Rational Method Peak Flow
Form SW-003

Project Information

Project Location: _____

Parcel Identification Number(s): _____

Drainage area: _____ ac

Average Slope: _____ %

Maximum Slope Length: _____ ft

Calculations

*The Rational Method may only be used where development will impact less than 10 acres

Time of Concentration (Tc) (Use additional sheets if necessary)			
	Pre-	**Post-**	
Sheet Flow			
Manning's roughness, n (Table 2-4)			
2-year, 24-hour Rainfall, P	4.0	6.0	in
Slope, S			ft/ft
Length of Sheet Flow, L (<=300 feet)			ft
Total Time for Sheet Flow			**min**
Shallow Concentrated Flow			
Surface Paved (P) or Unpaved (U)			
Length of flow, L			ft
Slope, S			ft/ft
Average Velocity, V (Table 2-3)			ft/min
Total Time for Shallow Concentrated Flow			**min**
Channel Flow			
Pipe (P) or Channel (C)			
If pipe: Diameter, D			in
If channel: Bottom Width, w			ft
If channel: side slope 1 (___:1)			
If channel: side slope 2 (___:1)			
Cross sectional flow area, A			sq ft
Wetted perimeter, Wp			ft
Hydraulic radius, R = A/Wp			ft

Time of Concentration (Tc) (Use additional sheets if necessary)			
	Pre-	**Post-**	
Channel slope, S			ft/ft
Manning's roughness, n (Table 2-4)			
Channel velocity			ft/sec
Length of Flow, L			ft/sec
Total Time for Channel Flow			**min**
Total Time of Concentration, Tc			**min**

Pre-development Conditions			
Land Use Description	C	Area (acres)	C*A
Woods	0.2		
Total			

Intensity for 2-year, 24-hour storm (Table 2-5) _____ in/hr

Pre-development peak flow, Q = CiA _____ cfs

Post-development Conditions			
Land Use Description	C	Area (acres)	C*A
Totals			

Area-weighted C: _____

Intensity for 10-year, 24-hour storm (Table 2-5) _____ in/hr

Post-development peak flow, Q = CiA _____ cfs

Minimum Storage Volume Required – Refer to *Section 2.4.4* for Volume Calculations

Storage Volume, V_s _____ ft^3

_____ _____

Applicant Date