



Rain Gardens Welcoming and filtering rainwater naturally

Asad Rouhi
Northern Virginia Soil and Water Conservation District



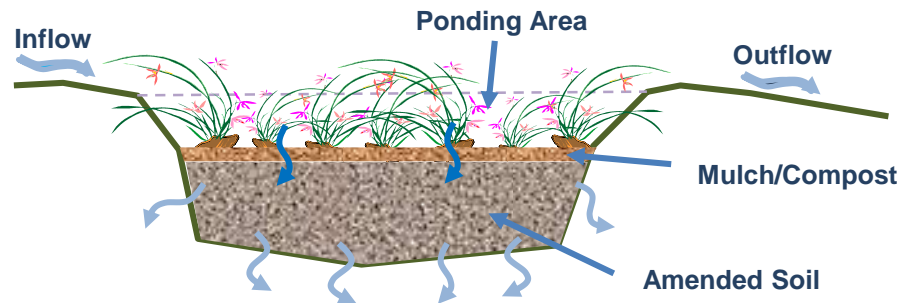






What is a rain garden?

Rain garden (bioretention) is a landscaped depression that has the ability to capture, temporarily retain, and filter rainwater.

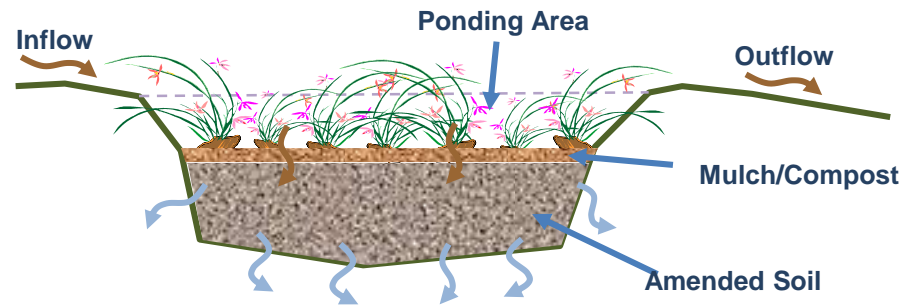


How does a rain garden work?

