

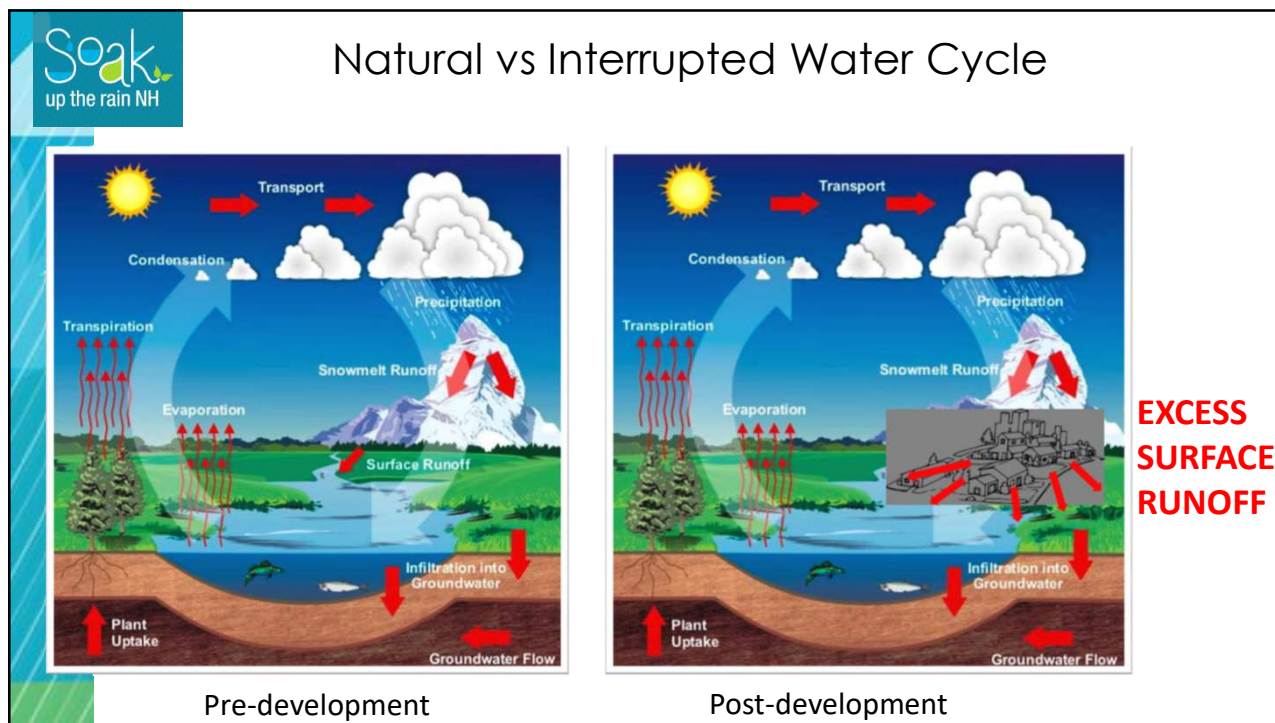


Your land. Your water. Your solution.

Lisa Loosigian
NH Department of Environmental Services

Gregg Lake, Antrim

June 8, 2021



Soak
up the rain NH

stormwater runoff

Water from rain or melting snow that doesn't soak into the ground.

stormwater runoff carries pollutants



Credit: Think Blue A

Soak
up the rain NH





Runoff Carries Pollutants

Directly from lawn/yard to lake

From unconsolidated roads

Over pavement

Through eroded areas





Sources of Residential Runoff



Pollutant Examples

Sediment



Cloudy water and phosphorus

Nutrients



Green lawns = green ponds

Bacteria



ADVISORY
High levels of bacteria may be present in this water body. It may be unsafe to drink, wade, or swim in this water.



Rain Garden

Dripline Trench

Vegetated Swale

Driveway Trench

Infiltration Steps

Rain Barrel


Vegetated Buffer

Porous Pavers

Water Bars

Dry Well

How can you **SOAK UP the RAIN?**
Find Do-It-Yourself Instructions and more at www.soaknh.org



Dripline Infiltration Trench

A stone-filled trench around the perimeter of a building

Before

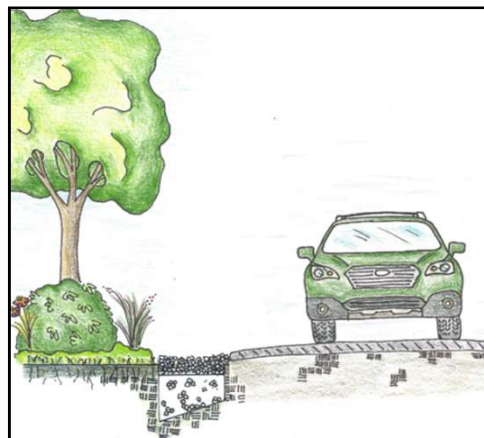
After

Photo Courtesy Nippo Lake Association, Barrington



Driveway Infiltration Trench

A stone-filled trench along the edge of a driveway.

