

2184 HydroCAD BASE

Type II 24-hr 25-Year Rainfall=5.40"

Prepared by HP

Printed 4/28/2016

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Summary for Pond DB #1: Det. Basin #1

Inflow Area = 32.680 ac, 35.79% Impervious, Inflow Depth > 3.21" for 25-Year event
 Inflow = 82.40 cfs @ 12.32 hrs, Volume= 8.738 af
 Outflow = 4.98 cfs @ 15.34 hrs, Volume= 3.027 af, Atten= 94%, Lag= 181.3 min
 Primary = 4.98 cfs @ 15.34 hrs, Volume= 3.027 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 393.84' @ 15.34 hrs Surf.Area= 210,158 sf Storage= 273,835 cf

Plug-Flow detention time= 268.6 min calculated for 3.027 af (35% of inflow)
 Center-of-Mass det. time= 176.7 min (972.2 - 795.5)

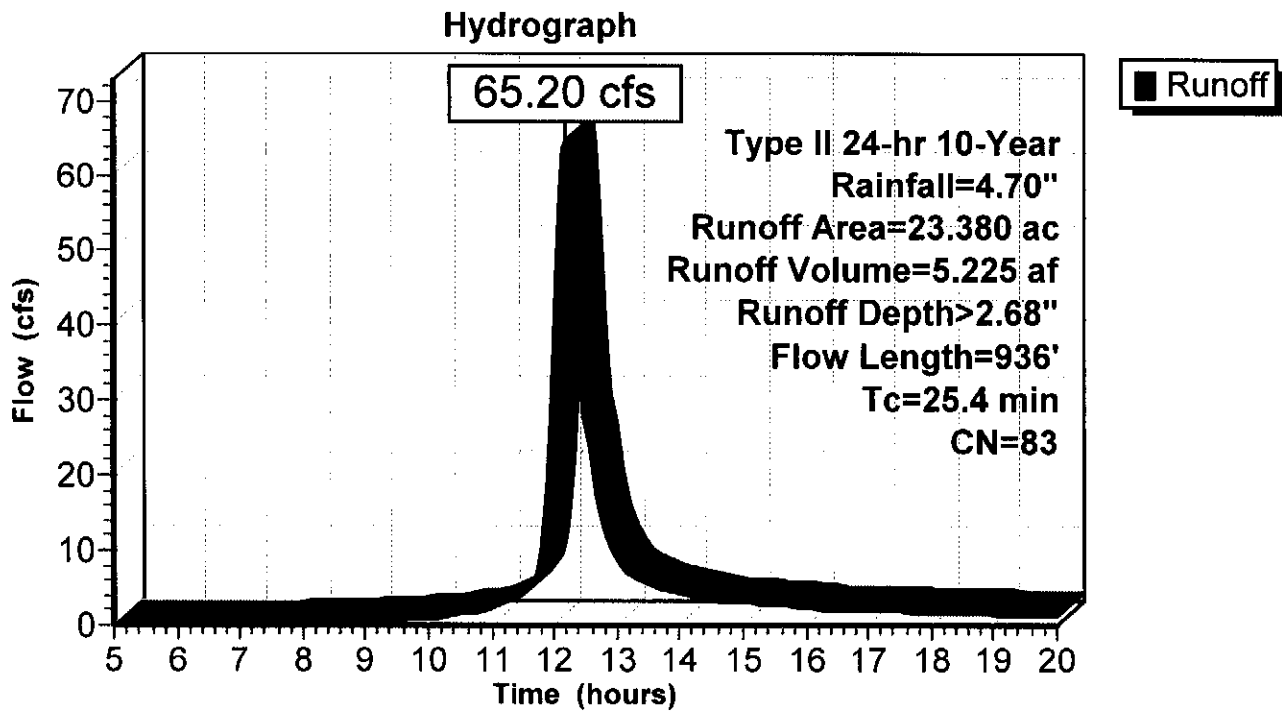
Volume	Invert	Avail.Storage	Storage Description
#1	392.50'	415,051 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
392.50	199,698	0	0
393.00	203,588	100,822	100,822
394.00	211,444	207,516	308,338
394.50	215,409	106,713	415,051

