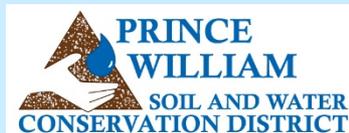


Suburban Best Management Practices (BMPs)

Nicole Slazinski

Conservation Specialist

Prince William Soil & Water Conservation District



What are Best Management Practices?

Best Management Practices, or BMPs, are practices that help us best protect our water and our soil (e.g. conservation landscaping). BMPs reduce pollutants from entering our waterways, (particularly for us, the Chesapeake Bay!)

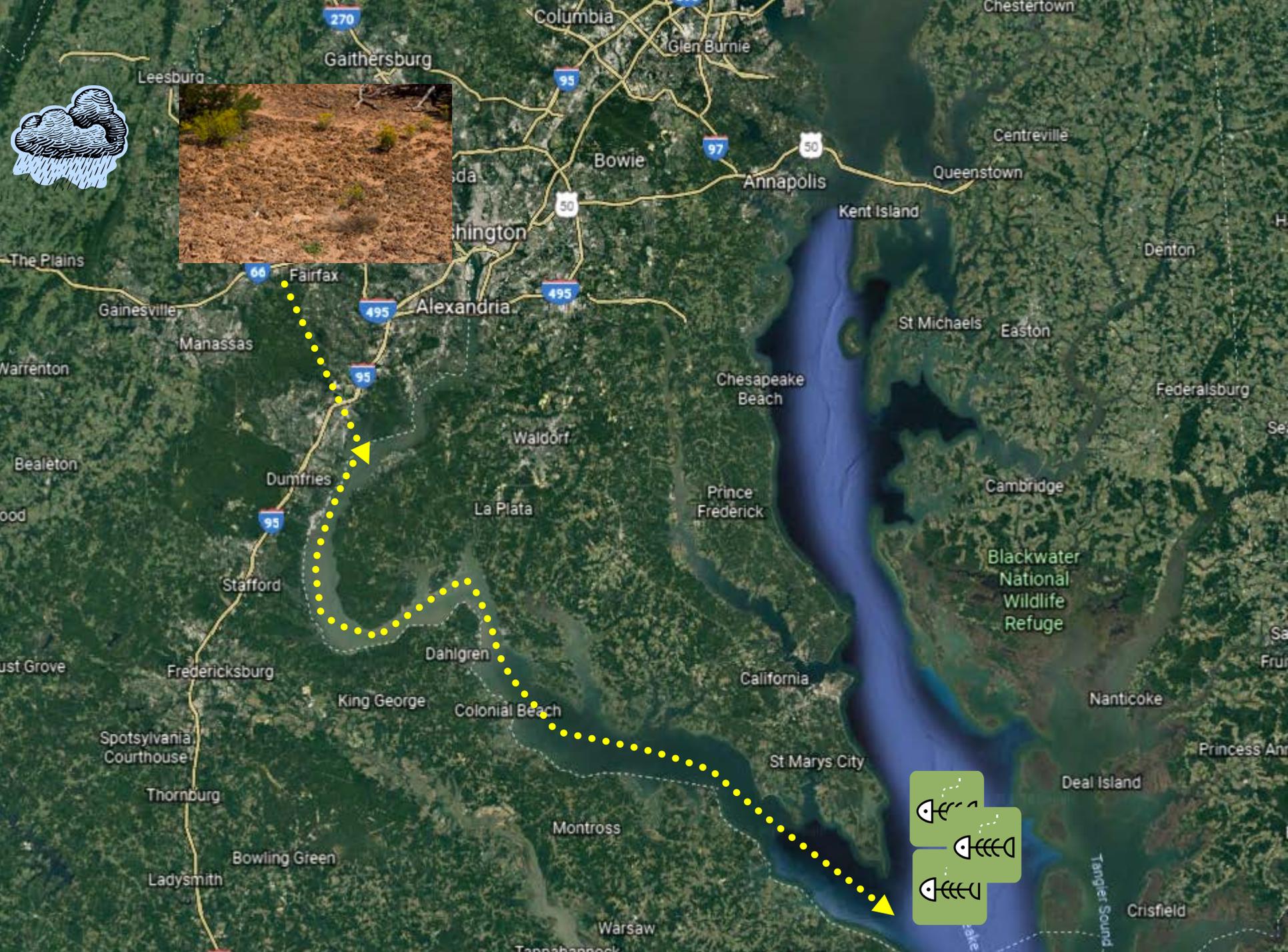


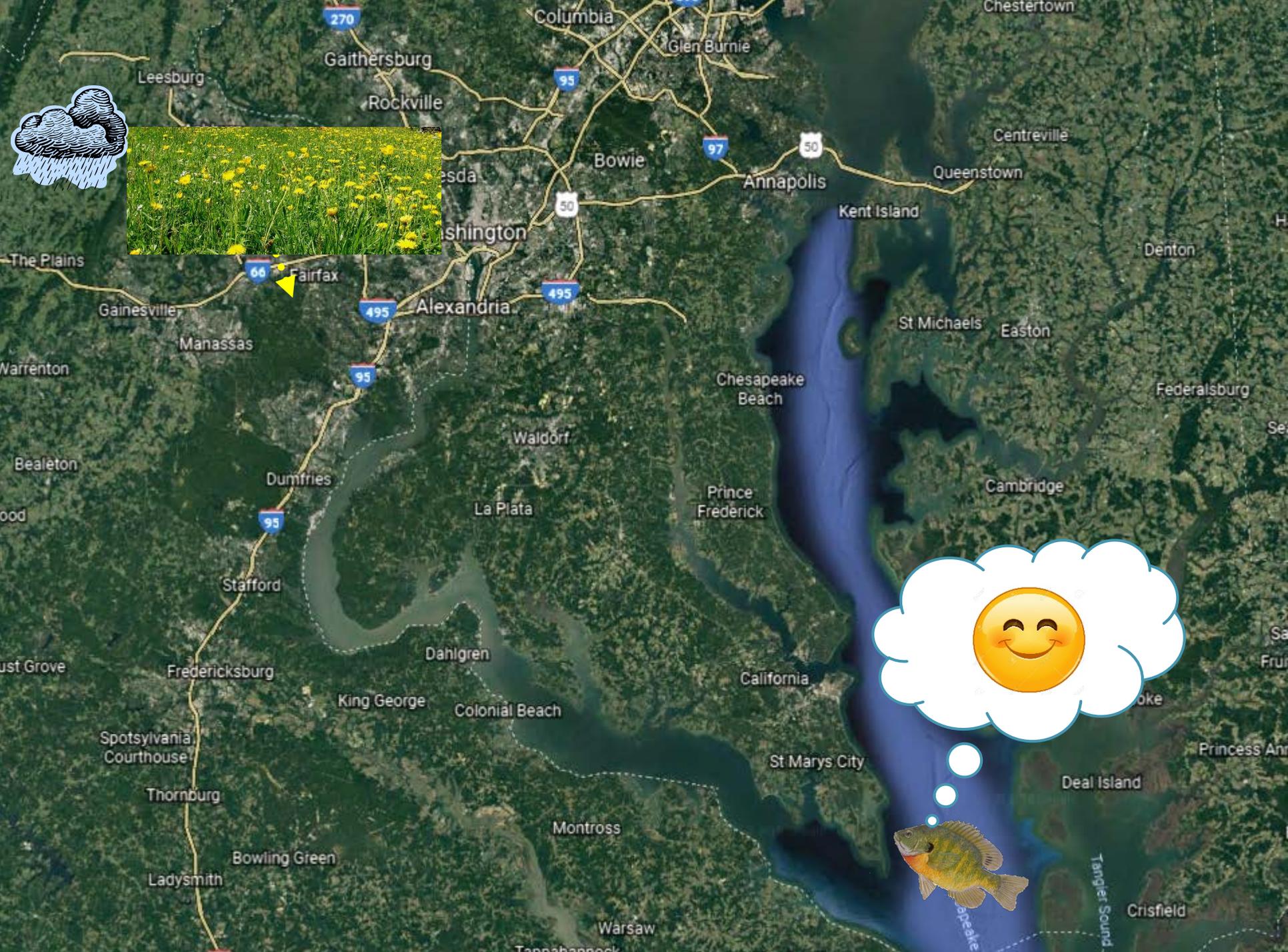
What are Pollutants?

From Wikipedia: “A pollutant is a substance ... introduced into the environment that has undesired effects.”

This includes:

- Nutrients (e.g. excess fertilizer)
- Sedimentation (soil particles from erosion)
- Dirt might be ‘natural,’ but as you’ll soon see, it can be very problematic to our environment.



