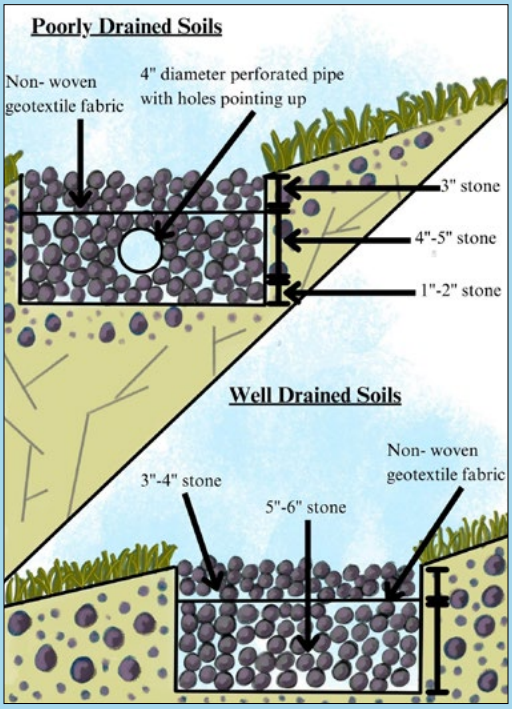
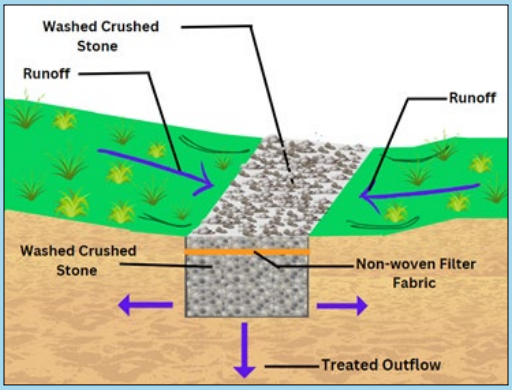
Maine Conservation Fact Sheets for Homeowners Series

Infiltration Trench



For poorly drained soils, install an underdrain to transport excess water to a vegetated area or additional infiltration structure. Well-drained soils do not require an underdrain.



Infiltration trenches can be placed at the bottom of a slope, intermittently placed along the contours of a slope, or strategically located to handle runoff from a path or driveway.

Purpose:

Infiltration trenches are stone-lined shallow ditches that collect and infiltrate runoff from paved driveways, rooftops and other areas. Due to their relatively small size, they can effectively handle only smaller rainfall events. Infiltration trenches are not well suited for areas that receive large amounts of sediment (e.g., gravel driveways) as they will fill in quickly. Infiltration trenches work best in well-drained soils like sands and gravels, but can be used in slower draining soils with the addition of an underdrain.

Materials:

Crushed stone can be purchased at your local gravel pit. Contact your local Soil and Water Conservation District for suppliers of non-woven geotextile fabric.

Installation:

1. Locate the desired area for the trench, which could be along a paved drive or walk way that receives runoff during rain events, or along a contour on a hillside. Make sure the selected area is set back at least 50 feet from septic systems and 100 feet from wells.
2. Dig a Trench that is 18” wide and at least 8” deep and as long as needed to address the problem area (the width and depth can be adjusted based on amount of runoff and size constraints). Make sure to dispose of soil in a flat area where it cannot be washed into the water.
3. Line the sides with a non-woven geotextile fabric to extend the life
4. Fill with ½-1½ inch crushed stone, leaving 3-4 inches of space at the top. If using an underdrain, install a 4 inch diameter perforated PVC pipe with the holes drilled halfway between the top and sides of the pipe. Make sure the pipe is angled slightly towards a stable outlet or vegetated area.
5. Fold over the geotextile fabric, then fill the remaining 3-4 inches of the trench with washed crushed stone.

Maintenance:

Periodically remove accumulated debris and weeds from the surface. Non-woven geotextile fabric will extend the life of these structures, however, they will eventually clog over time and the stone will need to be removed, washed and replaced.

Scan here for more information

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Portland Water District
From Sebago Lake to Casco Bay