

Alternate Worksheet 5.1 - Sizing Infiltration BMPs

Instructions: At a minimum, this worksheet needs to be completed for each Point of Interest/Discharge.

Project Name: _____ Test _____
 Point of Interest/Discharge: _____ 1 _____

Proposed Infiltration BMP(s)	Infiltration Rate			Infiltration Period			Hydraulic Loading							Infiltration Volume cu. ft.	
	Measured Infiltration Rate ¹ in/hr	FOS	Design Infiltration Rate in/hr	Infiltration Period ² hrs	Active Infiltration ³ hrs	Total Infiltration Period hrs	Impervious DA sq. ft.	% area draining to BMP	Imperv Area Loading Ratio	Total Drainage Area sq. ft.	% area draining to BMP ⁴	Total Area Loading Ratio	Target BMP Area ⁵ sq. ft.		Actual BMP Area ⁶ sq. ft.
BMP 6.4.1 Pervious Pavement w. Infiltr. Bed	1.60	2	0.80	24		24	152,460	10	5	435,600	20	8	10,890	10,890	17,424
		2					152,460		5	435,600		8			
		2					152,460		5	435,600		8			
BMP 6.4.2 Infiltration Basin	0.80	2	0.40	24		24	152,460	50	5	435,600	50	8	27,225	27,225	21,780
		2					152,460		5	435,600		8			
		2					152,460		5	435,600		8			
BMP 6.4.3 Subsurface Infiltration Bed		2					152,460		5	435,600		8			
		2					152,460		5	435,600		8			
		2					152,460		5	435,600		8			
BMP 6.4.4 Infiltration Trench	1.00	2	0.50	24		24	152,460	40	5	435,600	30	8	16,335	16,335	16,335
		2					152,460		5	435,600		8			
		2					152,460		5	435,600		8			
BMP 6.4.5 Rain Garden/Bioretention		2					152,460		5	435,600		8			
		2					152,460		5	435,600		8			
		2					152,460		5	435,600		8			
BMP 6.4.6 Dry Well / Seepage Pit		2					152,460		5	435,600		8			
		2					152,460		5	435,600		8			
		2					152,460		5	435,600		8			
BMP 6.4.7 Constructed Filter ⁷		2					152,460		5	435,600		8			
BMP 6.4.8 Vegetated Swale ⁷		2					152,460		5	435,600		8			
BMP 6.4.9 Vegetated Filter Strip ⁷		2					152,460		5	435,600		8			
BMP 6.4.10 Infiltr. Basin & Ret. Grading		2					152,460		5	435,600		8			

TOTAL: 55,539

- 1 Assumes a soil testing procedure which finds hydraulic conductivity.
- 2 Time it takes for BMP to empty once it is full. (Minimum 24 hrs, Maximum 72 hours)
- 3 Infiltration that occurs during the storm (before becoming full). Not to exceed 6 hours.
- 4 A portion of the total area draining to BMP from non-pervious area may be diverted.
- 5 Inherent in these calculations are the allowable loading ratios (5:1 and 8:1) from the BMP Manual.
- 6 Actual BMP Area may be larger than (but not smaller than) the Target BMP Area. Default value will be the Target BMP Area unless modified by the user.
- 7 These BMPs don't fall well into this computational process. For vegetated swales and filter strips, go to WS No. 5.3.