Device	Routing	Invert	Outlet Devices
#1	Primary	392.50'	15.0" Round Culvert L= 78.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 392.50' / 390.00' S= 0.0321 '/' Cc= 0.900 n= 0.012

Primary OutFlow Max=4.98 cfs @ 15.34 hrs HW=393.84' (Free Discharge)
 ←1=Culvert (Inlet Controls 4.98 cfs @ 4.06 fps)

Subcatchment UN-1: UN-1



Hydrograph for Subcatchment UN-1: UN-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.30	0.00	0.00	7.60	0.52	0.01	0.16
5.05	0.30	0.00	0.00	7.65	0.53	0.01	0.17
5.10	0.30	0.00	0.00	7.70	0.53	0.01	0.18
5.15	0.31	0.00	0.00	7.75	0.54	0.01	0.19
5.20	0.31	0.00	0.00	7.80	0.54	0.01	0.20
5.25	0.32	0.00	0.00	7.85	0.55	0.01	0.21
5.30	0.32	0.00	0.00	7.90	0.55	0.01	0.22
5.35	0.32	0.00	0.00	7.95	0.56	0.01	0.23
5.40	0.33	0.00	0.00	8.00	0.56	0.01	0.24
5.45	0.33	0.00	0.00	8.05	0.57	0.01	0.25
5.50	0.33	0.00	0.00	8.10	0.57	0.01	0.26
5.55	0.34	0.00	0.00	8.15	0.58	0.01	0.28
5.60	0.34	0.00	0.00	8.20	0.59	0.01	0.29
5.65	0.35	0.00	0.00	8.25	0.59	0.01	0.30
5.70	0.35	0.00	0.00	8.30	0.60	0.02	0.31
5.75	0.36	0.00	0.00	8.35	0.60	0.02	0.33
5.80	0.36	0.00	0.00	8.40	0.61	0.02	0.34
5.85	0.36	0.00	0.00	8.45	0.62	0.02	0.36
5.90	0.37	0.00	0.00	8.50	0.62	0.02	0.38
5.95	0.37	0.00	0.00	8.55	0.63	0.02	0.39
6.00	0.38	0.00	0.00	8.60	0.63	0.02	0.41
6.05	0.38	0.00	0.00	8.65	0.64	0.02	0.43
6.10	0.38	0.00	0.00	8.70	0.65	0.02	0.45
6.15	0.39	0.00	0.00	8.75	0.65	0.03	0.48
6.20	0.39	0.00	0.00	8.80	0.66	0.03	0.50
6.25	0.40	0.00	0.00	8.85	0.67	0.03	0.52
6.30	0.40	0.00	0.00	8.90	0.68	0.03	0.54
6.35	0.41	0.00	0.00	8.95	0.68	0.03	0.57
6.40	0.41	0.00	0.00	9.00	0.69	0.03	0.59
6.45	0.42	0.00	0.00	9.05	0.70	0.04	0.62
6.50	0.42	0.00	0.00	9.10	0.71	0.04	0.64
6.55	0.42	0.00	0.00	9.15	0.71	0.04	0.67
6.60	0.43	0.00	0.00	9.20	0.72	0.04	0.70
6.65	0.43	0.00	0.00	9.25	0.73	0.04	0.72
6.70	0.44	0.00	0.01	9.30	0.74	0.04	0.75
6.75	0.44	0.00	0.01	9.35	0.74	0.05	0.77
6.80	0.45	0.00	0.01	9.40	0.75	0.05	0.79
6.85	0.45	0.00	0.02	9.45	0.76	0.05	0.81
6.90	0.46	0.00	0.03	9.50	0.77	0.05	0.83
6.95	0.46	0.00	0.04	9.55	0.77	0.05	0.85
7.00	0.47	0.00	0.04	9.60	0.78	0.06	0.87
7.05	0.47	0.00	0.05	9.65	0.79	0.06	0.89
7.10	0.47	0.00	0.06	9.70	0.80	0.06	0.91
7.15	0.48	0.00	0.07	9.75	0.81	0.06	0.93
7.20	0.48	0.00	0.08	9.80	0.81	0.07	0.96
7.25	0.49	0.00	0.09	9.85	0.82	0.07	0.98
7.30	0.49	0.00	0.10	9.90	0.83	0.07	1.01
7.35	0.50	0.00	0.11	9.95	0.84	0.08	1.05
7.40	0.50	0.00	0.12	10.00	0.85	0.08	1.09
7.45	0.51	0.00	0.13	10.05	0.86	0.08	1.12
7.50	0.51	0.01	0.14	10.10	0.87	0.08	1.17
7.55	0.52	0.01	0.15	10.15	0.88	0.09	1.21