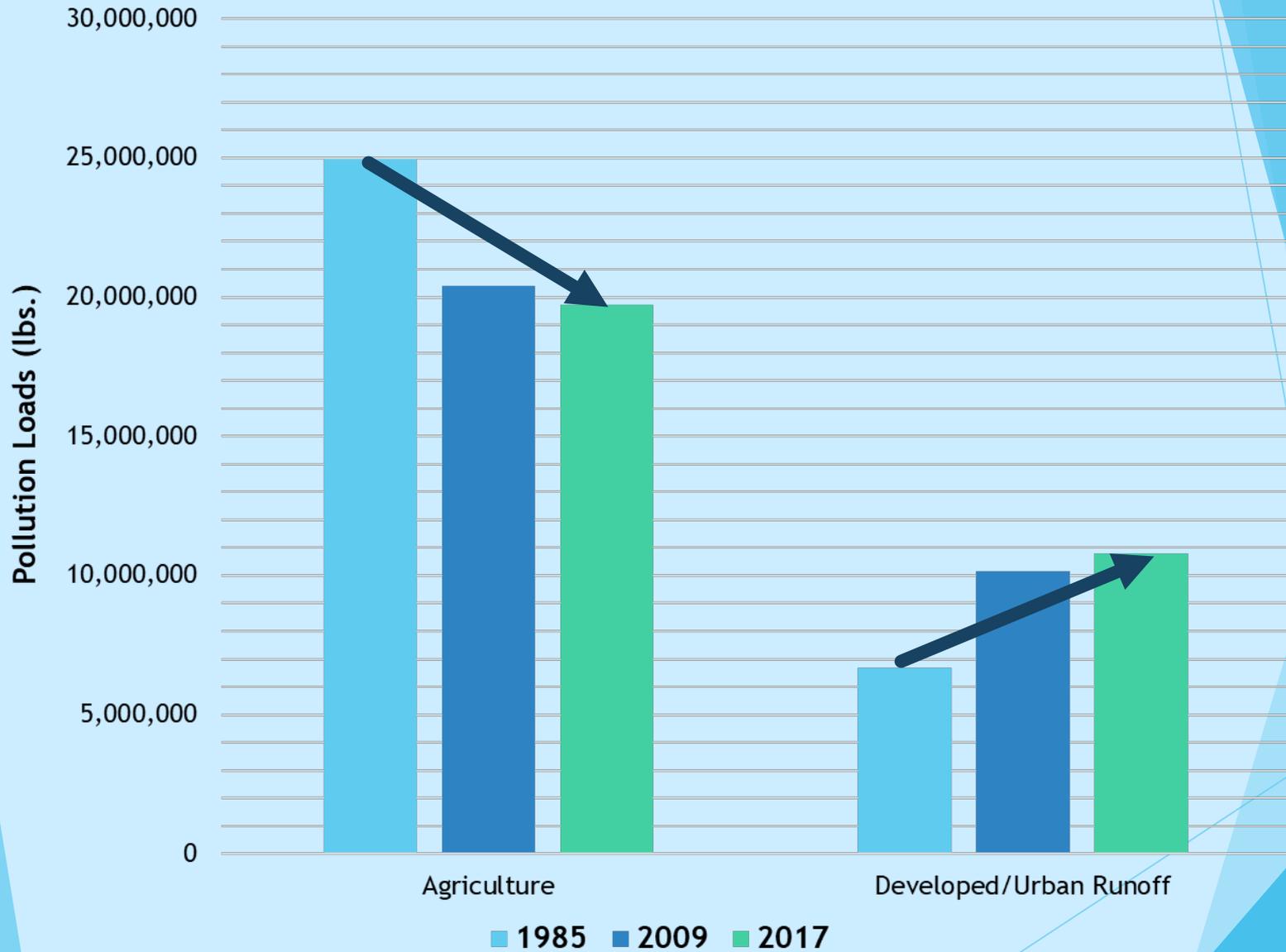


Why BMPs are Important

- The EPA has set goals to reduce nutrient loads into the Chesapeake Bay by 2025
- Programs to reduce nutrient runoff from agriculture has been going on for years; these programs continue to be very successful at cutting down on nutrient loads into the Chesapeake Bay
- It's time to focus on suburban nutrient loads

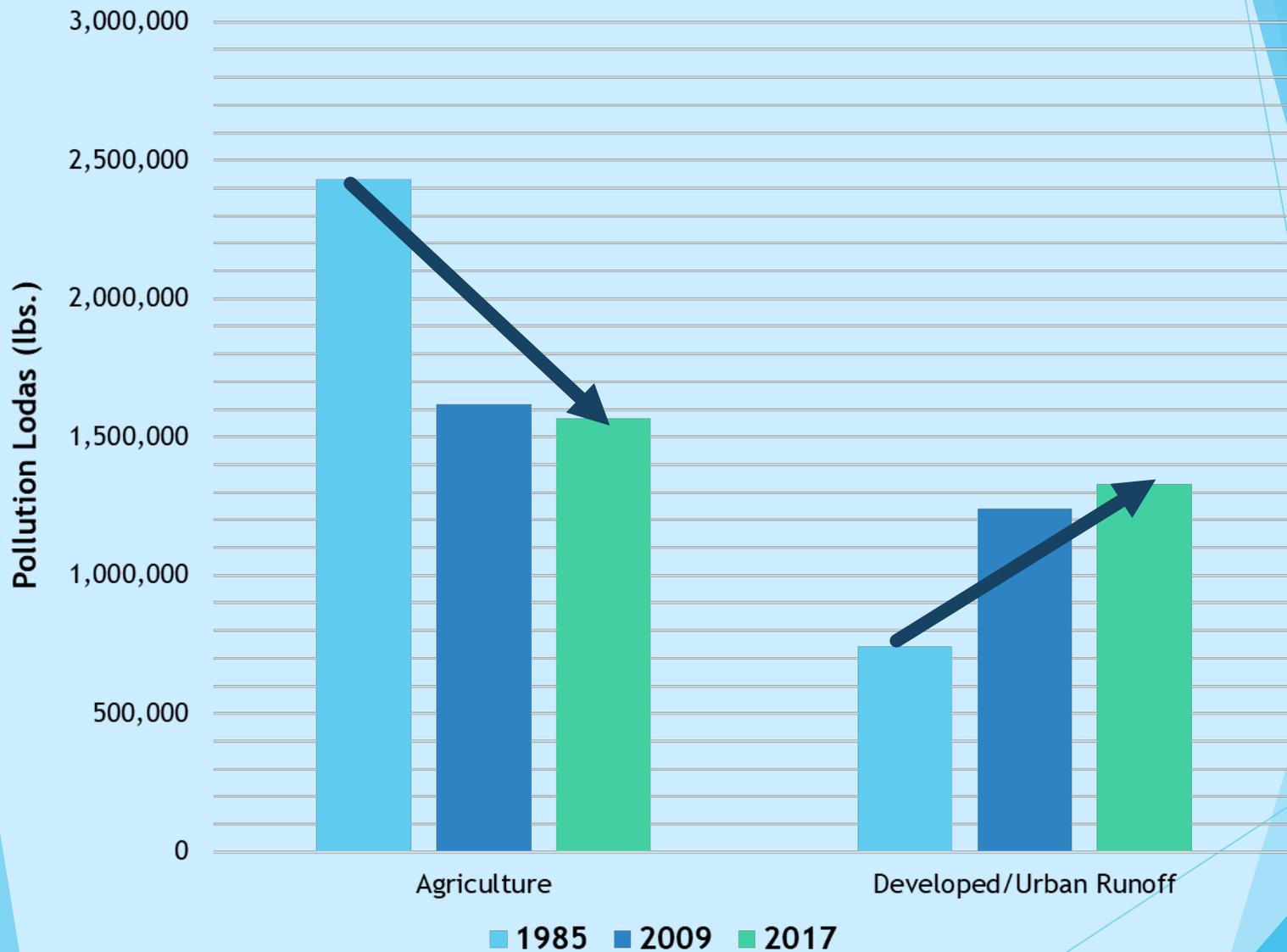


Nitrogen Pollution Loads





Phosphorus Pollution Loads



Common BMPs For Homeowners

1. Testing your soil to avoid over-applying fertilizer
2. Replacing impervious areas or land that lacks vegetation with pervious surfaces
3. Installing a rain garden
4. Installing a rain barrel
5. Conservation Landscaping

