

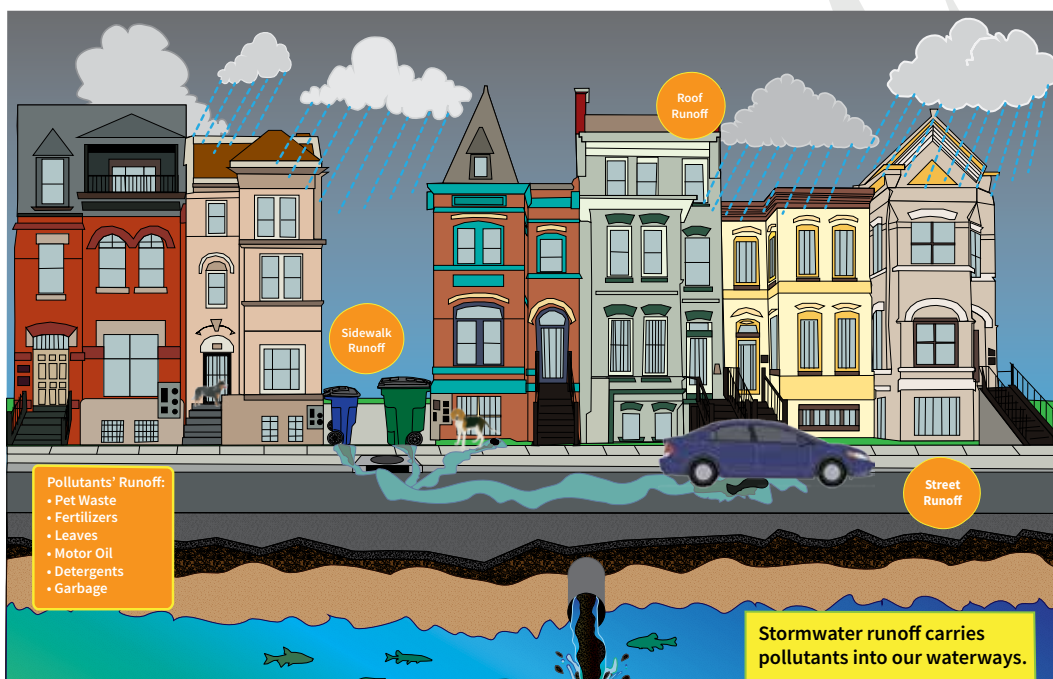
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STORMWATER AND YOU

WHAT IS STORMWATER AND WHY IS IT AN ISSUE?

Stormwater is rainwater that falls on impervious surfaces such as rooftops, driveways, roads, sidewalks, and even lawns, which then flows off the site. As stormwater flows to our local streams, directly as sheet flow across the surface of the land or into storm drains, it picks up pollutants such as oil and grease from our roadways and driveways, nutrients from our lawn fertilizers, discarded litter, and bacteria from pet waste and other animal excrement. Once in the stream, the polluted stormwater adds to the fast-moving surges of water associated with storms. This process causes erosion and destroys habitat for fish and other wildlife. By capturing and infiltrating stormwater on your property, you can help decrease the harmful stormwater and sewage overflows that run into waterways, improving your city, watershed, and the Chesapeake Bay.



WHAT DISTRICT RESIDENTS CAN DO

- Participate in RiverSmart Homes landscaping grant program:
 - Landscaping timeline (once audit has been completed) –
 1. Project assigned to a landscape contractor once reached on the wait list (approximately 3-6 months)
 2. Consultation with landscape designer
 3. Submission of copayment and signed maintenance agreement
 4. Landscape designer completes design and supporting documents and submits them to the Alliance and homeowner for review
 5. Adjustments to design (if needed) are made and final design approved by the Alliance and homeowner
 6. Landscape contractor schedules installation and installs project
- Add an additional rain garden by participating in RiverSmart Rain Garden Rebate program:
 - Request application forms from the Alliance (jalberti@allianceforthebay.org)
 - Successful projects are eligible for \$3/sf of area treated
 - Visit <https://www.allianceforthebay.org/riversmartlandscaping> for more information on Rain Garden rebates.
- Select native plants when landscaping your property
- Visit the Reduce Your Stormwater website to learn about helpful action that you can implement at home: <http://www.stormwater.allianceforthebay.org/take-action>