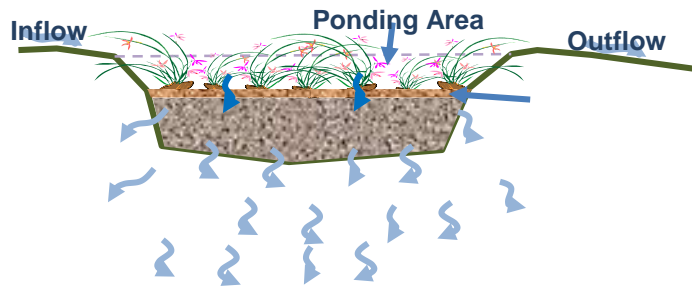


Rain Gardens Provide Multiple Benefits

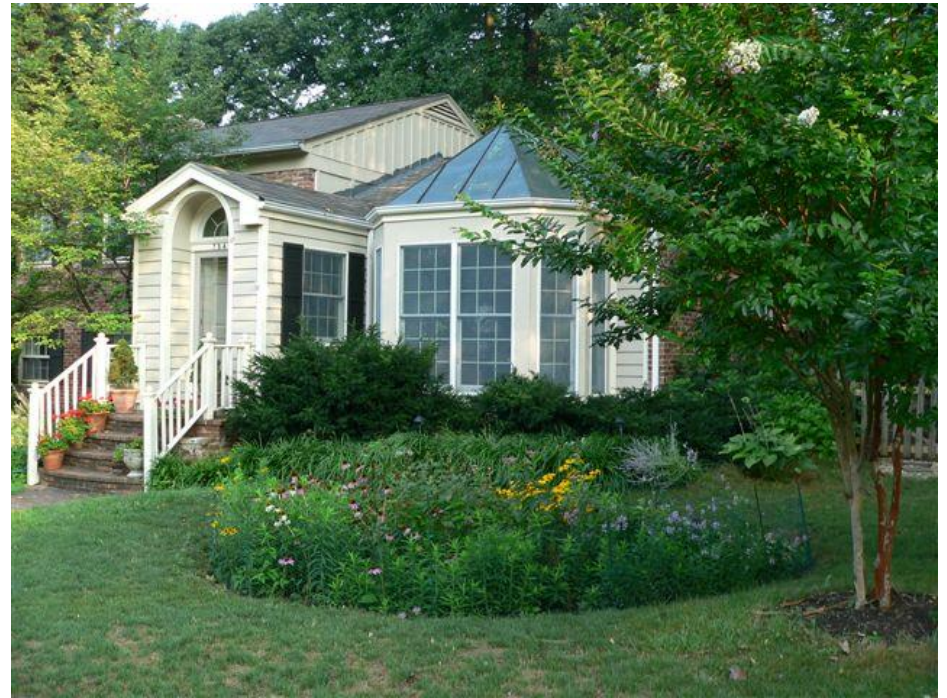
They improve runoff
water quality



By soaking runoff, rain gardens help recharge ground water.



Helps solve yard drainage, erosion, and flooding problems.



Here a rain garden was built to solve another common yard drainage/erosion problem.



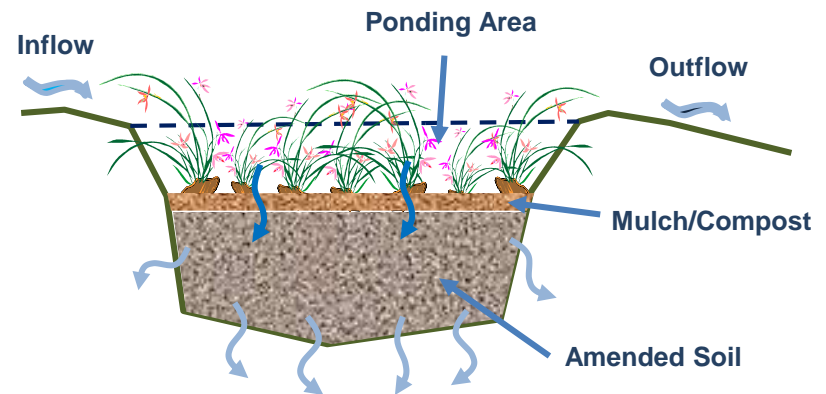
Enhances landscaping
and the beauty of your
property.



Main parts of your rain garden

In general a small rain garden has the following parts:

- Inflow/outflow
- Ponding area
- Mulch/compost
- Amended soil
- Gravel bed (optional)



Main parts of your rain garden

Inflow/outflow:

You need to bring runoff into your rain garden (inflow) and allow safe passage of extra runoff out of your rain garden (outflow).



Main parts of your rain garden

inflow/outflow

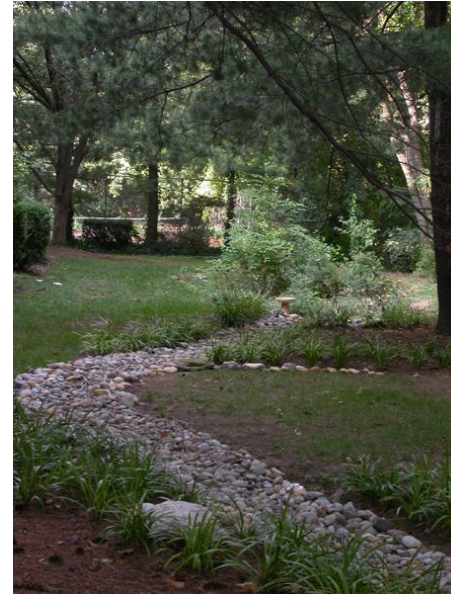
Examples of
inflow/outflow in different
rain gardens

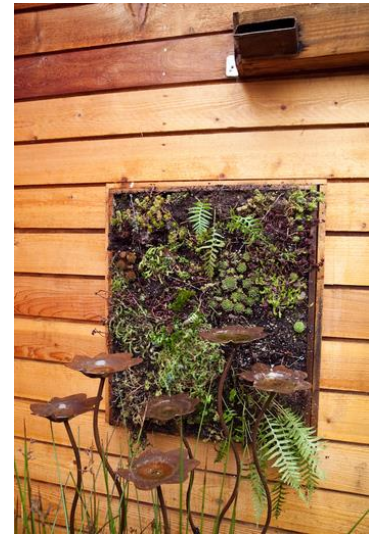


Main parts of your rain garden

inflow/outflow

Examples of
inflow/outflow in different
rain gardens





Main parts of your rain garden

inflow/outflow

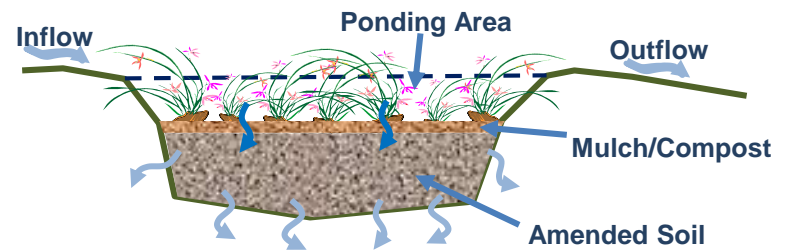
Examples of
inflow/outflow in different
rain gardens



Main parts of your rain garden

ponding area

The storage space on top of the rain garden. Its depth varies from 6 inches to 12 inches.

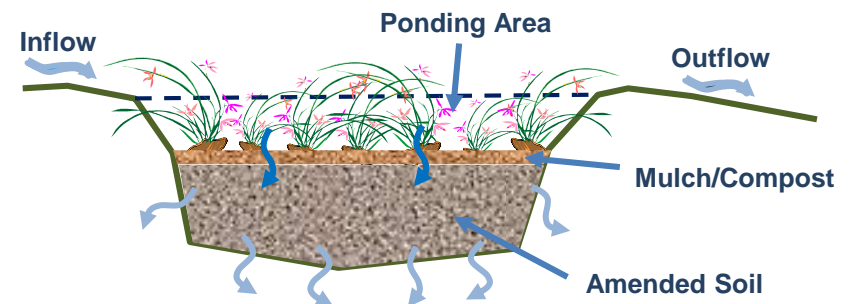


Main parts of your rain garden

Amended Soil



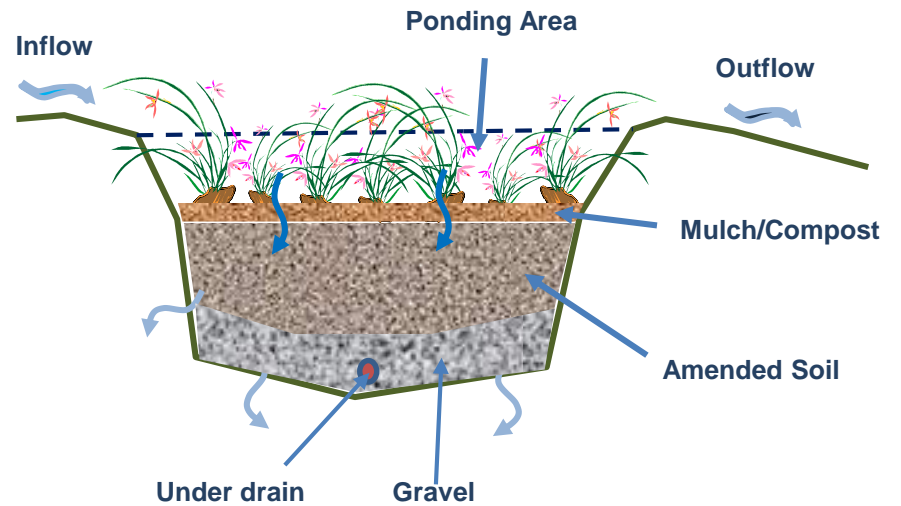
Most of the time the natural soil inside the rain garden needs to be amended. Depth of amended soil varies from 1.0 to 2.5 feet.



