

**PC-28 INFILTRATION BASIN**

Reference: Maryland Stormwater Design Manual.

**BMP Objectives**

- Perimeter Control
- Slope Protection
- Borrow and Stockpiles
- Drainage Areas
- Sediment Trapping
- Stream Protection
- Temporary Stabilizing
- Permanent Stabilizing

**Definition and Purpose**

An infiltration basin is used to capture and treat a volume of stormwater runoff. This BMP consists of an excavated basin (sometimes rock-filled) in which runoff is collected and percolated to the surrounding soils. Grass channels, filter strips, or forebays can be used to reduce sediments entering the basin. The basin has a flat floor with an underdrain system and an outfall to drain higher volumes of flow.

**Appropriate Applications**

- Can be used to enhance stormwater quality, reduce peak discharges, and recharge groundwater.
- Should not be used on or adjacent to steep slopes and should not be used within fill soils.
- Can be used to pre-treat portions of the water quality volume if used as an upstream stilling basin.
- Typically used for drainage areas less than 5 acres.
- Should only be used with well-drained soils of Hydrologic Soil Groups A or B.
- Should not be installed in highly permeable sand or gravel seams that are directly connected to aquifers.
- Can be directly connected to parking lot drains, roof downspouts, or other inlet structures.

**Design Parameters**

- The bottom of the basin should be 4 feet higher than the seasonal high water table or bedrock.
- Generally, basins are designed to infiltrate retained runoff within a 48-hour period.

- A dense vegetative cover needs to be established over all contributing pervious areas before runoff can be conveyed to the basin.
- Dewatering methods need to be designed in the event of a failure. For the basin, underdrain pipe systems will accommodate excess flows.
- Observations should be made to determine the time needed for water to infiltrate into the soil after a storm event.
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### **Maintenance and Inspection**

- Conduct inspections as required by the NPDES permit or contract specifications during construction.
- Periodic inspection and maintenance will be required based on post-construction site conditions.
- Make any repairs necessary to ensure the measure is operating properly.
- Periodic observations should also be made to monitor any decrease in performance.
- Regular maintenance is necessary to remove surface sediment, trash, debris, and leaf litter, and dead or diseased plant material.