CONSERVATION LANDSCAPING USING NATIVE PLANTS

CONSERVATION LANDSCAPING,

often called BayScaping, is the practice of modifying the visible features of an area of land in a way that incorporates environmentally sensitive design, low impact development, non-invasive native plants, and/or integrated pest management. The purpose is to create a diverse landscape that helps to protect clean air and water and support wildlife. The RiverSmart Homes Program utilizes conservation landscape techniques in its BayScope and rain garden installations.



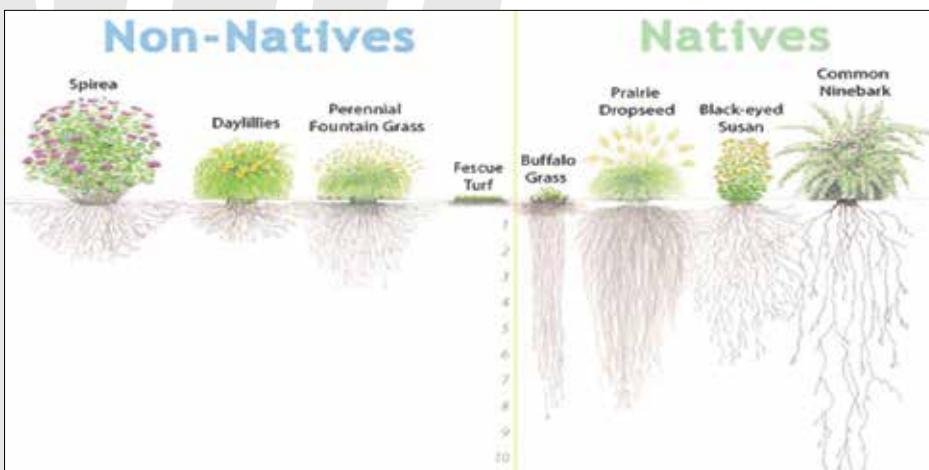
Conservation landscape (Bayscape) showcasing native plants.

FUNCTIONS OF CONSERVATION LANDSCAPING

Conservation landscaping provides benefits in the form of clean air and water, supporting wildlife, and supporting a more beautiful and healthier human environment.

BENEFITS

- Deeper and more extensive root systems to help stabilize soil to help prevent erosion and absorb more water
- Trapping localized stormwater on site to ensure slow infiltration (or percolation) and increased filtration of nutrients entering the ground water
- Once established (typically after the first year), requires minimal watering (in times of drought)
- Using native plants that are adapted to local conditions require little to no fertilizer, which may harm local ecosystems
- Require no pesticides
- Minimizes mowing, saving time and money, and reducing air pollution
- Provides diverse plant environment that supports wildlife, such as bird, bees, and butterflies, which rely on these resources and creates migratory corridors for birds and insects



Native plants typically have deeper roots relative to exotic plants, which allow for better water absorption (<http://www.stormwater.allianceforthebay.org>)

NATIVE PLANTS!

Native plants of the Chesapeake Bay region are plants that have been here long before European settlement. They have adapted to local soils, climates, micro-organisms, and insects. Since they have evolved in natural conditions, many native plants require much less care than many non-native species. RiverSmart gardens are only planted with natives.

NATIVE PLANT RESOURCES

- Native Plant Guide (US Fish & Wildlife Service): <https://www.fws.gov/Chesapeakebay/pdfNativePlantsforWildlifeHabitatandConservationLandscaping.pdf>
- Native Plant Website: www.nativeplantcenter.net

GETTING TO KNOW YOUR PROJECT

RAIN GARDEN

VS

BAYSCAPING



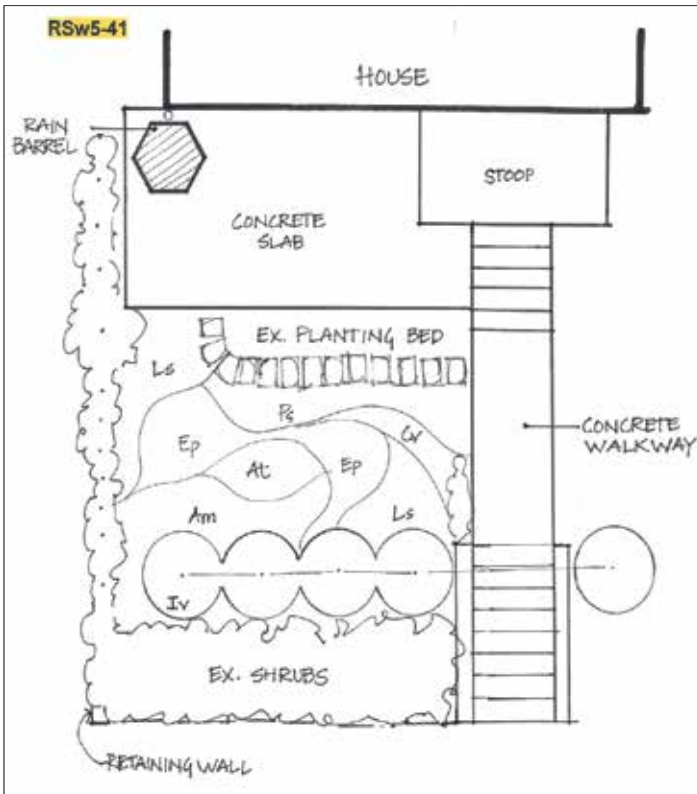
A newly installed RiverSmart rain garden.



A newly installed RiverSmart BayScape.

	RAIN GARDEN	BAYSCAPING
PLANTS	Use native plants	Use native plants
SIZE	~50sf	~120sf
SOIL	Engineered with bioretention soil mix	Existing soil is used (with possible compost addition)
DEPTH	Dug to depth of ~2 feet	No soil excavation; using existing soils
SHAPE	Bowl shaped design to capture and hold water for up to 48 hours and allow for slow infiltration of stormwater into ground	Shallow garden usually on sloped areas
DOWNSPOUT CONNECTIONS	Requires a downspout to be directed into it	May or may not have a downspout directed to it
RESTRICTIONS	Must be placed a minimum of 10 feet from foundations/retaining walls	No restrictions on distance from foundations or retaining walls
OVERFLOW	Requires an adequate overflow area beyond the rain garden to which excess water will flow	No overflow area necessary

