

Worksheet B.4-1: Simple Sizing Method for Infiltration BMPs

Simple Sizing Method for Infiltration BMPs		Worksheet B.4-1		
1	DCV (Worksheet B-2.1)	DCV		cubic-feet
2	Estimated design infiltration rate (Worksheet D.5-1)	K_{design}		in/hr
3	Available BMP surface area	A_{BMP}		sq-ft
4	Average effective depth in the BMP footprint ($\text{DCV}/A_{\text{BMP}}$)	D_{avg}		feet
5	Drawdown time, T ($D_{\text{avg}} * 12 / K_{\text{design}}$)	T		hours
6	Provide alternative calculation of drawdown time, if needed.			

Notes:

- Drawdown time must be less than 36 hours. This criterion was set to achieve average annual capture of 80% to account for back to back storms (See rationale in Section B.4.3). In order to use a different drawdown time, BMPs should be sized using the percent capture method (Section B.4.2).
- The average effective depth calculation should account for any aggregate/media in the BMP. For example, 4 feet of stone at a porosity of 0.4 would equate to 1.6 feet of effective depth.
- This method may overestimate drawdown time for BMPs that drain through both the bottom and walls of the system. BMP specific calculations of drawdown time may be provided that account for BMP-specific geometry.