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Type II 24-hr 10-Year Rainfall=4.70"

Printed 4/28/2016

Hydrograph for Subcatchment UN-1: UN-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
10.20	0.89	0.09	1.26	12.80	3.57	1.91	12.53
10.25	0.90	0.10	1.31	12.85	3.58	1.93	11.31
10.30	0.91	0.10	1.36	12.90	3.60	1.94	10.33
10.35	0.92	0.10	1.41	12.95	3.61	1.95	9.52
10.40	0.93	0.11	1.47	13.00	3.63	1.97	8.86
10.45	0.95	0.11	1.53	13.05	3.64	1.98	8.30
10.50	0.96	0.12	1.60	13.10	3.66	1.99	7.82
10.55	0.97	0.12	1.67	13.15	3.67	2.00	7.40
10.60	0.98	0.13	1.74	13.20	3.68	2.01	7.03
10.65	1.00	0.13	1.81	13.25	3.70	2.02	6.69
10.70	1.01	0.14	1.89	13.30	3.71	2.04	6.39
10.75	1.03	0.14	1.97	13.35	3.72	2.05	6.13
10.80	1.04	0.15	2.06	13.40	3.73	2.06	5.92
10.85	1.06	0.15	2.16	13.45	3.74	2.07	5.74
10.90	1.07	0.16	2.26	13.50	3.76	2.08	5.57
10.95	1.09	0.17	2.37	13.55	3.77	2.08	5.41
11.00	1.10	0.18	2.49	13.60	3.78	2.09	5.26
11.05	1.12	0.18	2.61	13.65	3.79	2.10	5.12
11.10	1.14	0.19	2.73	13.70	3.80	2.11	4.98
11.15	1.16	0.20	2.87	13.75	3.81	2.12	4.85
11.20	1.18	0.21	3.02	13.80	3.82	2.13	4.73
11.25	1.20	0.22	3.18	13.85	3.83	2.14	4.61
11.30	1.23	0.23	3.36	13.90	3.84	2.14	4.50
11.35	1.25	0.24	3.57	13.95	3.85	2.15	4.39
11.40	1.28	0.26	3.81	14.00	3.85	2.16	4.29
11.45	1.30	0.27	4.06	14.05	3.86	2.17	4.19
11.50	1.33	0.29	4.34	14.10	3.87	2.17	4.09
11.55	1.37	0.31	4.64	14.15	3.88	2.18	3.99
11.60	1.44	0.35	4.99	14.20	3.89	2.19	3.90
11.65	1.54	0.40	5.51	14.25	3.90	2.20	3.82
11.70	1.67	0.48	6.40	14.30	3.90	2.20	3.74
11.75	1.82	0.57	7.95	14.35	3.91	2.21	3.67
11.80	2.02	0.71	10.46	14.40	3.92	2.22	3.61
11.85	2.31	0.91	14.17	14.45	3.93	2.22	3.56
11.90	2.67	1.19	19.45	14.50	3.94	2.23	3.51
11.95	2.98	1.43	26.84	14.55	3.94	2.24	3.46
12.00	3.12	1.54	36.50	14.60	3.95	2.24	3.42
12.05	3.16	1.58	47.48	14.65	3.96	2.25	3.39
12.10	3.21	1.61	57.55	14.70	3.97	2.26	3.35
12.15	3.25	1.65	63.94	14.75	3.98	2.26	3.31
12.20	3.28	1.68	65.03	14.80	3.98	2.27	3.28
12.25	3.32	1.71	61.45	14.85	3.99	2.28	3.24
12.30	3.35	1.73	54.87	14.90	4.00	2.28	3.21
12.35	3.38	1.76	46.93	14.95	4.00	2.29	3.18
12.40	3.41	1.78	39.18	15.00	4.01	2.30	3.14
12.45	3.43	1.80	32.72	15.05	4.02	2.30	3.11
12.50	3.45	1.82	27.76	15.10	4.03	2.31	3.08
12.55	3.47	1.84	23.85	15.15	4.03	2.31	3.05
12.60	3.49	1.85	20.67	15.20	4.04	2.32	3.01
12.65	3.51	1.87	18.03	15.25	4.05	2.33	2.98
12.70	3.53	1.88	15.84	15.30	4.05	2.33	2.95
12.75	3.55	1.90	14.02	15.35	4.06	2.34	2.91

