INFILTRATION PRACTICE CRITERIA
(Env-Wq 1508.06)

Type/Node Name: **d pond 7p infilttration basin**

Enter the type of infiltration practice (e.g., basin, trench) and the node name in the drainage analysis, if applicable

		Have you reviewed Env-Wq 1508.06(a) to ensure that infiltration is allowed?	
5.35	ac	A = Area draining to the practice	
0.11	ac	A_I = Impervious area draining to the practice	
0.02	decimal	I = percent impervious area draining to the practice, in decimal form	
0.07	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)	
0.37	ac-in	WQV= 1" x Rv x A	
1,340	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")	
335	cf	25% x WQV (check calc for sediment forebay volume)	
		Method of pretreatment? (not required for clean or roof runoff)	
	cf	V_{SED} = sediment forebay volume, if used for pretreatment	← ≥ 25%WQV
	cf	V = volume[1] (attach a stage-storage table)	← ≥ WQV
	sf	A_{SA} = surface area of the bottom of the pond	
	iph	$Ksat_{DESIGN}$ = design infiltration rate[2]	
-	hours	T_{DRAIN} = drain time = V / (A_{SA} * I_{DESIGN})	← ≤ 72-hrs
295.10	feet	E_{BTM} = elevation of the bottom of the basin	
293.88	feet	E_{SHWT} = elevation of SHWT (if none found, enter the lowest elevation of the test pit)	
294.00	feet	E_{ROCK} = elevation of bedrock (if none found, enter the lowest elevation of the test pit)	
1.23	feet	D_{SHWT} = separation from SHWT	← ≥ *[3]
1.1	feet	D_{ROCK} = separation from bedrock	← ≥ *[3]
na	ft	D_{amend} = Depth of amended soil, if applicable due high infiltation rate	← ≥ 24"
na	ft	D_T = depth of trench, if trench proposed	← 4 - 10 ft
	Yes/No	If a trench or underground system is proposed, observation well provided[4]	
na		If a trench is proposed, material in trench	
pea gravel		If a basin is proposed, basin floor material	
yes	Yes/No	If a basin is proposed, the perimeter should be curvilinear, basin floor shall be flat.	
2.0	:1	If a basin is proposed, pond side slopes	← ≥3:1
297.27	ft	Peak elevation of the 10-year storm event (infiltration can be used in analysis)	
298.47	ft	Peak elevation of the 50-year storm event (infiltration can be used in analysis)	
299.50	ft	Elevation of the top of the practice (if a basin, this is the elevation of the berm)	
YES		10 peak elevation ≤ Elevation of the top of the trench?[5]	← yes
YES		If a basin is proposed, 50-year peak elevation ≤ Elevation of berm?	← yes

1. Volume below the lowest invert of the outlet structure and excludes forebay volume
2. $Ksat_{DESIGN}$ includes a factor of safety. See Env-Wq 1504.14 for requirements for determining the infiltr. rate
3. 1' separation if treatment not required; 4' for treatment in GPAs & WSIPAs; & 3' in all other areas.
4. Clean, washed well graded diameter of 1.5 to 3 inches above the in-situ soil.
5. If 50-year peak elevation exceeds top of trench, the overflow must be routed in HydroCAD as secondary discharge.

Designer's Notes: