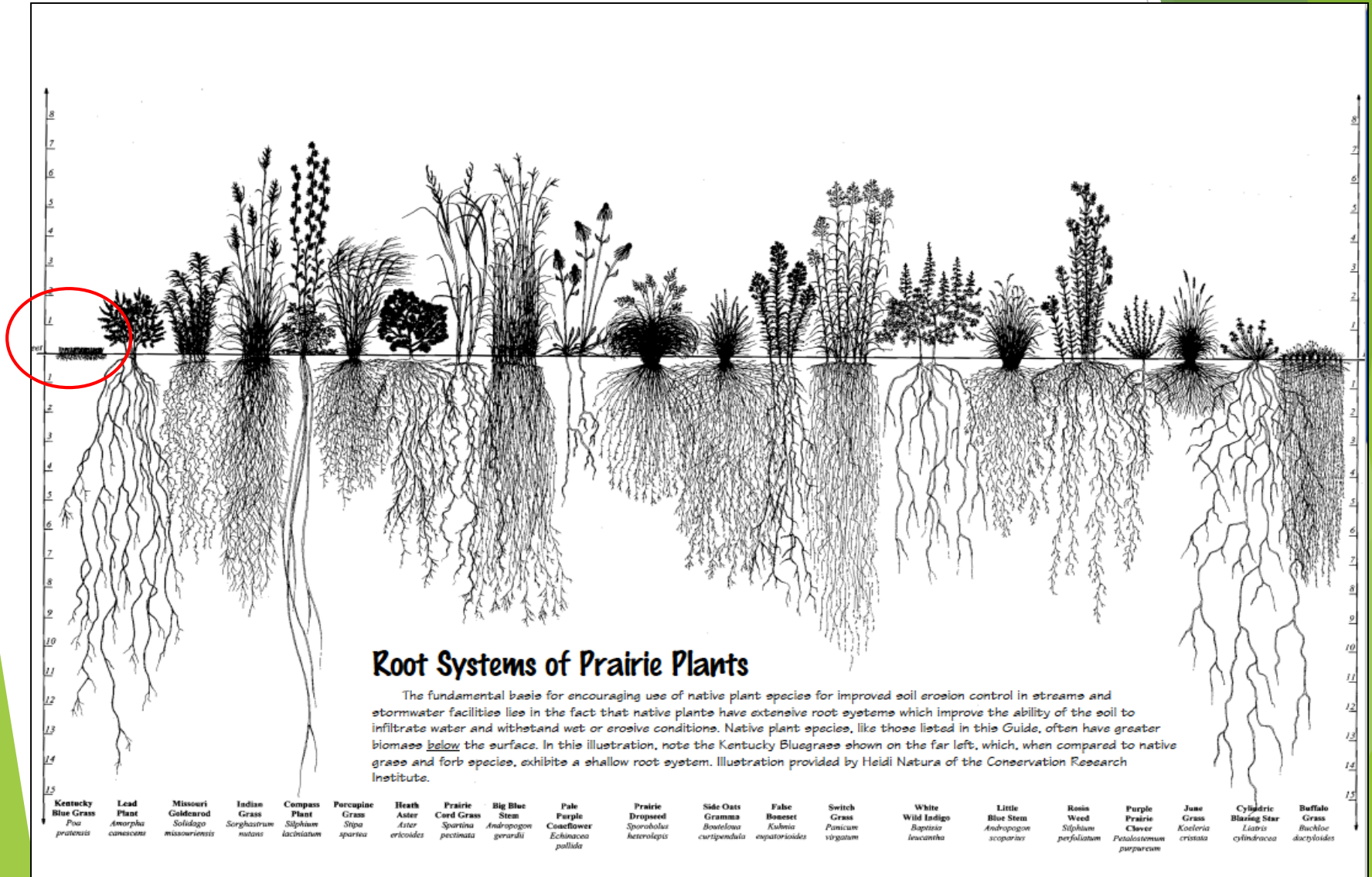
- Wasting clean, treated water
- Wasting energy resources
- Additional waste when water lands on pavement



Fertilizers & Herbicides, Insecticides:

- Applied on most lawns (>50% homes)
- Unregulated
- Misapplied (too much, wrong time, wrong weather)
- **Urban Nutrient Management Plans**

TURF vs. NATIVE MEADOW



Why Native Plants?

- Stormwater management
- Increase wildlife habitat & diversity
- Pollinator habitat
- Fewer inputs (water, chemicals)



Silky dogwood



Aster sp.



