

## Infiltration Basin

**Description:** A constructed impoundment that captures and infiltrates the design water quality volume over several days. Infiltration basins can be designed off-line to bypass larger flows and only manage the water quality volume.

### **BMP Information**

BMP Type: Runoff Reduction

Targeted Pollutants: Bacteria, sediment, phosphorus, nitrogen, metals

### **WQV / Disconnection Credit**

Runoff Retention Credit: 100%

Treatment Credit: 0%

Disconnection Credit: 100%

### **Design Considerations**

Drainage Area: 10 acres or less recommended

Sizing: Volume equal to water quality volume

Depth:  $\leq 3'$  recommended

Pretreatment: A scour hole or sediment forebay should be provided for concentrated inflow.

Soils: NRCS Hydrologic Soil Groups A and B

Infiltration Rate:  $\geq 0.30$  in/hr recommended

Drain Time: 12 hours min / 48 hours max

Separation: Foundations and roadway subbase shall be  $\geq 2'$  above ponded elevation if adjacent

Overflow: An emergency overflow or a path for overland relief shall be provided to avoid flooding adjacent facilities / roadways

Basin must be designed in accordance with CTDOT Drainage Manual including but not limited to, storm frequency, freeboard, width and depth.



### **Limitations**

No aquifer protection areas

No brownfield areas unless coordinated with Office of Environmental Compliance

Seasonal high water table must be  $\geq 2'$  below bottom

Infiltration facilities should not be located below or immediately adjacent to a roadway base/subbase or foundation

### **Maintenance Requirements**

Bi-annual inspections

Mowing grass areas

Remove trash and debris

Clean sediment forebay

### **Cost Considerations:**

Capital Cost: Moderate

O&M Cost: Moderate to High

### **Notes:**

All infiltration BMP's require a field inspection to verify soil type, infiltration rate and ground water depth  
Do not use infiltration basins as temporary sediment traps during construction

References:

2004 Connecticut Stormwater Quality Manual - <http://www.ct.gov/deep/cwp/view.asp?a=2721&q=325704>

Massachusetts Stormwater Handbook - <https://www.mass.gov/files/documents/2016/08/qj/v2c2.pdf>

New Jersey Stormwater BMP Manual - [http://www.njstormwater.org/bmp\\_manual2.htm](http://www.njstormwater.org/bmp_manual2.htm)

Virginia Stormwater BMP Clearinghouse - <http://www.vwrrc.vt.edu/swc/NonProprietaryBMPs.html>

Washington State DOT Highway Runoff Manual - <https://www.wsdot.wa.gov/publications/manuals/fulltext/M31-16/highwayrunoff.pdf>