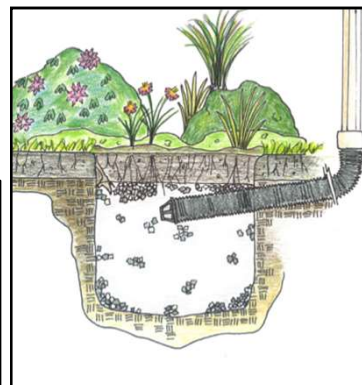


In this case, at Phillips Exeter Academy, water was flowing from road onto this property and eroding the side yard.



Dry Well

Classic hole in the ground filled with stone.

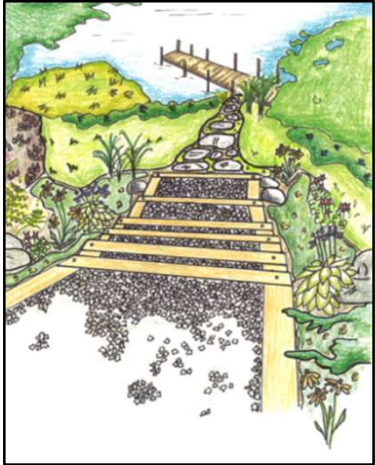


Project Partner: Great Bay Stewards, Greenland



Infiltration Steps

Stabilize sloped paths, reduces erosion.

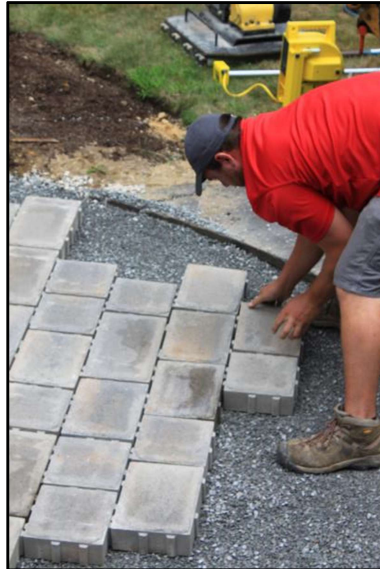


Project partner: Friends of Hothole Pond, Loudon



Porous Pavers

Stone reservoirs under pavers.



AKA geo grids or grass pavers, etc.



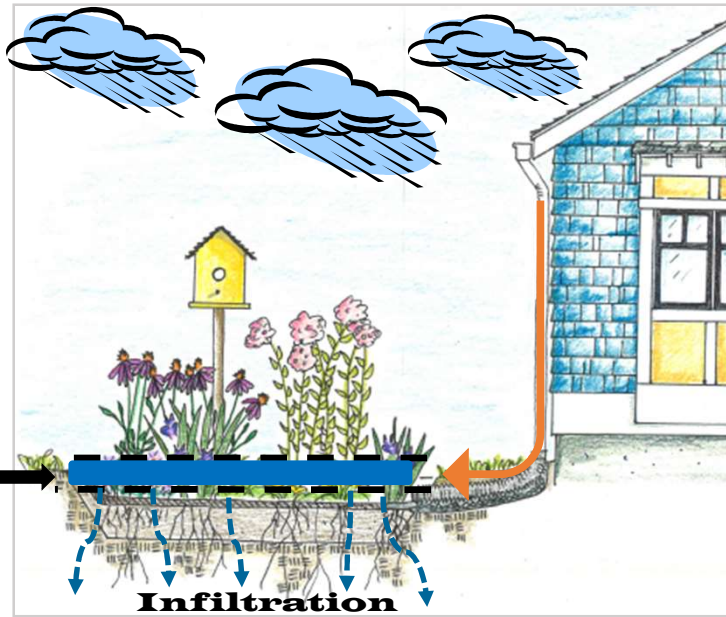
Rain Garden

A sunken, flat-bottomed garden designed to capture rain water



Rain Garden

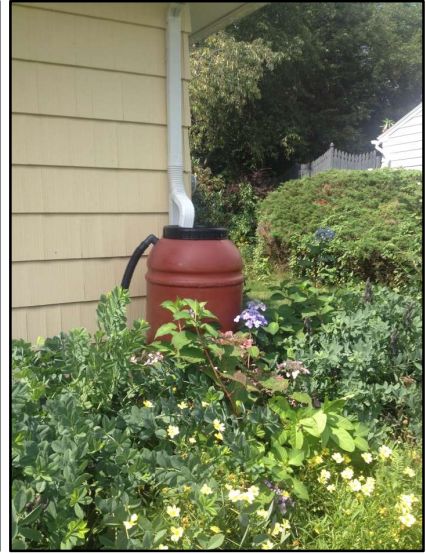
PONDING AREA





Rain Barrel

Captures and stores rainwater from a roof for later use.