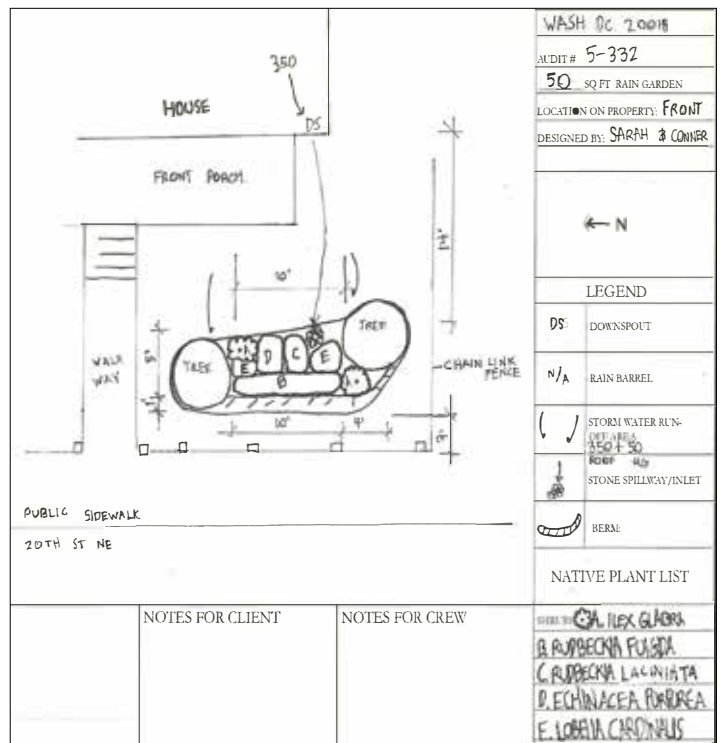
RIVERSMART BAYSCAPE PROJECT



Sample BayScape project design sketch



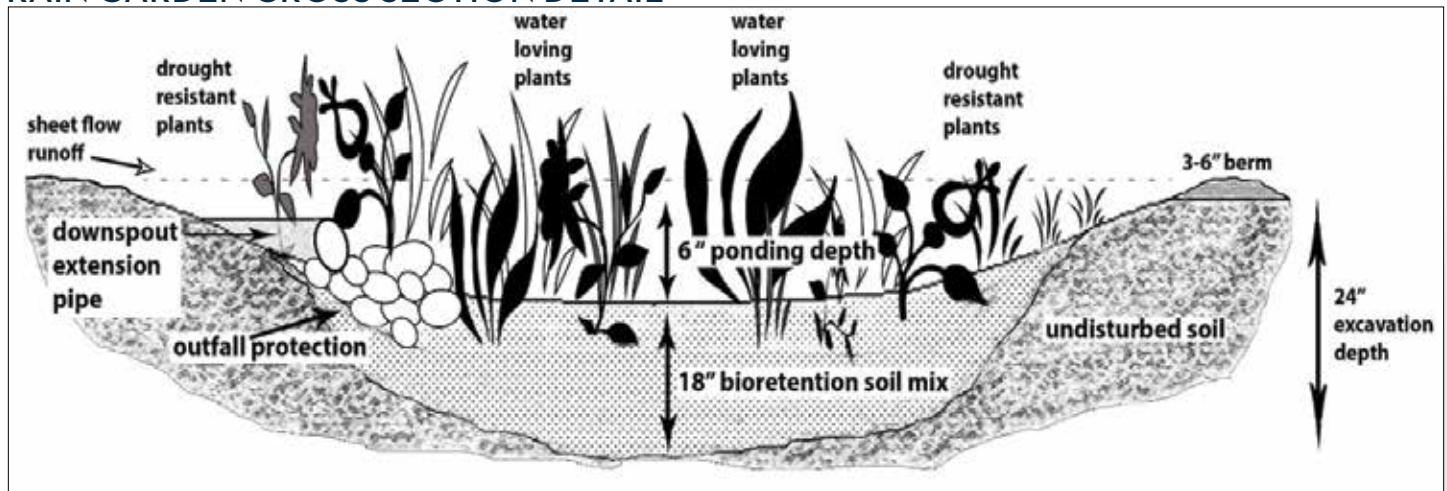
RIVERSMART RAIN GARDEN PROJECT



Sample rain garden project design sketch

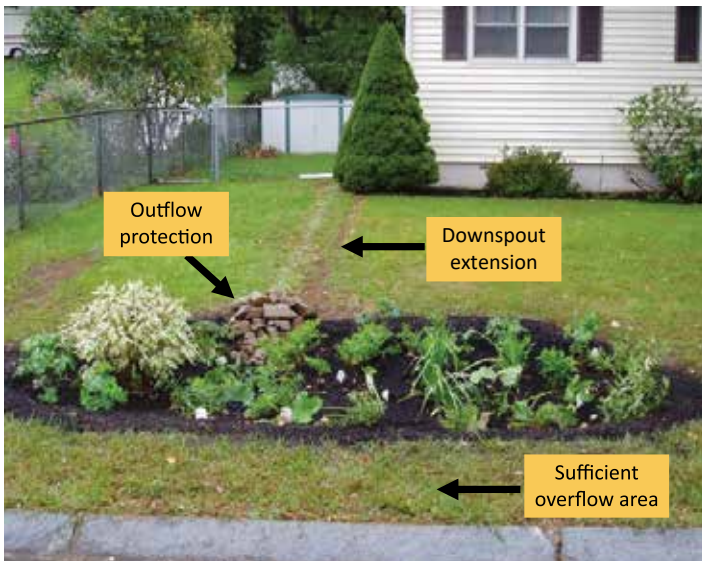
RAIN GARDENS

RAIN GARDEN CROSS SECTION DETAIL



*Rain gardens are designed for 1.2" rain events. Once rain gardens have filled, excess water will overflow and drain away from garden.