Testing Your Soil

**Quick Video on how
Too much Fertilizer and
Sediment hurts our
waterways**



Testing Your Soil

- A soil sample will tell you exactly how much fertilizer you need for the plants you are trying to grow.
 - *Contact your Virginia Cooperative Extension office!*
- Many people over-fertilize their lawns when their grass doesn't need it; this is just money down the drain.

Don't pay to pollute the Bay!





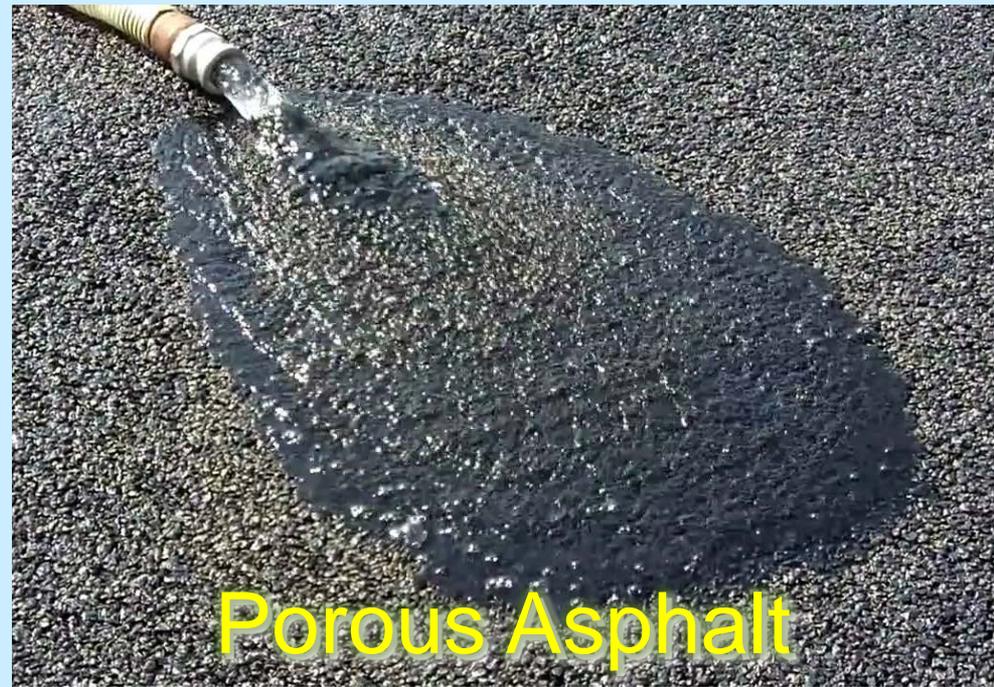
Permeable Pavement

- Water infiltrates through the edges of the stone
- Protects the soil
- Reduces erosion
- Reduces standing water
- Replenishes groundwater





