



Facts About: Infiltration Systems

Stormwater Best Management Practices (BMPs)

Stormwater infiltration practices capture and temporarily store water quality volume, allowing for infiltration into the soil.

Infiltration Trench

An **infiltration trench** is a shallow linear ditch that is filled with stone to create a narrow underground reservoir. Stormwater runoff from surrounding surfaces like driveways is diverted into the trench and stored in the voids of the stones. The water slowly infiltrates through the bottom of the trench into the subsoil over a few days, and eventually into the groundwater. Pollutants such as sediment, phosphorus, nitrogen, trace metals, coliforms, and organic matter are absorbed as the water filters through the soil.



Infiltration trench, Stormwater LLC

Infiltration Basin

An **infiltration basin** is a vegetated, open impoundment engineered to hold stormwater and let it gradually infiltrate into the soil. Infiltration basins are used primarily for water quality treatment, but also to control, or slow down, the release of stormwater runoff into rivers and streams to prevent flooding and erosion. They are usually located within soils that will provide a reasonable infiltration rate and where the water table is low enough to prevent the pollution of groundwater. Water filters down through the floor of the basin over two days.



Infiltration basin

Design Variants

- Infiltration trench
- Infiltration basin

Pollutant Removal Efficiencies

- Sediments 90%
- Phosphorus 60%
- Nitrogen 50% (as part of a system of environmental site design practices)

More Information

For information on specific design criteria, go to Maryland's Stormwater Design Manual:
mde.maryland.gov/programs/water/StormwaterManagementProgram/Pages/stormwater_design.aspx