

Appendix 6E-5 Rational Method Runoff Coefficients with 100 yr. C_f factor Applied

C _f Values for 100 Year Storm Frequency (C _f =1.25)					
Land Use		Average Watershed Slope			Average % Impervious
		Flat <2%	Rolling 2% - 6%	Steep >6%	
Business, Commercial & Industrial		1.00			90%
Apartments and Townhomes		0.81	0.88	0.94	75%
Schools		0.63	0.69	0.75	50%
Residential	lots 10,000 sq. ft	0.50	0.56	0.63	35%
	lots 12,000 sq. ft.	0.50	0.53	0.56	30%
	lots 17,000 sq. ft.	0.44	0.50	0.56	25%
	lots ½ acre or more	0.38	0.44	0.50	20%
Parks, Cemeteries and Unimproved Areas		0.25	0.34	0.44	15%
Paved and Roof Areas		1.00			100%
Cultivated Areas		0.63	0.75	0.88	Varies
Pasture		0.44	0.50	0.56	Varies
Lawns		0.31	0.38	0.44	Varies
Forest		0.25	0.31	0.38	Varies
Railroad Yard Areas		0.25	0.38	0.50	
Roadway Slopes (2:1) w/ Little or No Vegetated Cover		0.88			
Roadway Shoulder & Ditch Areas w/ Little or No Vegetated Cover		0.63			
Roadway Slopes (2:1) w/ Established Vegetated Cover		0.50			
Roadway Shoulder & Ditch Areas w/ Established Vegetated Cover		0.44			

Rational Formula (Revised) – $Q = C_{cf} A i^{\ddagger}$

[‡] Source: VDOT