

Calculation of Open Infiltration Trench Storage Capacity

Project Name: _____
 Date Submitted: _____
 Property Address: _____
 Development/Property Name: _____
 GMP Number: _____
 Design Firm: _____
 Design Engineer: _____ Telephone: _____ Email: _____
 KY PE No.: _____

MSD Reviewer: _____
 WM No. _____

Step A. Site Planning Recommendation

Define goals and primary function of open infiltration trench based on the Open Infiltration Trench fact sheet in section 18.4.11. Refer to this section as needed throughout the remainder of this calculation sheet.

Step C. Calculate the Water Quality Volume Required (VR) of water to be removed by open infiltration trench:

1. A = Contributing drainage area to open infiltration trench: _____ ft²
2. RE = Required Water Quality Volume Rain Event in inches (minimum 0.6 in): _____ inches
3. I = Impervious cover of the contribution drainage area in percent: _____ %
4. VR = (1/12)(RE)(A)(0.05+(0.009)(I)) = _____ ft³

Step D. Calculate the Water Quality Volume Provided (VP), or storage capacity of open infiltration trench:

1. A = Area of trench: _____ ft²
2. p1 = porosity of base layer (% void): _____ 40 %
3. d1 = depth of base layer : _____ ft
6. VP = (A)(p1)(d1) = _____ ft³

Step E. Prepare exhibits A and B for long-term maintenance and operation agreement.
