



Turning a New Leaf Conference
Shepherdstown, West Virginia
November 16, 2013

Track B: Innovations in Urban Restoration

Session B.3 RiverSmart Homes: Four Years Later, New Insights. Jenny Guillaume, District Department of the Environment (DDOE), Washington, DC

Background

The large area of impervious surface in Washington DC has its effects of the Chesapeake Bay Watershed

- DC has 34 miles of rivers and streams, yet none are safe to fish or swim in
- High levels of pathogens contaminate water
 - Major Stormwater Pollutants:
 - Combined Sewer Overflow (CSO)
 - Urban runoff
 - Trash
 - Erosion
- DC's Sewers
 - 1/3 are CSO – at low flow, all of the combined stormwater and sewage is piped to Blue Plains where it is treated. When the city receives over ¼" of rain, there is too much water for this systems and sewage mixed with stormwater overflows into tributaries
 - 2/3 are MS4 structures – these have 2 separate pipes keeping stormwater and sewage apart, but none of the stormwater is cleaned before it enters the streams
 - Both of these systems would be aided by a decrease in stormwater runoff

RiverSmart Homes Genesis

- The program began with workshops
- These were not always successful due to transportation issues of participants and materials as not all residents of DC have vehicles
- The program had good intentions, but follow through was not always possible
- Goals were set to increase Low Impact Development, increase impact, spread the word and connect better with the public
- Chesapeake Bay Stormwater Goals along with Community Focus Groups redirected the mission of the program
 - Focus Groups Showed that Homeowners:
 - desired help with Bayscaping
 - like rain barrels
 - are willing to contribute about 10%/\$100
- Focused on Private Properties due to:
 - Complications forming partnerships to work on federal lands
 - The majority of land in DC is privately held



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- Areas of slower redevelopment are least likely to see stormwater improvements
- New Program Purpose (RSH)
 - all yards are unique and should be treated so
 - the program should offer something for everyone
 - should be easy for homeowners
 - should maximize Best Management Practices (BMPs)
 - be one-on-one

This District-wide program offers incentives to all homeowners interested in reducing stormwater runoff from their properties. Homeowners receive up to \$1,200 to adopt one or more of the following landscape enhancements:

- Shade Tree Planting – Native trees installed from Casey Trees
- Rain Barrels – 132 gallon models installed from DC GreenWorks, rebate for others can be provided if model is preapproved
- Pervious Pavers – to replace existing pavement
- Rain Gardens – 475 sq ft of pavement treated for 1.2" rain – semi prescribed design
- BayScaping -120 sq ft for slopes and other difficult areas
- Process
 - Homeowner fills out basic application to express interest
 - Audits performed/recommendations made
 - Homeowner chooses what/if to install recommended practices
 - Homeowner responsible for small portion of costs
 - Funding is limited per property, not per person
- RSH Audits
 - There is currently a 2-3 month waiting list for the 1 hour assessments
 - Auditors discuss BMPs and provide written recommendations for any of the above practices
 - Homeowners then decide what to implement with the provided non-profit partnered contractors (*RSH trains new partner contractors annually working with the Alliance for the Chesapeake Bay)
 - DDOE inspects 10-15% of the practices post installation
 - Homeowners sign a maintenance pledge – most that are inspected to well, more maintenance help seems needed, especially with weeding
- Most advertising is word of mouth and online (some specific areas are targeted with flyers)
- Highest enrollment comes in spring



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- All DC wards participate in the program

Most to least installed when recommended practices (#s installed from 2009-2013)

- a. Rain Barrels (2,800)
- b. Shade trees (2,330)
- c. Bayscaping (600)
- d. Rain Gardens (215) – RSHs hopes to increase these
- e. Pervious Pavers (95) – most costly for homeowner

2-3 practices are recommended for each one installed

Homeowner Motivations:

- 28% for Beautification
- 28% Environmental Consciousness
- 11% to reduce sewer and water bills
- 10% to decrease lawn maintenance
- 6% to increase property value
- 6% to reduce erosion

For more information:

<http://green.dc.gov/service/riversmart-homes-overview>

New Watershed Program

RiverSmart Washington is a partnership led by the District Department of the Environment (DDOE), including the District Department of Transportation (DDOT), DC Water, LimnoTech, Casey Trees, and Rock Creek Conservancy.

The program is designed to measure impacts of installing attractive, low-cost, eco-friendly landscaping and innovative streetscaping

- two experimental neighborhoods attempting to reduce polluted runoff into Rock Creek.
- If successful, the program may be replicated across the District.
- Three phase program
 - Monitoring/Outreach (completed)
 - Install LID on private (completed) & public (in progress) land
 - Post installation monitoring (future)

For more information:

<http://www.rockcreekconservancy.org/index.php/definitions#Streetscaping>