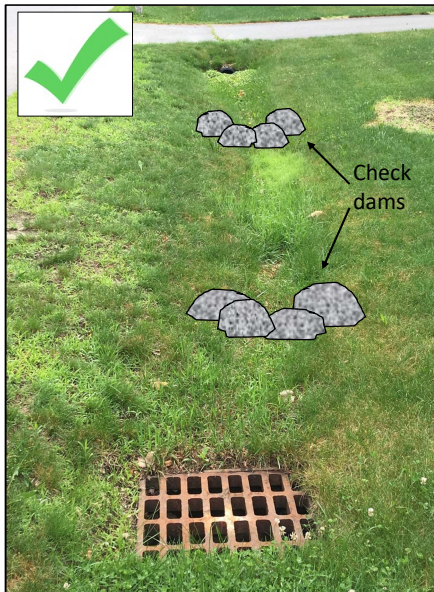
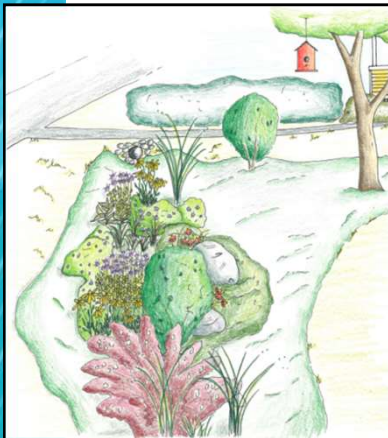


Project partner: Great Bay Stewards, Greenland



Vegetated Swale

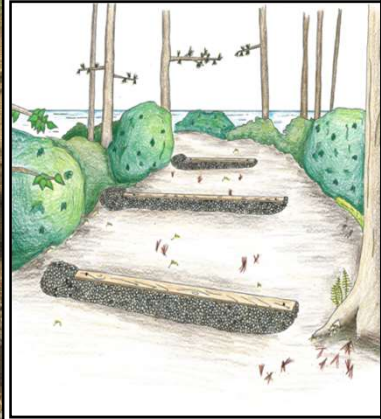
A shallow channel filled with plants to slow flow





Water Bar

Intercepts and diverts water traveling down paths.

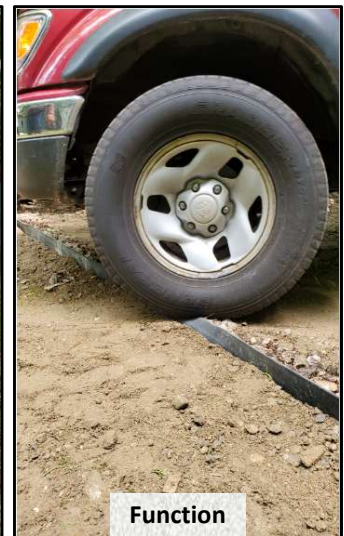


Project partner: Green Mountain Conservation Group, Freedom



Water Bar - Rubber Razor

Conveyor belt material sandwiched between lumber and protruding above grade

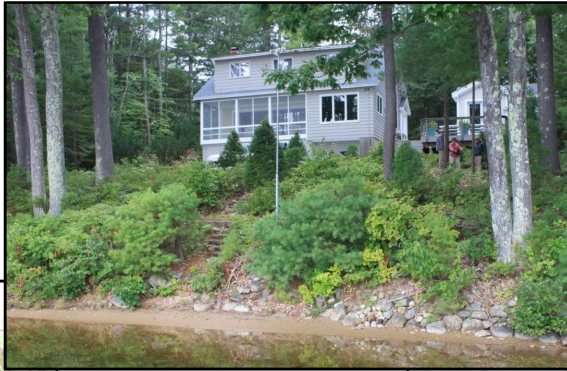


Project partner: Nippo Lake Association, Barrington



Vegetated Buffer

Vegetation between landscaped area and water



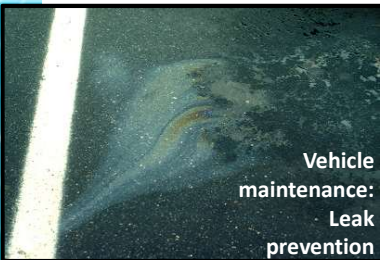
Planted Buffer
Wentworth Lake,
Wolfeboro



