

Table B-1. Rational Method Example

Analysis Point	Subshed Data				Cumulative Watershed Values				Overland Flow Data				Gutter/Channel Data						Pipe Data						Subshed Rational Method				Cumulative Watershed Rational Method						
	Subshed Name	Land Use	Area acres	Runoff Coef C	C*A	C*A	Area acres	Runoff Coef C	Length ft	Slope %	Overland Flow Path C Value	to min	Length ft	Slope ft/ft	Manning "n"	Hydraulic Radius ft	Flow Velocity ft/sec	tg min	Length ft	Diameter ft	Slope ft/ft	Manning "n"	Hydraulic Radius ft	Velocity ft/sec	tp min	tc min	Rainfall Depth in	Rainfall Intensity in/hr	Flow cfs	tc min	Rainfall Depth in	Rainfall Intensity in/hr	Flow cfs		
1																																			
2	1	A	Agricultural	11.5	0.20	2.30	2.30	11.5	0.20	800	5	0.20	32.1	230	0.010	0.030	1.05	5.1	0.7	150	1.5	0.020	0.024	0.375	4.6	0.5	33.4	1.06	1.90	4.4	33.4	1.06	1.90	4.4	
3																																			
4	2		Conveyance from 1 to 2																	690	2	0.005	0.015	0.500	4.4	2.6						36.0			
5																																			
6		B	Park	6.8	0.18	1.22				510	7	0.18	24.1	100	0.020	0.030	1.05	7.3	0.2							24.3									
7			Residential (4-6 units/ac)	4.7	0.45	2.12				350	5	0.45	15.5	600	0.070	0.015	0.26	10.7	0.9							16.4									
8			Neighborhood Commercial	2.9	0.60	1.74				350	2	0.60	15.1	290	0.050	0.015	0.26	9.0	0.5							15.7									
9			Total	14.4		5.08	7.38	25.9	0.28																	24.3	0.93	2.28	11.6	36.0	1.10	1.83	13.5		
10																																			
11	3	C	Residential (4-6 units/ac)	12.0	0.45	5.40				640	2	0.45	26.3	700	0.010	0.015	0.26	4.0	2.9							29.2									
12			Neighborhood Commercial	5.2	0.60	3.12				250	2	0.60	12.8	700	0.010	0.015	0.26	4.0	2.9							15.7									
13			Total	17.2		8.52	8.52	17.2	0.50																	29.2	1.00	2.06	17.5	29.2	1.00	2.06	17.5		
14																																			
15	4		Conveyance from 2 to 4																	750	2	0.010	0.015	0.500	6.3	2.0						38.0			
16			Conveyance from 3 to 4																	630	1.5	0.005	0.015	0.375	3.7	2.9					32.1				
17																																			
18																																			
19		D	Residential (4-6 units/ac)	6.1	0.45	2.75				580	2	0.45	25.1	290	0.005	0.015	0.26	2.9	1.7							26.8									
20			Neighborhood Commercial	3.2	0.60	1.92				300	2	0.50	16.7	290	0.005	0.015	0.26	2.9	1.7							18.4									
21			Total	9.3		4.67	20.56	52.4	0.39																	26.8	0.96	2.16	10.1	38.0	1.12	1.77	36.4		
22																																			
23	5	E	Apartments	6.5	0.50	3.25				620	1	0.50	28.5	390	0.005	0.015	0.26	2.9	2.3							30.8									
24			Residential (6-8 units/ac)	5.3	0.50	2.65				310	1	0.50	20.2	530	0.005	0.015	0.26	2.9	3.1							23.3									
25			Total	11.8		5.90	5.90	11.8	0.50																	30.8	1.02	2.00	11.8	30.8	1.02	2.00	11.8		
26																																			
27	6		Conveyance from 4 to 6																	630	3	0.010	0.015	0.750	8.2	1.3						39.3			
28			Conveyance from 5 to 6																	690	2	0.005	0.015	0.500	4.4	2.6					33.4				
29																																			
30		F	Residential (6-8 units/ac)	12.5	0.55	6.88	33.34	76.7	0.43	590	1	0.50	27.8	50	0.005	0.015	0.26	2.9	0.3							28.1	0.99	2.10	14.5	39.3	1.14	1.74	57.9		
31			Total																																
32																																			

Table B-2. Summary of Peak Flow Results

Location	Peak Flow, cfs
From Subshed A	4.4
At Analysis Point 1	4.4
From Subshed B	11.6
At Analysis Point 2	13.5
From Subshed C	17.5
At Analysis Point 3	17.5
From Subshed D	10.1
At Analysis Point 4	36.4
From Subshed E	11.8
At Analysis Point 5	11.8
From Subshed F	14.5
At Analysis Point 6	57.9