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Type II 24-hr 10-Year Rainfall=4.70"

Prepared by HP

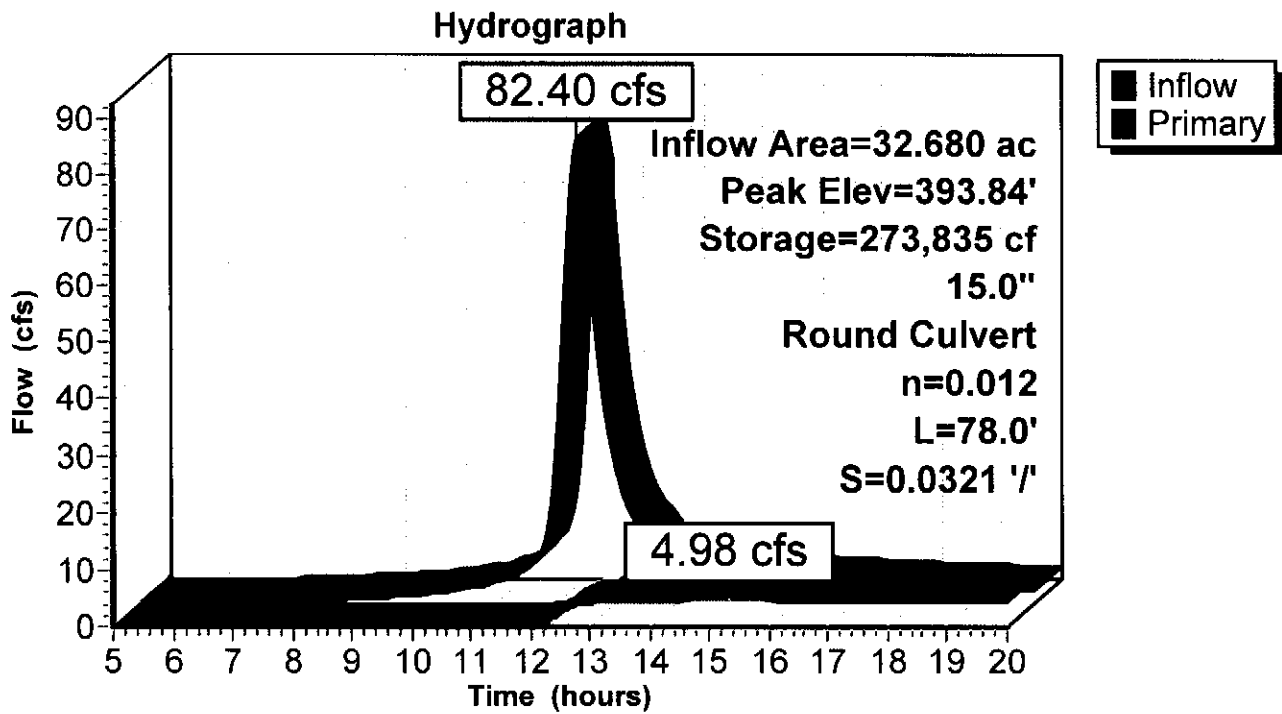
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Hydrograph for Subcatchment UN-1: UN-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
15.40	4.07	2.34	2.88	18.00	4.33	2.57	1.85
15.45	4.07	2.35	2.85	18.05	4.33	2.58	1.84
15.50	4.08	2.35	2.82	18.10	4.34	2.58	1.83
15.55	4.08	2.36	2.78	18.15	4.34	2.58	1.82
15.60	4.09	2.36	2.75	18.20	4.35	2.59	1.81
15.65	4.10	2.37	2.72	18.25	4.35	2.59	1.79
15.70	4.10	2.38	2.69	18.30	4.35	2.60	1.78
15.75	4.11	2.38	2.65	18.35	4.36	2.60	1.77
15.80	4.11	2.39	2.62	18.40	4.36	2.60	1.76
15.85	4.12	2.39	2.59	18.45	4.37	2.61	1.75
15.90	4.13	2.40	2.55	18.50	4.37	2.61	1.73
15.95	4.13	2.40	2.52	18.55	4.37	2.61	1.72
16.00	4.14	2.40	2.49	18.60	4.38	2.62	1.71
16.05	4.14	2.41	2.46	18.65	4.38	2.62	1.70
16.10	4.15	2.41	2.42	18.70	4.39	2.62	1.69
16.15	4.15	2.42	2.39	18.75	4.39	2.63	1.67
16.20	4.16	2.42	2.36	18.80	4.39	2.63	1.66
16.25	4.16	2.43	2.33	18.85	4.40	2.63	1.65
16.30	4.17	2.43	2.30	18.90	4.40	2.64	1.64
16.35	4.17	2.44	2.28	18.95	4.40	2.64	1.63