Main parts of your rain garden



Gravel filter & under drain



Four Stages to Create and Sustain Your Rain Garden

Planning



Building



Planting



Maintaining



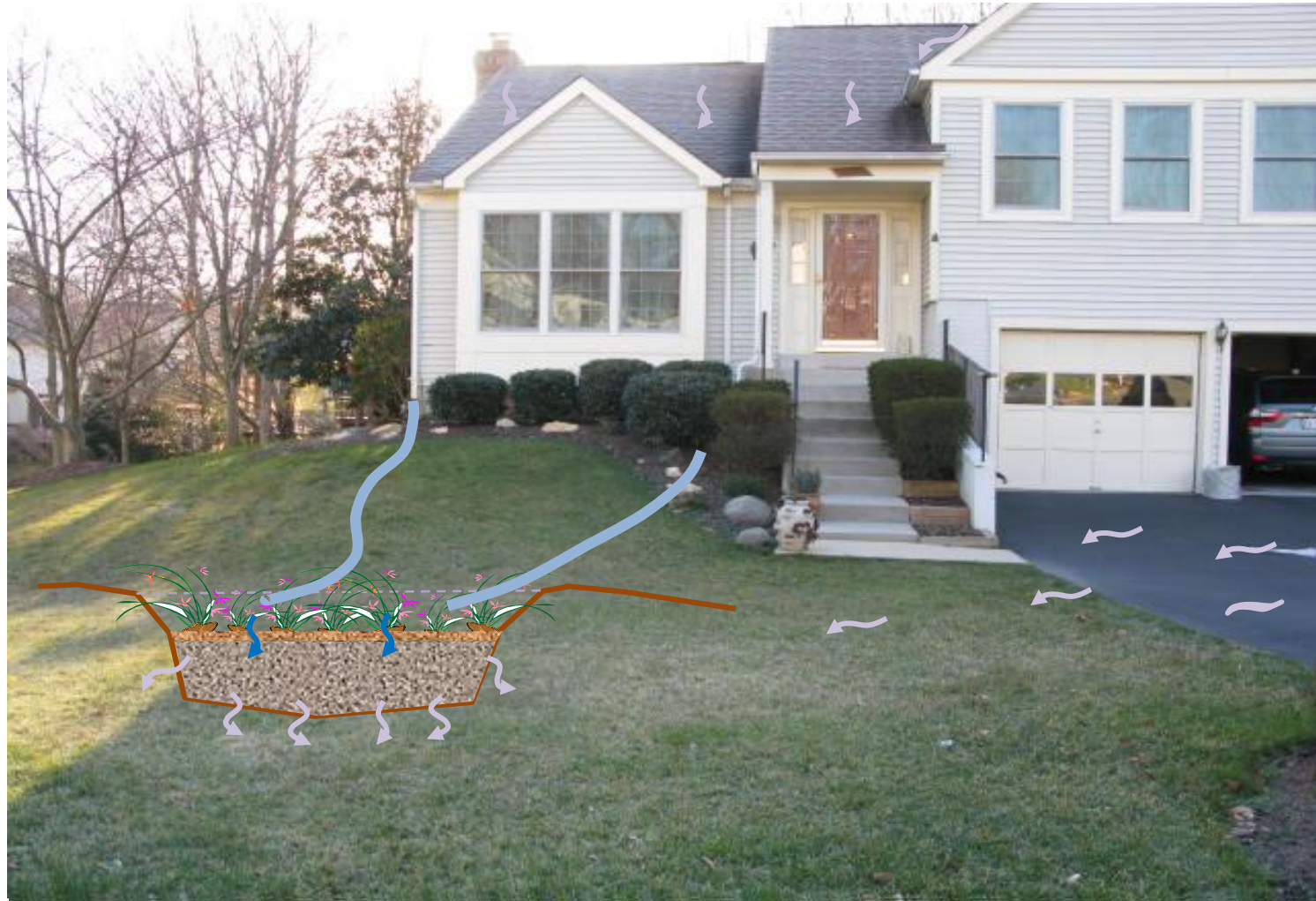
Four Stages to Create and Sustain Your Rain Garden

1. Decide where you want to have your rain garden
2. Check your soil suitability for rain garden
3. Determine the size your rain garden
4. Determine what material and how much you need
5. Select the tools that you are going to need to build your rain garden
6. Estimate the costs

Planning



Decide where you want to locate your rain garden.



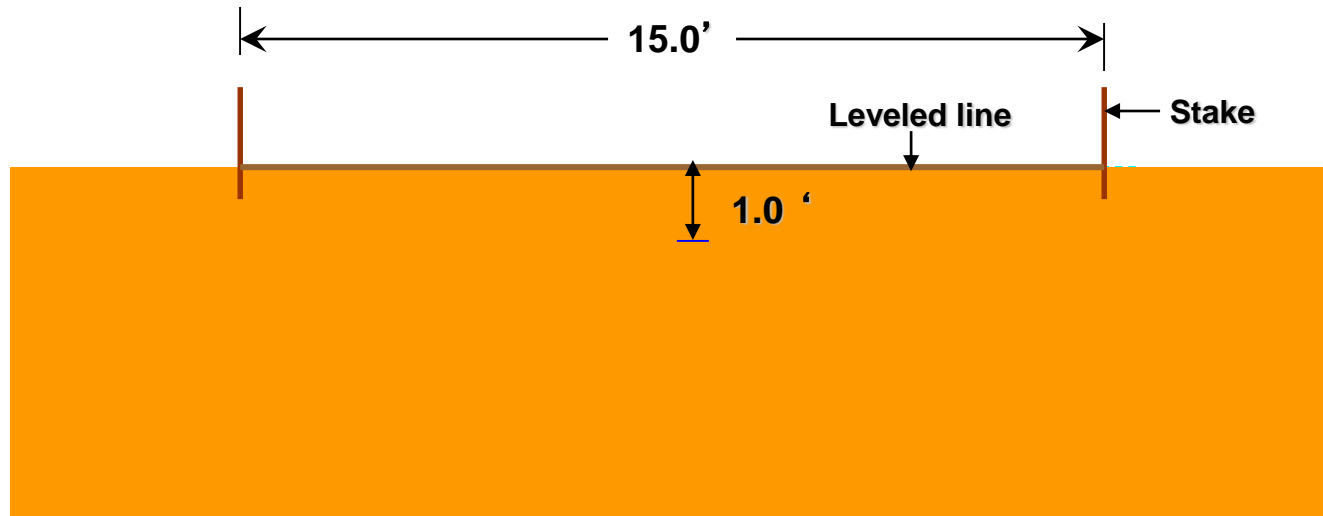
Four Stages to Create and Sustain Your Rain Garden