Interlocking Pavers



Porous Asphalt

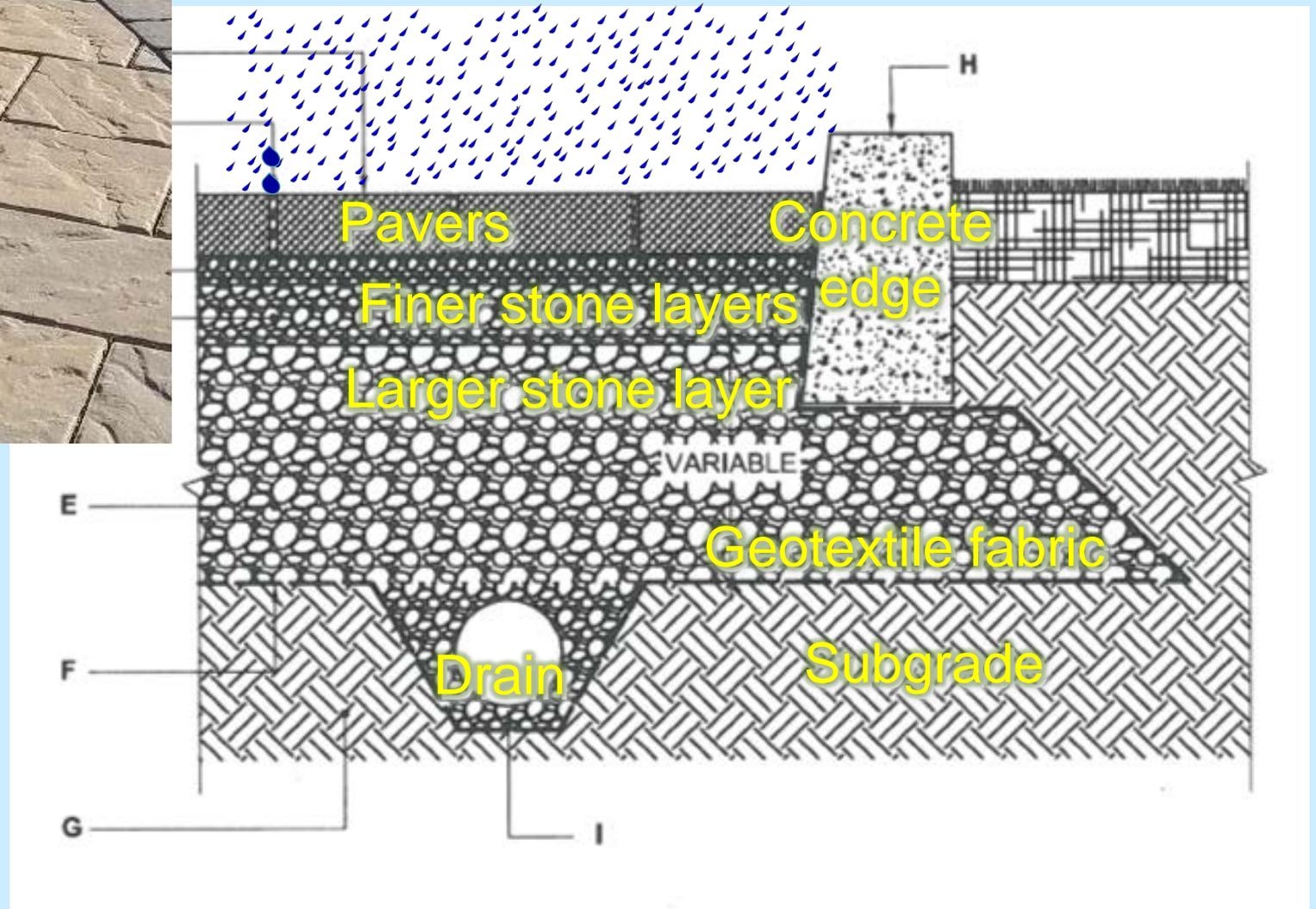


Grass Pavers



Pervious Concrete

Permeable Pavement



Example of permeable pavement design by Techo-Bloc







ASTM 57 (5-28mm)
~0.6"

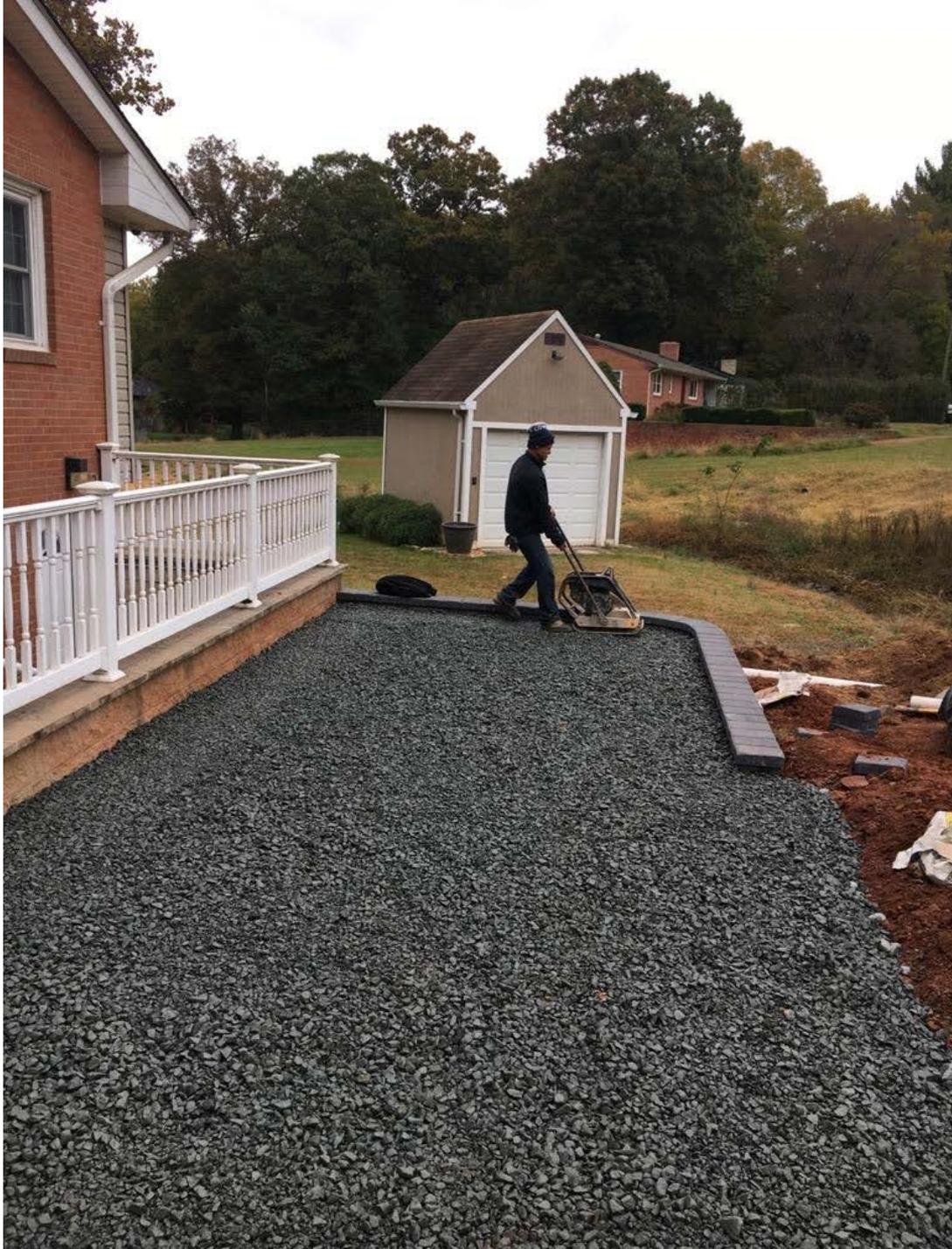
ASTM 2 (40-80mm)
~2.4"



















