

2.2 Site Coverage (Pervious versus Impervious Areas)

Another very important aspect to stormwater management is the site coverage. This will determine how much water you need to capture. The amount of area that does not absorb water (impervious) will significantly contribute to water flowing across your property (sheet flow); therefore, to improve water quality a certain amount of stormwater must be captured and stored on your property. Water quality of streams, lakes, and the bay are greatly impacted by stormwater runoff. Multiple properties in one location without any type of stormwater management will exasperate runoff and compound sheet flow creating localized flooding. Plants and soil naturally filter stormwater, which greatly reduces stormwater runoff and enhances the water quality of surrounding streams, lakes, and bays. The amount of natural undisturbed land (pervious) that is preserved on a property provides a greater opportunity to naturally capture and filter stormwater runoff.

Impervious	Pervious
<ul style="list-style-type: none">• Houses• Driveways• Pools• Patios / Decks	<ul style="list-style-type: none">• Lawn• Vegetated Areas

To determine the amount of area on your property that does not absorb water (impervious) you can use one of four methods.

1. If you have a new design, obtain the total impervious area proposed from the design plans and/or ask your engineer to provide it to you.
2. If you have an existing site and you are making improvements that add additional impervious area, you need to use a recent survey to calculate the existing site coverage and add the area of the new addition and anything that might be missing from the survey.

Low Impact Development Calculation Sheet				
Owner				Line 1
Address				Line 2
Phone				Line 3
E-mail				Line 4
Parcel Identification Number				Line 5
Total Property (acres)	_____	ac		Line 6
Impervious Area Totals (Existing and Proposed)				
			Existing	Proposed
House	_____	ft ²	<input type="checkbox"/>	<input type="checkbox"/>
Detached Garage	_____	ft ²	<input type="checkbox"/>	<input type="checkbox"/>
Shed	_____	ft ²	<input type="checkbox"/>	<input type="checkbox"/>
Driveway	_____	ft ²	<input type="checkbox"/>	<input type="checkbox"/>
Patio	_____	ft ²	<input type="checkbox"/>	<input type="checkbox"/>
Pool	_____	ft ²	<input type="checkbox"/>	<input type="checkbox"/>
Misc Description:	_____	ft ²	<input type="checkbox"/>	<input type="checkbox"/>
Area Totals				
Total Impervious Area	_____	ft ²	Divide this number by 43,560 and enter in line 14	
Total Impervious Area (acres)	_____	ac	Line 15	
Total Impervious Area (acres)	= Total Area (ft ²) * (1 acre/ 43,560 ft ²)			
Total Pervious Area	_____	ac	Subtract Line 6 from Line 14 and Enter in Line 15	
Total Pervious Area (ft ⁴)	_____	ft ⁴	Line 17	
Total Pervious Area (acres) = Total Area (acres) - Total Impervious Area (acres)				
Next Determine the Volume Required Per the LDC Section 5.06.00				
Total Property (square feet)	_____	ft ²	Line 18	
Stormwater Volume Requirements				
_____	0.5 in	Rainfall Over Disturbed Area	_____	ft ³
				Line 19
_____	1 in	Runoff Over Proposed Impervious Surface	_____	ft ³
				Line 20
Attenuation Volume	_____	ft ³	Find Largest Value Between Line 19, 19, and 20 And Enter The Value On Line 21	
Required Retention Volume	_____	ft ³	Line 21	

Low Impact Development Worksheet Continued

Depth to Seasonal High Groundwater Table ft below ground surface Line 22

Predominant Soil Type

Predominant Soil Type		Value Taken From USGS Soils Survey	Line 23
Infiltration	Actual K_{sat}	<u> </u> in/hr	Provided in Table 3 Line 24
Design Infiltration	Design K_{sat}	<u> </u> in/hr	Divide Line X by 2 Line 25