RAIN GARDEN REQUIREMENTS



Completed rain garden located a safe distance from downspout with appropriate overflow area and outlet protection.

When locating a rain garden, allow for:

- 10 feet from foundation/retaining walls
- 2-3 feet from walkways and driveways
- Downward slope away from home
- Adequate soil drainage
- Adequate overflow area



Perc test required to ensure adequate drainage. Water must drain within 36 hours.



Excavate ~ 2 feet down and add bioretention soil to allow for additional stormwater infiltration.



Compact level berm allows water to pool for up to 48 hours to slowly infiltrate water into ground.



Downspout point of entry is protected to avoid channeling of water. Overflow area may also be protected if needed.

EXAMPLES OF YOUNG RAIN GARDENS



BEFORE YOUR LANDSCAPE CONSULTATION

Advanced preparation is not required for your consultation with the landscape designer. However, if you have particular interests, create a list of things or questions to ask your designer.

THINGS FOR YOU TO CONSIDER:

- **Do you have any plant preferences (color, size, etc)?** You may wish to review some native plants (see references under Native Plants section) to make a list of types of plants you like or do not like. Consider characteristics about the native plants you choose, such as when they'll bloom, what sort of maintenance they require, and how tall/short they grow. While you may request specific natives, please keep in mind that many are not available or may not be suitable for your space. Your landscape designer will offer suggestions.
- **Are you interested in having extra work outside of the RiverSmart Homes program completed in addition to your RiverSmart garden(s)?** If so, let your landscape designer know when scheduling the consultation so they may allow additional time to discuss optional services.
- **How do you use the space?** Consider whether the garden size or location will impact your use of the yard. For example, if a garden borders a driveway, leave enough room for you to enter and exit your vehicle without stepping on plants in the garden. Also consider how converting this yard space to garden will reduce yard space for play/entertaining and pets.
- **Are you also having trees installed?** Homeowners are responsible for coordinating between the landscaping contractor and Casey Trees. Please let Casey Trees know of your garden plans so that they may place the tree accordingly to allow space for the garden. You should also notify your contractor so they leave room in the garden for the tree placement.
- **How will you water your garden?** Consider how far the garden is from a spigot. If using a rain barrel, make sure it is placed in a position that will allow easy watering. If the rain barrel is located downhill from the potential garden, possibly consider a yard pump.

CARING FOR YOUR RAIN GARDEN

INITIAL CARE OF YOUR GARDENS

Watering is critical to establishing your plants. Plan to provide extra care and maintenance of your newly installed garden for the first year, after which the plants typically will have become established and will then require little maintenance, except during extreme weather conditions, such as heat/drought.

Weeding will be required periodically throughout the year. Become familiar with the look of your plants after installation,

particularly the leaf shape. This will help you to identify weeds later once the garden starts to fill in. Weed frequently the first year to catch weed invaders early and to help you become familiar with your new native plants.

Dormancy occurs towards late fall/early winter. Gardens installed at this time will look sparse, but root systems will develop over the winter and plants should emerge starting in the spring. Plants emerge at varying times during the spring, but should be out by the end of May.

Additional Care, such as pruning and splitting mature plants may also be periodically needed.

More information on maintenance, including a series of maintenance videos, can be found on DOEE's website at <https://www.riversmarthomes.org/>.



LONG-TERM CARE OF YOUR GARDENS

Maintenance Plans are often offered by landscape contractors. Ask your landscape contractor for an estimate of one-time and yearly maintenance plans if interested. You may also utilize the RiverSmart Maintenance Program (see details below).

