

2022 SINGLE-FAMILY/DUPLEX LOT STORMWATER CALCULATIONS

1. Determine Percentage of Impervious Coverage

Foundation/slabs	A		sq. ft.
Decks/ Patios	B		sq. ft.
Driveways	C		sq. ft.
Sidewalks	D		sq. ft.
Pool (& Deck if not included above)	E		sq. ft.
Other	F		sq. ft.
Total Impervious Coverage (A + B + C + D + E + F)			sq. ft.

2. Determine effective impervious area & swale volume

Unconnected Impervious area *		sq. ft.
Effective Impervious area **		sq. ft.

* **Unconnected impervious area** is an impervious area that has to drain over more than 20 feet of pervious area before entering the drainage system (swale or inlet).

** Sum of directly connected impervious and half the unconnected impervious

Total lot size (disturbed area)		sq. ft.
Ratio of effective impervious area to disturbed area		sq. ft.
Required Retention Depth (ft) Enter the Value from the "Required Retention Depth (feet)" Column from Table 1 below		ft.
Required Swale Volume		ft.

3. Determining Swale length

Swale Width (top of bank; ft)		ft.
Swale width at bottom (ft)		ft.
Swale Depth (ft)		ft.
Swale Cross Sectional Area (square feet)		sq. ft.
Required Swale Length		ft

Table 1 Required Retention Depth for Single Family/Duplex Lots

Effective Impervious Area to Disturbed Area Ratio	Required Retention Depth (feet)	Required Retention Depth (inches)
0.20	0.138	1.66
0.25	0.146	1.75
0.30	0.153	1.84
0.35	0.164	1.97
0.40	0.177	2.12
0.45	0.188	2.26
0.50	0.203	2.44
0.55	0.215	2.58
0.60	0.228	2.74
0.65	0.243	2.92
0.70	0.256	3.07
0.75	0.271	3.25
0.80	0.286	3.43