Building

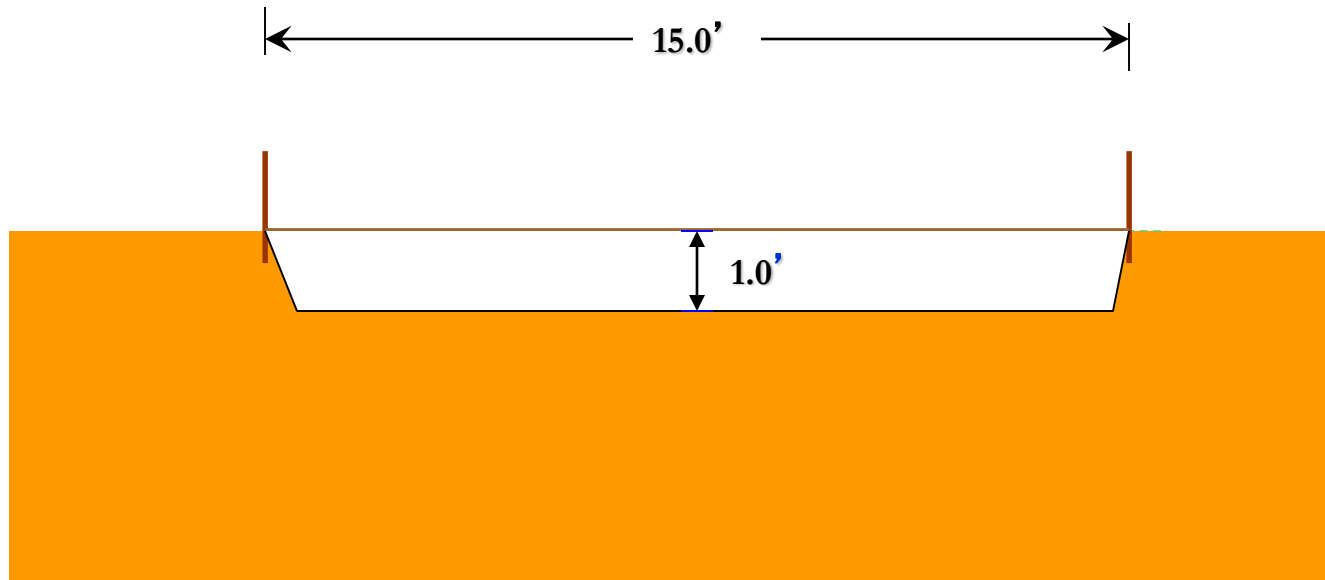


Tips on how to build your rain garden



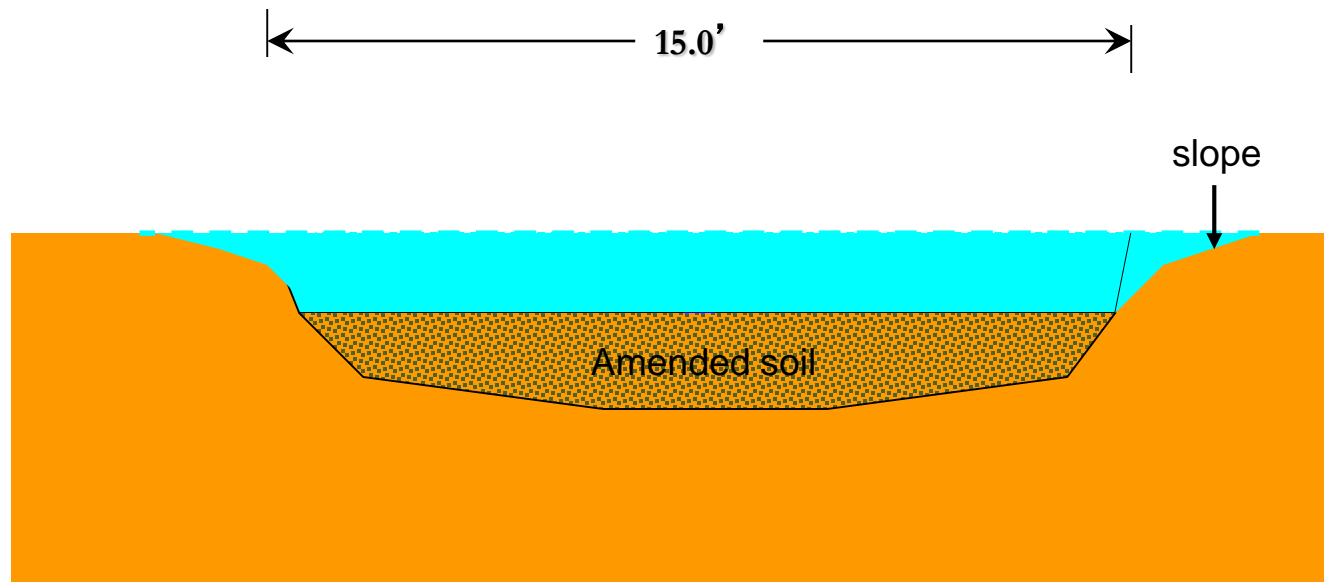
Ground surface is relatively flat.

Tips on how to build your rain garden



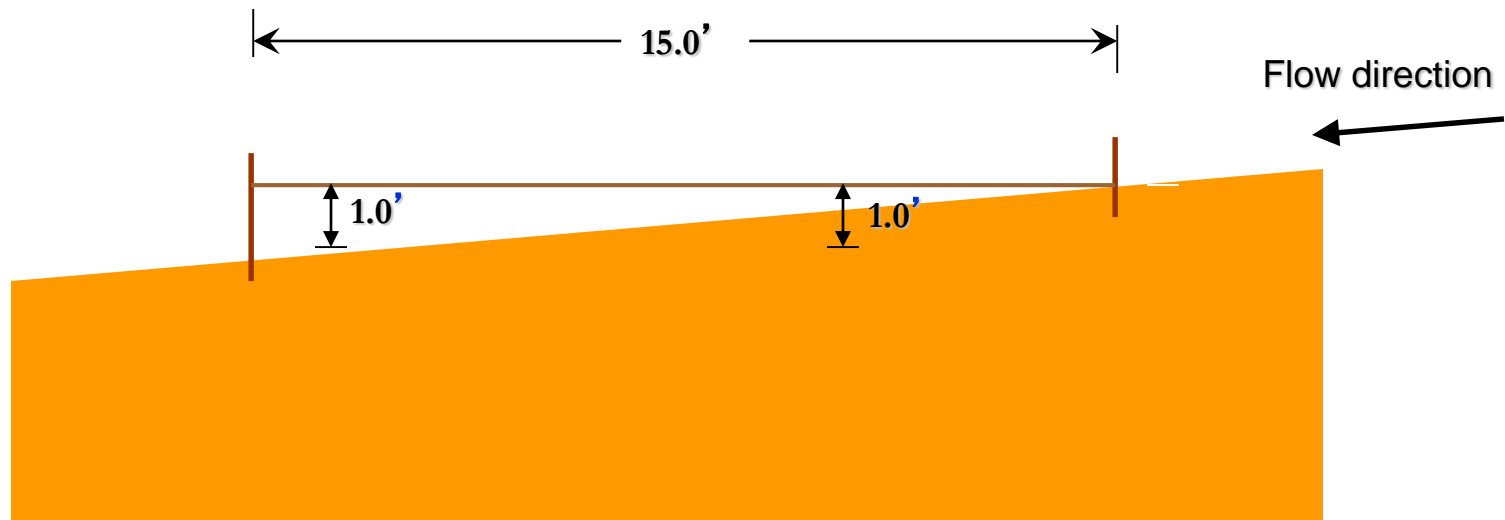
Ground surface is relatively flat.

Tips on how to build your rain garden



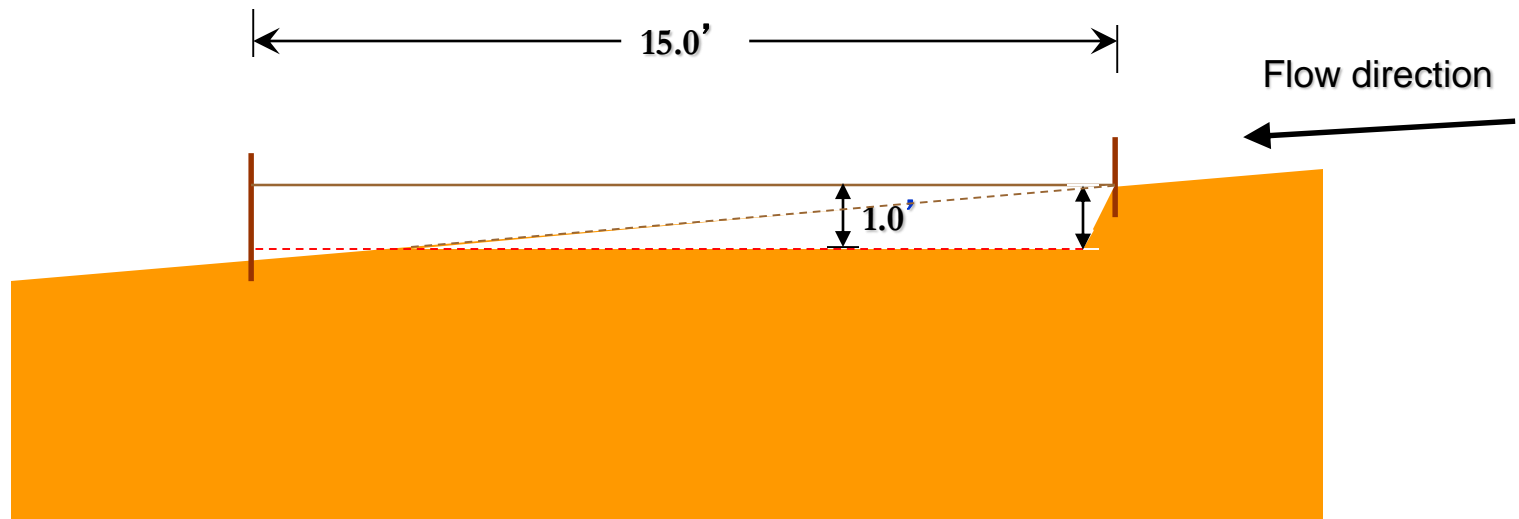
Ground surface is relatively flat.