16.40	4.18	2.44	2.26	19.00	4.41	2.64	1.61
16.45	4.18	2.45	2.24	19.05	4.41	2.65	1.60
16.50	4.19	2.45	2.22	19.10	4.41	2.65	1.59
16.55	4.19	2.46	2.20	19.15	4.42	2.65	1.58
16.60	4.20	2.46	2.19	19.20	4.42	2.66	1.57
16.65	4.20	2.46	2.17	19.25	4.43	2.66	1.55
16.70	4.21	2.47	2.16	19.30	4.43	2.66	1.54
16.75	4.21	2.47	2.15	19.35	4.43	2.67	1.53
16.80	4.22	2.48	2.14	19.40	4.44	2.67	1.52
16.85	4.22	2.48	2.12	19.45	4.44	2.67	1.51
16.90	4.23	2.49	2.11	19.50	4.44	2.67	1.49
16.95	4.23	2.49	2.10	19.55	4.45	2.68	1.48
17.00	4.24	2.49	2.09	19.60	4.45	2.68	1.47
17.05	4.24	2.50	2.08	19.65	4.45	2.68	1.46
17.10	4.25	2.50	2.06	19.70	4.46	2.69	1.45
17.15	4.25	2.51	2.05	19.75	4.46	2.69	1.43
17.20	4.26	2.51	2.04	19.80	4.46	2.69	1.42
17.25	4.26	2.52	2.03	19.85	4.47	2.69	1.41
17.30	4.27	2.52	2.02	19.90	4.47	2.70	1.40
17.35	4.27	2.52	2.01	19.95	4.47	2.70	1.39
17.40	4.28	2.53	1.99	20.00	4.47	2.70	1.37
17.45	4.28	2.53	1.98				
17.50	4.28	2.54	1.97				
17.55	4.29	2.54	1.96				
17.60	4.29	2.54	1.95				
17.65	4.30	2.55	1.94				
17.70	4.30	2.55	1.92				
17.75	4.31	2.55	1.91				
17.80	4.31	2.56	1.90				
17.85	4.32	2.56	1.89				
17.90	4.32	2.57	1.88				
17.95	4.32	2.57	1.86				