Rain Gardens

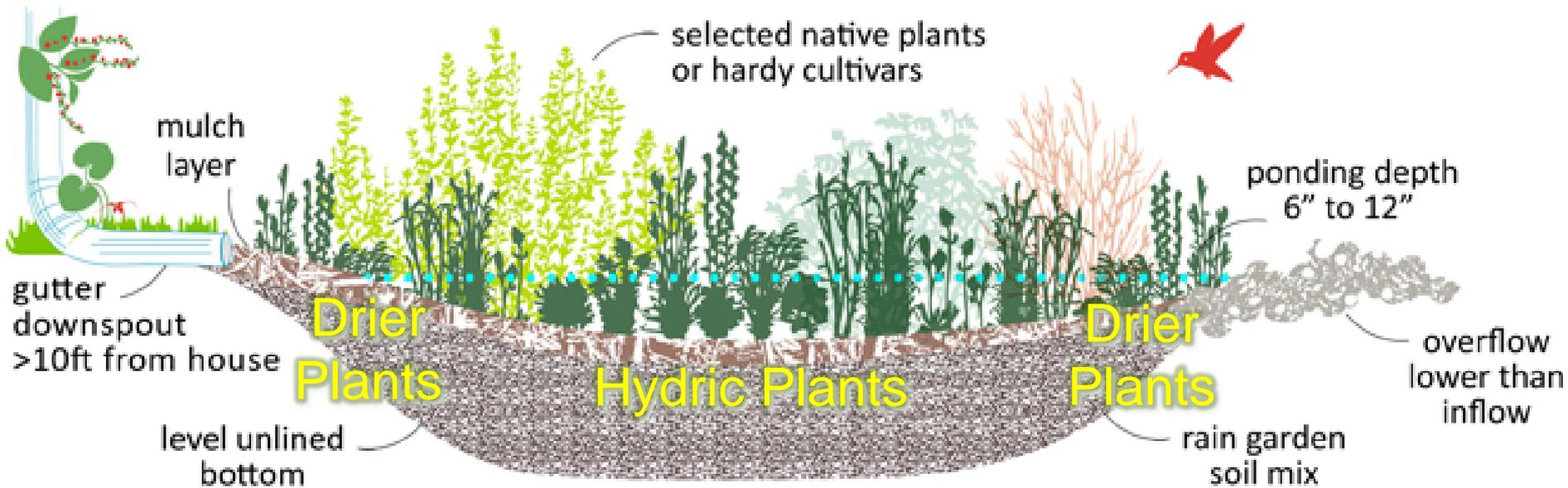
A garden located in a small depressed area composed of native plants. The primary objective of a rain garden is to filter stormwater.

Benefits of a rain garden:

- Slowly infiltrates water
- Reduces erosion
- Provides Aesthetics
- Filters out Pollutants
- Provides habitats for birds, bees, butterflies, and other species



Rain Garden – General Design



<http://www.12000raingardens.org/build-a-rain-garden/>

Choose the right plant of the right size for the right spot!



Rain Garden – Infiltration Test

After a rain event, a properly functioning rain garden should hold water for less than a 48 hour period

- Dig a 12” deep hole at the proposed site and fill it completely with water.
- Allow the water to sit for at least an hour so that the soil can saturate.
- Refill the hole so it is full again
- From this point on, observe to see if the water drains into the soil

If the water drains within 48 hours: the site is suitable for a rain garden

If the water DOES NOT drain in 48 hours:

- install an underdrain
- choose another location
- Choose another BMP



Rain Garden – Sizing

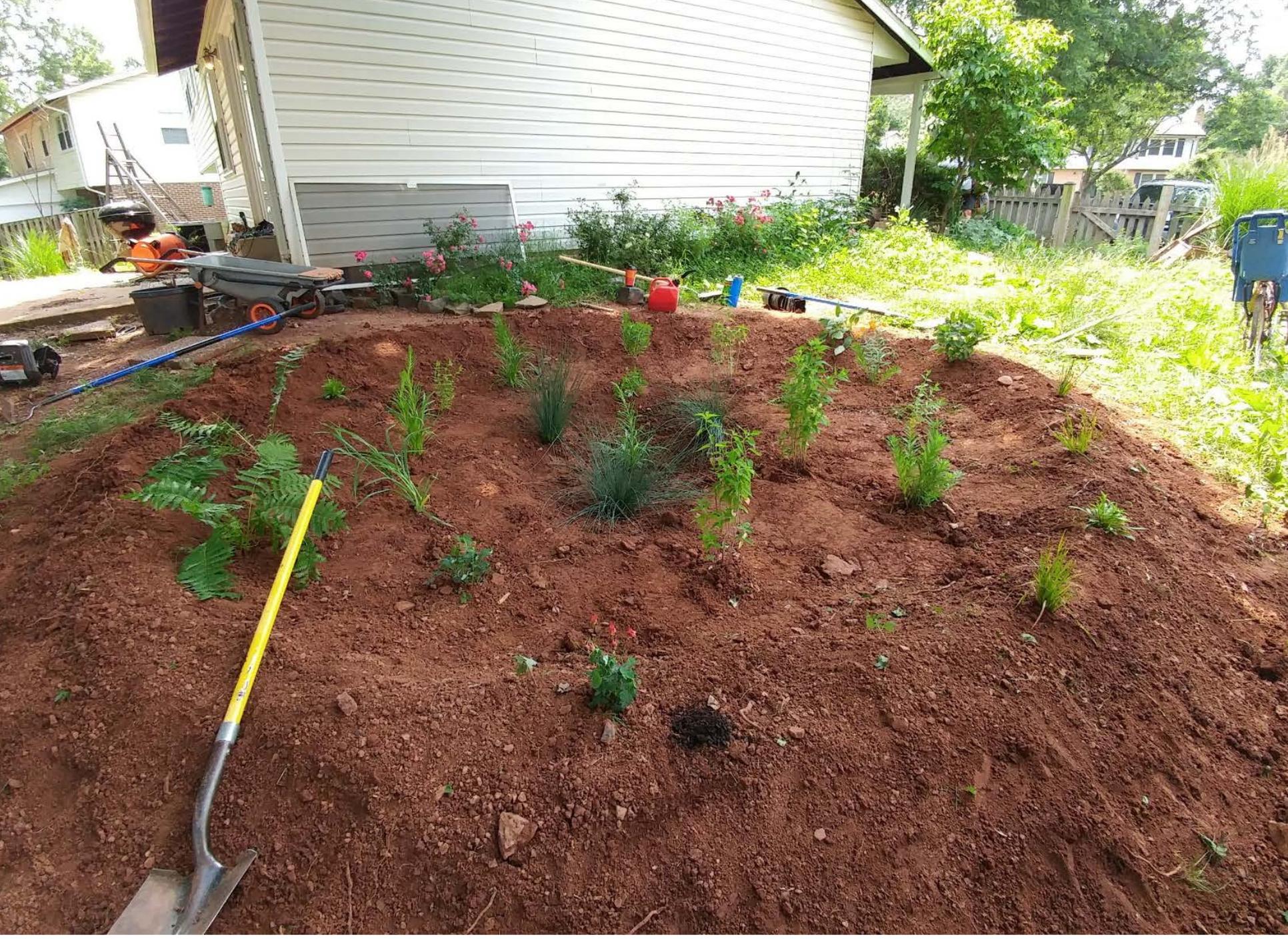
- How much water from your roof will drain to your rain garden?
- How much water from other sources is draining towards your rain garden?
- What is your Rain Garden's Ponding Depth (usually 6-12")

1. Roof surface area (length times width of roof)	_____	Sq. ft.
2. Other impervious surfaces area (length times width of other surfaces)	_____	Sq. ft.
3. Total impervious surface area (line 1 + line 2)	_____	Sq. ft.
4. Pervious surface area	_____	Sq. ft.
5. Depth Factor	_____	
6. Size of rain garden: Impervious surfaces (Line 3 x line 5 x .072)	_____	Sq. ft.
7. Size of rain garden: Pervious surfaces (Line 4 x line 5 x .028)	_____	Sq. ft.
8. Size of rain garden: Impervious plus pervious surfaces (Line 6 + line 7)	_____	Sq. ft.











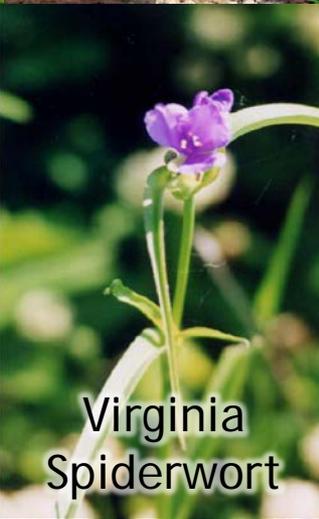




Sensitive Fern



Virginia Spiderwort



Virginia Spiderwort



Blazing Star



Butterfly Milkweed

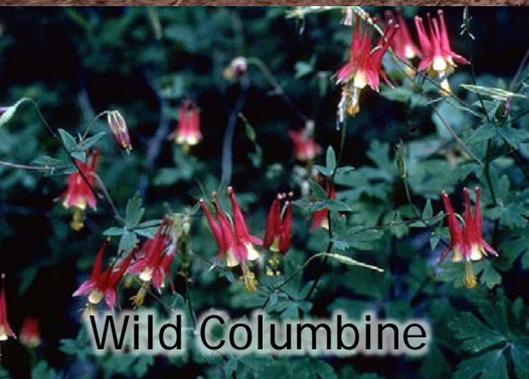
Black-eyed Susan (not pictured)