Natural Buffer
Pleasant Lake,
Deerfield



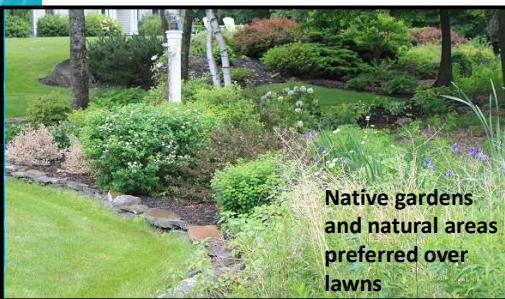
Good Housekeeping Tips



Vehicle maintenance:
Leak prevention



Responsible lawn care




Native gardens and natural areas preferred over lawns



Commercial Car Washes reclaim/treat wash water



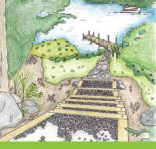
Winter: less salt/more sand??



Step-by-step instructions

INFILTRATION STEPS

Infiltration steps slow down and infiltrate runoff on moderate slopes to reduce erosion and define walking paths. They are well-suited for shorefront properties.



SIZING AND DESIGN

STEP 1. Measure the slope. Measure the overall rise and run of the area in inches (Figure 1).

STEP 2. Determine the number of steps needed. Divide the rise of the slope (measured in Step 1) by the height of the timber (6" unless you are using different sized timbers) and round to the nearest whole number. This is the number of steps you will need.

RISE ÷ TIMBER HEIGHT = NUMBER OF STEPS

STEP 3. Determine step depth (bread). Divide the run of the slope by the number of steps (figured in Step 2). The depth of the step tread is flexible, but should be at least 15" to be comfortable to walk up and down.

RUN ÷ NUMBER OF STEPS = DEPTH OF STEP TREAD

STEP 4. Determine the width of the steps. A comfortable width is usually 4 feet, but depending on the topography, trees, or other site conditions, a wider or narrower step may be desired.

EQUIPMENT & MATERIALS

- Measuring tape
- Shovel
- Sledge hammer
- 4 Wooden stakes
- String or spray paint
- 1/2" crushed stone or pea stone
- Non-woven geotextile fabric
- 6" x 6" pressure treated timbers (or similar sized material such as granite or logs)
- 18" long pieces of 1/2" diameter steel rebar
- Level
- Power drill with 1/8" drill bit
- 12" galvanized spikes

www.soaknh.org





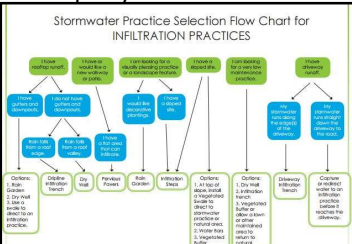






Photo galleries & stories

Property assessment tools



Rain garden planning

Scientific Name	Common Name	Rain Garden Zone	Soil Preference	Light Tolerance	Water Tolerance	Room Period & Color	Height (feet)	Spread (feet)
<i>Eupatorium purpureum</i>	Common Joe-Pye weed	1	Wet	Full Sun	High	2-3'	3-6'	3'
<i>Gentiana clausa</i>	Clasped gentian or Meadow beauty gentian	1	Wet	Full Sun	High	2-3'	1-3'	1-2'
<i>Geranium maculatum</i>	Spotted crane's bill	1	Wet	Full Sun	High	2-3'	1'	1-1.5'
<i>Helenium autumnale</i>	Common Helianthus	1	Wet	Full Sun	High	2-3'	3-5'	3'
<i>He vericolar</i>	Blue Bell or Blue flag	1	Wet	Full Sun	High	2-3'	2-3'	2-3'
<i>Labello cardinalis</i>	Cardinal Flower	1	Wet	Full Sun	High	2-3'	2-4'	2'




Quiz – Is This You?


Quiz – Is This You?

Sand/soil/sediment moving to lake?


Runoff to collection system?



Eroded path to the lake?



No buffer?





If so...sign up for a site visit!

Or check us out at www.soaknh.org



Site Visit Sign-up Sheet

Name	Address	Email and phone number	Runoff or Erosion issue? Yes/No and Notes



Rain Garden. Partner: Great Bay Stewards

QUESTIONS?

www.soaknh.org

Facebook: SoakNH

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Dry Well. Partner: Great Bay Stewards



Infiltration Pad. Partner: Wentworth Watershed Assoc.






Infiltration Trench. Partner: Green Mtn Conservation Group