Pond DB #1: Det. Basin #1



Hydrograph for Pond DB #1: Det. Basin #1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
5.00	0.00	0	392.50	0.00
5.05	0.00	0	392.50	0.00
5.10	0.00	0	392.50	0.00
5.15	0.00	0	392.50	0.00
5.20	0.00	0	392.50	0.00
5.25	0.00	0	392.50	0.00
5.30	0.00	0	392.50	0.00
5.35	0.00	0	392.50	0.00
5.40	0.00	0	392.50	0.00
5.45	0.00	0	392.50	0.00
5.50	0.00	0	392.50	0.00
5.55	0.00	0	392.50	0.00
5.60	0.00	0	392.50	0.00
5.65	0.00	0	392.50	0.00
5.70	0.00	0	392.50	0.00
5.75	0.00	0	392.50	0.00
5.80	0.00	0	392.50	0.00
5.85	0.00	0	392.50	0.00
5.90	0.00	0	392.50	0.00
5.95	0.00	0	392.50	0.00
6.00	0.00	0	392.50	0.00
6.05	0.00	0	392.50	0.00
6.10	0.00	1	392.50	0.00
6.15	0.01	2	392.50	0.00
6.20	0.01	3	392.50	0.00
6.25	0.01	5	392.50	0.00
6.30	0.02	8	392.50	0.00
6.35	0.03	12	392.50	0.00
6.40	0.03	18	392.50	0.00
6.45	0.04	25	392.50	0.00
6.50	0.05	34	392.50	0.00
6.55	0.06	44	392.50	0.00
6.60	0.08	57	392.50	0.00
6.65	0.09	71	392.50	0.00
6.70	0.10	88	392.50	0.00
6.75	0.11	107	392.50	0.00
6.80	0.13	129	392.50	0.00
6.85	0.14	152	392.50	0.00
6.90	0.15	178	392.50	0.00
6.95	0.17	207	392.50	0.00
7.00	0.18	238	392.50	0.00
7.05	0.19	272	392.50	0.00
7.10	0.21	308	392.50	0.00
7.15	0.22	347	392.50	0.00
7.20	0.24	388	392.50	0.00
7.25	0.25	432	392.50	0.00
7.30	0.27	479	392.50	0.00
7.35	0.28	528	392.50	0.00
7.40	0.30	580	392.50	0.00
7.45	0.31	635	392.50	0.00
7.50	0.33	693	392.50	0.00
7.55	0.34	754	392.50	0.00