Tips on how to build your rain garden



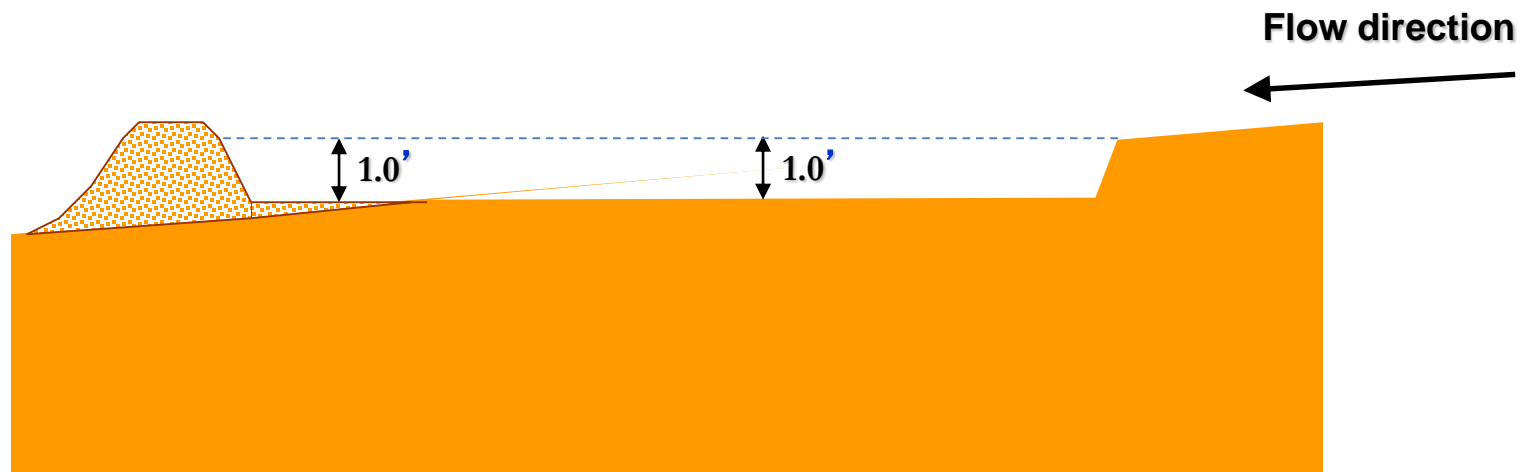
Ground surface is sloped.

Tips on how to build your rain garden



Ground surface is sloped.

Tips on how to build your rain garden



Ground surface is sloped.

Tips on how to build your rain garden



Tips on how to build your rain garden



Tips on how to build your rain garden





Contact information:

Asad Rouhi, PhD
Urban Conservation Engineer
NVSWCD

Asad.rouhi@fairfaxcounty.gov

Phone: 703-324 1460