



Residential Stormwater Retention Calculation Sheet

Required Swale Volume:

- For a home with **no adjacent water bodies**, use:
(Based on 1 inches of runoff for total lot area or project area)

$$\frac{\text{Total Lot Area}}{\text{Total Lot Area}} \text{ ft}^2 \times \frac{0.08}{0.08} = \frac{\text{Swale Volume}}{\text{Swale Volume}} \text{ ft}^3$$

- For a home **discharging into Sensitive Receiving Water Bodies** i.e. Outstanding Florida Waters, bays, estuaries, nearshore waters, or canals use the following:
(Based on 1.5 inches of runoff for total lot area or project area)

$$\frac{\text{Total Lot Area}}{\text{Total Lot Area}} \text{ ft}^2 \times \frac{0.12}{0.12} = \frac{\text{Swale Volume}}{\text{Swale Volume}} \text{ ft}^3$$

Required Swale Volume for New Impervious Area Only (Existing Developments):

$$\frac{\text{New Impervious Area}}{\text{New Impervious Area}} \text{ ft}^2 \times \frac{0.08}{0.08} = \frac{\text{Swale Volume}}{\text{Swale Volume}} \text{ ft}^3$$

Determine Swale Length:

$$\frac{\text{Swale Volume}}{\text{Swale Volume}} \text{ ft}^3 / \frac{\text{Cross Sectional Area}}{\text{Cross Sectional Area}} = \frac{\text{Swale Length}}{\text{Swale Length}} \text{ Linear feet}$$

Notes

- All runoff shall be directed to proposed swale by gutters, detailed lot grading, or other approved methods.
- Minimum swale depth shall be 12 inches, with minimum side slope of 4:1.
- All swales shall be stabilized by gravel or grass.
- All disturbed areas on the property shall be stabilized.
- Project area is the total lot area less any wetland or conservation areas.