Hydrograph for Pond DB #1: Det. Basin #1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
7.60	0.36	817	392.50	0.00
7.65	0.38	884	392.50	0.00
7.70	0.39	953	392.50	0.00
7.75	0.41	1,025	392.51	0.00
7.80	0.43	1,100	392.51	0.00
7.85	0.44	1,178	392.51	0.00
7.90	0.46	1,259	392.51	0.00
7.95	0.48	1,343	392.51	0.00
8.00	0.50	1,431	392.51	0.00
8.05	0.51	1,521	392.51	0.00
8.10	0.53	1,615	392.51	0.00
8.15	0.55	1,712	392.51	0.00
8.20	0.57	1,813	392.51	0.00
8.25	0.59	1,916	392.51	0.00
8.30	0.61	2,024	392.51	0.00
8.35	0.63	2,135	392.51	0.00
8.40	0.65	2,250	392.51	0.00
8.45	0.67	2,369	392.51	0.00
8.50	0.70	2,493	392.51	0.00
8.55	0.73	2,621	392.51	0.00
8.60	0.76	2,754	392.51	0.00
8.65	0.79	2,892	392.51	0.00
8.70	0.82	3,036	392.52	0.00
8.75	0.85	3,186	392.52	0.00
8.80	0.89	3,342	392.52	0.00
8.85	0.92	3,504	392.52	0.00
8.90	0.96	3,673	392.52	0.00
8.95	1.00	3,849	392.52	0.00
9.00	1.04	4,031	392.52	0.00
9.05	1.08	4,221	392.52	0.00
9.10	1.12	4,418	392.52	0.00
9.15	1.16	4,623	392.52	0.00
9.20	1.21	4,836	392.52	0.00
9.25	1.25	5,056	392.53	0.00
9.30	1.29	5,284	392.53	0.00
9.35	1.34	5,520	392.53	0.00
9.40	1.38	5,764	392.53	0.00
9.45	1.42	6,015	392.53	0.01
9.50	1.46	6,273	392.53	0.01
9.55	1.50	6,538	392.53	0.01
9.60	1.53	6,810	392.53	0.01
9.65	1.57	7,088	392.54	0.01
9.70	1.60	7,372	392.54	0.01
9.75	1.64	7,662	392.54	0.01
9.80	1.67	7,959	392.54	0.01
9.85	1.71	8,262	392.54	0.01
9.90	1.75	8,572	392.54	0.01
9.95	1.80	8,890	392.54	0.01
10.00	1.85	9,216	392.55	0.01
10.05	1.90	9,551	392.55	0.01
10.10	1.96	9,896	392.55	0.01
10.15	2.02	10,252	392.55	0.01

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Type II 24-hr 25-Year Rainfall=5.40"

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Hydrograph for Pond DB #1: Det. Basin #1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
10.20	2.08	10,618	392.55	0.01
10.25	2.16	10,997	392.56	0.02
10.30	2.23	11,389	392.56	0.02
10.35	2.31	11,794	392.56	0.02
10.40	2.39	12,214	392.56	0.02
10.45	2.48	12,649	392.56	0.02
10.50	2.58	13,101	392.57	0.02
10.55	2.67	13,569	392.57	0.02
10.60	2.78	14,056	392.57	0.03
10.65	2.89	14,561	392.57	0.03
10.70	3.00	15,087	392.58	0.03
10.75	3.13	15,633	392.58	0.03
10.80	3.25	16,202	392.58	0.03
10.85	3.39	16,793	392.58	0.04
10.90	3.53	17,410	392.59	0.04
10.95	3.69	18,053	392.59	0.04
11.00	3.85	18,724	392.59	0.04
11.05	4.02	19,425	392.60	0.05
11.10	4.21	20,157	392.60	0.05
11.15	4.40	20,923	392.60	0.05
11.20	4.61	21,724	392.61	0.06
11.25	4.83	22,563	392.61	0.06
11.30	5.08	23,443	392.62	0.07
11.35	5.35	24,368	392.62	0.07
11.40	5.64	25,343	392.63	0.08
11.45	5.97	26,373	392.63	0.09
11.50	6.32	27,463	392.64	0.09
11.55	6.71	28,619	392.64	0.10
11.60	7.16	29,848	392.65	0.11
11.65	7.72	31,166	392.66	0.12
11.70	8.55	32,608	392.66	0.13
11.75	9.80	34,235	392.67	0.14
11.80	11.73	36,146	392.68	0.16
11.85	14.61	38,486	392.69	0.18
11.90	18.86	41,463	392.71	0.21
11.95	24.97	45,367	392.73	0.25
12.00	33.33	50,564	392.75	0.30
12.05	43.42	57,410	392.79	0.39
12.10	54.39	66,133	392.83	0.50
12.15	64.88	76,761	392.88	0.67
12.20	73.64	89,089	392.94	0.88
12.25	79.49	102,689	393.01	1.14
12.30	82.21	117,009	393.08	1.44
12.35	81.71	131,472	393.15	1.77
12.40	79.13	145,598	393.22	2.11
12.45	74.51	159,016	393.28	2.44
12.50	68.86	171,452	393.34	2.76
12.55	62.36	182,738	393.40	3.05
12.60	55.56	192,778	393.45	3.31
12.65	49.14	201,586	393.49	3.53
12.70	43.50	209,270	393.53	3.72
12.75	38.72	215,985	393.56	3.89