Arrowwood viburnum



Conservation Landscaping
(CL): Meadow



Conservation Landscaping (CL): Meadow



Conservation Landscaping (CL): Shrubs & Small Trees

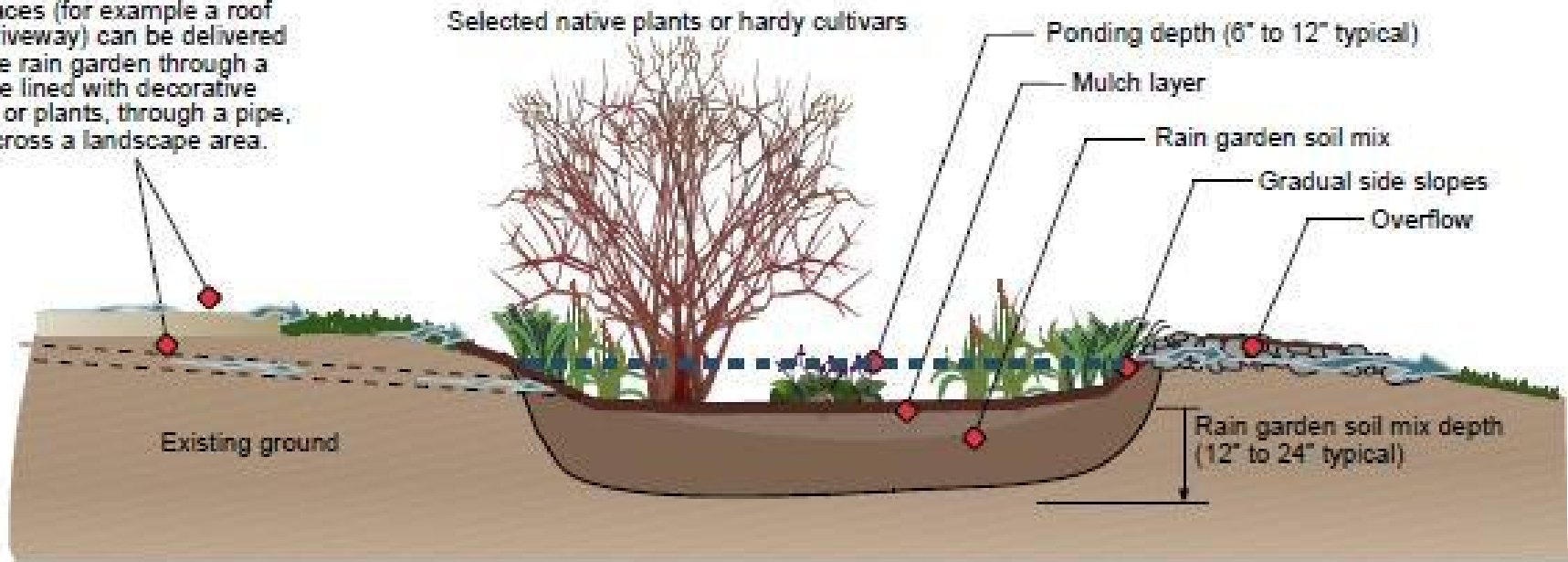


Rockfish Community Center



Rain Garden (RG)

Water flowing off impervious surfaces (for example a roof or driveway) can be delivered to the rain garden through a swale lined with decorative rock or plants, through a pipe, or across a landscape area.



RG Installation



Finished Product



Rainwater Harvesting (RWH)



Easier Installations



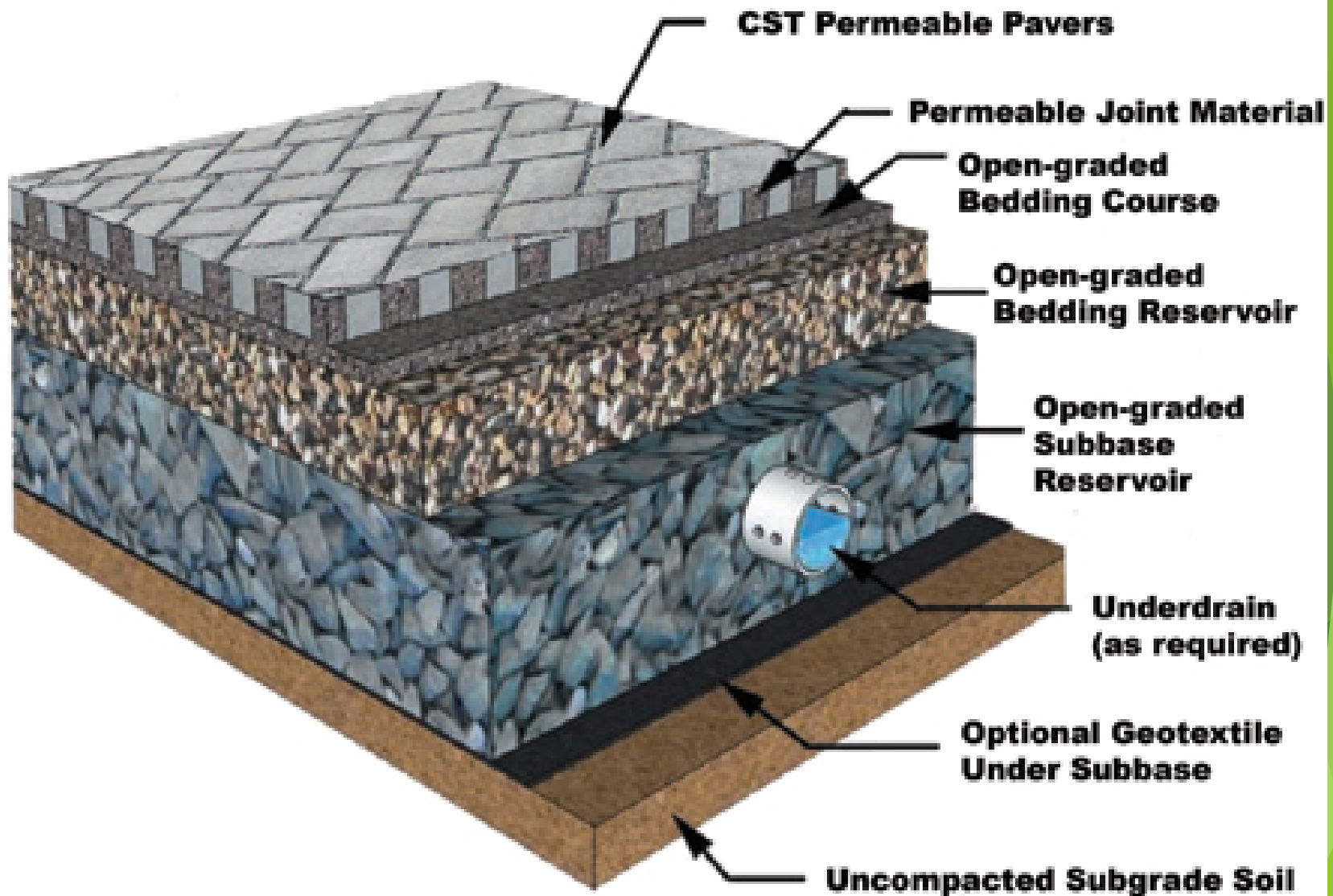
Impervious Surface Removal (ISR)



Completed!!!



Permeable Pavers (PP)



Permeable Pavers (PP)



Bioretention (BR)



Constructed Wetland (CW)



Grass Channel



Dry Swale



Vegetative Stormwater Conveyance (VSC)

Wet Swale



Green Roof (GR)



Living Shoreline



LIVING SHORELINES SUPPORT RESILIENT COMMUNITIES

Living shorelines use plants or other natural elements—sometimes in combination with harder shoreline structures—to stabilize estuarine coasts, bays, and tributaries.



One square mile of salt marsh stores the carbon equivalent of **76,000 gal of gas** annually.



Marshes trap sediments from tidal waters, allowing them to **grow in elevation** as sea level rises.



Living shorelines improve **water quality**, provide fisheries **habitat**, increase **biodiversity**, and promote **recreation**.



Marshes and oyster reefs act as natural **barriers** to waves. **15 ft** of marsh can **absorb 50%** of incoming wave energy.



Living shorelines are **more resilient** against storms than bulkheads.



33% of shorelines in the U.S. will be **hardened** by **2100**, decreasing fisheries habitat and biodiversity.



Hard shoreline structures like **bulkheads** prevent natural marsh migration and may create seaward **erosion**.



The National Centers for Coastal Ocean Science | [coastalscience.noaa](http://coastalscience.noaa.gov)

Some graphics courtesy of the Integration and Application Network, University of Maryland Center for Environmental Science (ian.umces.edu)

Cost Share Rates

Practice	Lifespan	Reimbursement Rate	Max per application
Impervious Surface Removal (ISR)	10 years	\$2.50 per square foot	\$ 10,000.00
Conservation Landscaping (CL)	10 years	75% of costs	\$ 3,500.00
Rain Gardens (RG)	10 years	75% of costs	\$ 3,500.00
Bioretention Basins and Areas (BB and BA)	10 years	75% of costs	\$ 20,000.00
Dry Well (DW)	10 years	75% of costs	\$ 3,500.00
Infiltration Basin (IB)	10 years	75% of costs	\$ 20,000.00
Rainwater Harvesting (RH)	10 years	\$2.00 per gal. of treated vol.	\$ 10,000.00
Vegetated Stormwater Conveyance (VSC)	10 years	75% of costs	\$ 10,000.00
* Dry Swales (DS)	10 years	75% of costs	\$ 10,000.00
* Step Pools (SP)	10 years	75% of costs	\$ 10,000.00
* Wet Swales (WS)	10 years	75% of costs	\$ 10,000.00
Constructed Wetlands (CW)	10 years	75% of costs	\$ 5,000.00
Permeable Pavement (PP)	10 years	75% of costs	\$ 20,000.00
Green Roof (GR)	10 years	\$10 per square foot	\$ 20,000.00
Living Shoreline	10 Years	75% of costs	\$ 20,000.00

Process

- ▶ Fill out application (TJSWCD Website)
- ▶ TJSWCD Rep will set up a site visit
- ▶ Application presented to TJSWCD Board
- ▶ Final Plans
- ▶ Construction of BMP
- ▶ Final site inspection
- ▶ Reimbursement check sent

Questions?



Please contact your Local Soil and Water
Conservation District/
Or go to VASWCD.org