The RiverSmart Maintenance Assistance Program (RSMAP) is available to you if you have questions regarding the maintenance of your RiverSmart gardens. Free e-mail/phone support or fee-based on-site services are offered. Please visit <http://allianceforthebay.org/maintenance> for additional information or contact (443) 499-8230 or maintenance@allianceforthebay.org.

Please reference the "Maintenance Schedule" for more detailed maintenance tips: www.allianceforthebay.org/maintenance_schedule



Is your garden in need of maintenance? Consider the RiverSmart Maintenance Assistance Program to help answer your maintenance questions.

PLANT WARRANTY

- Plants installed through the RiverSmart Homes grant program are warranted for one year, provided that they are cared for as instructed. A one-time replacement may be made.
- Directions for claiming plant warranty:
 - Allow ample opportunity for plants to emerge. Some may emerge later in the season.
 - Do NOT remove struggling or dead plants. They will need to be inspected.
 - Contact landscape contractor and copy the Alliance regarding your plant condition. Please include photos whenever possible.
 - Arrangements will be made for an inspection.
 - Plant replacements will be completed if needed (only one plant replacement visit per property is included).

- Plant warranty will be voided if:
 - Significant changes to the garden have been made such as addition of topsoil and structural changes to the design of the garden
 - Removal of plants
 - Plants are not properly maintained, including appropriate watering
 - Repeated trampling of plants (dogs, children, etc)
 - Chemicals or pesticides are applied
 - Construction or utility work damages occur
- Damage to plants (including but not limited to broken branches/stems, leaf spot, powdery mildew, and root rot) caused by deer or other animals, weather (such as heavy snowfall or excessive rain), or other existing conditions may occur and are not necessarily covered by the warranty. Monitor the health of your plants and intervene early to promote the survival of the plants. Consider utilizing the RiverSmart Maintenance Program to assist with answering your maintenance questions.

GET IN TOUCH!

THE RIVERSMART HOMES LANDSCAPING PROGRAM IS BEING IMPLEMENTED BY DOE GRANTEE, ALLIANCE FOR THE CHESAPEAKE BAY. PLEASE SEE BELOW FOR CONTACT INFORMATION.

PROGRAM CONTACT

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riversmartlandscaping](http://www.allianceforthebay.org/riversmartlandscaping)

Please contact us with additional questions or concerns. We welcome your feedback and would appreciate hearing about your experience as a participant in the RiverSmart Homes Landscaping Program.

FREQUENTLY ASKED QUESTIONS

Q: What is the typical timeline?

A: Once you have been assigned to a landscape contractor, you will need to complete your paperwork (signed Maintenance Agreement and copayment for each project) and make an appointment with your landscape designer. Typically, landscape contractors make appointments with those homeowners that have completed paperwork first, followed by those that have not yet submitted it. Submission of paperwork is not required before the consultation, but may help to speed up the process. After the consultation, no additional work can be done until the paperwork is completed. Once the paperwork and consultation are done, the landscape designer will create a design plan for your project(s) and submit to you and the Alliance for review. Upon approval (you and the Alliance), installation will be scheduled. The timeline may vary considerably depending on the responsiveness of the homeowner and the contractor's schedule, but typically takes 4-8 weeks.

Q: What is the planting season for RiverSmart gardens?

A: RiverSmart gardens may be planted throughout the year, provided that the ground is not frozen. Typically installations will occur from late March through mid-December. Gardens planted during the summer months should be carefully maintained to ensure adequate watering. Gardens planted in late fall may only visibly show a few sticks/leaves, but will develop root systems over the winter and emerge in the spring.

Q: Will my rain garden cause mosquito problems?

A: No. A properly functioning rain garden should hold water for up to 48 hours, allowing it to slowly infiltrate into the ground. Mosquito breeding begins to occur when water has been standing for 72 hours. If your rain garden is still holding water beyond 72 hours, please notify the Alliance and the landscape contractor.