Dark Green Bulrush



Black-eyed Susan



Wild Columbine



Wild Bergamot



Beebalm



Mountain mint



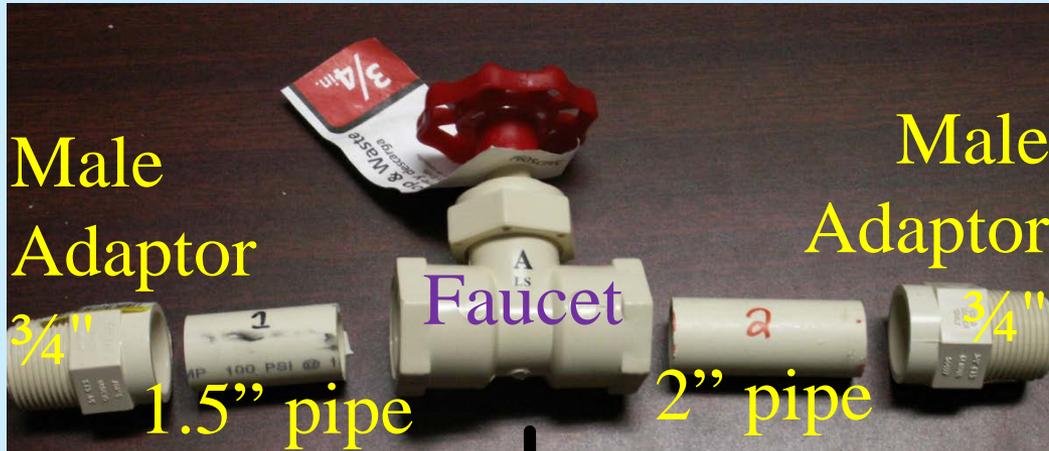
Butterfly Milkweed

Rain Barrels

- Collects water from rooftops
- Stores water for future uses
 - Water plants during times of drought
 - Bird Baths
 - Flushing toilets
 - Etc.
- Reduces stormwater runoff
- Reduces your water bill



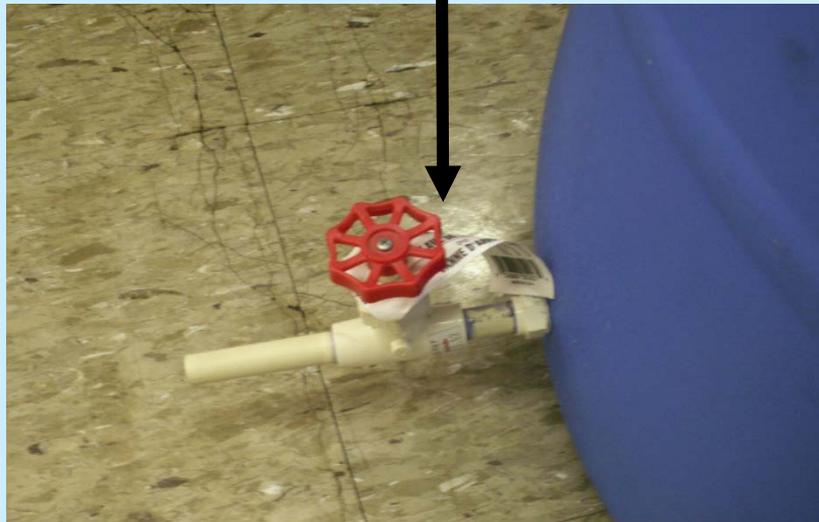
Rain Barrel Supplies



Purple Primer
All Purpose Cement



Teflon Tape



2 elbows (2"x3")





You can connect the downspout directly to the barrel using the 2x3" elbows.

Learn More about Rain Barrels at Compost Awareness Day!

Saturday

April 27, 2019

Balls Ford Road Compost Facility

13000 Balls Ford Road

Manassas, VA 20109

Friends of the Occoquan

“FOTO has rain barrels for sale for \$65. The rain barrels are 55 gallon food grade pickling barrels from Mount Olive Pickling Company. Each barrel comes with the hardware to complete your rain barrel. Tools, hoses and downspout are not included. Assembly is required.”

www.friendsoftheoccoquan.org/rainbarrelworkshops.html

Upcoming Rain Barrel Workshops in Fairfax - Northern VA Soil & Water

BUILD-YOUR-OWN WORKSHOPS \$55

- **Saturday, March 30, 10:30-12:30** Walter Reed Community Center
Arlington
- **Saturday, May 25, 10:00-12:00**
Ellanor C. Lawrence Park
Fairfax

DISTRIBUTION EVENTS/SALES - \$65

- **Friday, April 5 (9:00-4:00)**
- **Saturday, April 6 (9:00-12:00)**

Location:

Sleepy Hollow Bath & Racquet Club
3516 Sleepy Hollow Rd.
Falls Church, VA 22044

Conservation Landscaping

Roots from (Native) Plants have many benefits:

- Stabilizes the soils; significantly reduces erosion
- Filters pollutants and nutrients
- Improves soil quality
- Provides aesthetics
- Provides food and habitats to a variety of species

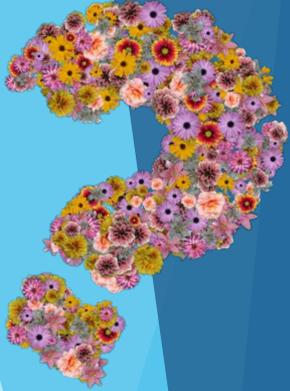


Blazing Star

Virginia Conservation Assistance Program (VCAP)



- Cost Share program for suburban BMPs, such as:
 - Conservation Landscaping
 - Rain Gardens
 - Permeable Pavement
 - (soil sampling and rain barrels are not VCAP practices)
- Cost-share means that we share the costs; most VCAP practices cover 75% of the costs to install the practice (permeable pavement is \$2/ft²)
- Registration period for Prince William is open until April 30th, 2019. Please see our website for more information:
www.pswcd.org/vcap
- If you are not in Prince William, contact your local soil and water conservation District: <https://www.pswcd.org/other-districts>



Questions?

Nicole Slazinski

nicoleethier@pwsxcd.org

571-379-7514

www.pwsxcd.org