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Hydrograph for Pond DB #1: Det. Basin #1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
12.80	34.70	221,881	393.59	4.03
12.85	31.23	227,078	393.61	4.14
12.90	28.19	231,670	393.63	4.25
12.95	25.52	235,732	393.65	4.33
13.00	23.22	239,332	393.67	4.40
13.05	21.21	242,532	393.69	4.47
13.10	19.48	245,386	393.70	4.52
13.15	17.98	247,941	393.71	4.56
13.20	16.67	250,235	393.72	4.60
13.25	15.55	252,305	393.73	4.63
13.30	14.55	254,179	393.74	4.66
13.35	13.70	255,881	393.75	4.68
13.40	12.93	257,433	393.76	4.70
13.45	12.25	258,850	393.76	4.73
13.50	11.65	260,148	393.77	4.75
13.55	11.10	261,339	393.78	4.77
13.60	10.62	262,434	393.78	4.79
13.65	10.18	263,442	393.79	4.81
13.70	9.78	264,372	393.79	4.82
13.75	9.42	265,231	393.80	4.84
13.80	9.08	266,024	393.80	4.85
13.85	8.76	266,755	393.80	4.86
13.90	8.45	267,428	393.81	4.88
13.95	8.17	268,046	393.81	4.89
14.00	7.90	268,613	393.81	4.90
14.05	7.66	269,131	393.81	4.90
14.10	7.44	269,606	393.82	4.91
14.15	7.23	270,042	393.82	4.92
14.20	7.06	270,442	393.82	4.93
14.25	6.88	270,809	393.82	4.93
14.30	6.72	271,145	393.82	4.94
14.35	6.57	271,452	393.82	4.94
14.40	6.43	271,731	393.83	4.95
14.45	6.30	271,986	393.83	4.95
14.50	6.18	272,217	393.83	4.96
14.55	6.07	272,427	393.83	4.96
14.60	5.97	272,618	393.83	4.96
14.65	5.88	272,791	393.83	4.97
14.70	5.80	272,948	393.83	4.97
14.75	5.71	273,089	393.83	4.97
14.80	5.64	273,216	393.83	4.97
14.85	5.57	273,330	393.83	4.98
14.90	5.50	273,431	393.83	4.98
14.95	5.44	273,520	393.83	4.98
15.00	5.38	273,597	393.84	4.98
15.05	5.32	273,663	393.84	4.98
15.10	5.25	273,718	393.84	4.98
15.15	5.20	273,762	393.84	4.98
15.20	5.14	273,796	393.84	4.98
15.25	5.08	273,819	393.84	4.98
15.30	5.03	273,832	393.84	4.98
15.35	4.97	273,835	393.84	4.98

Hydrograph for Pond DB #1: Det. Basin #1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
15.40	4.92	273,828	393.84	4.98
15.45	4.86	273,811	393.84	4.98
15.50	4.81	273,784	393.84	4.98
15.55	4.75	273,747	393.84	4.98
15.60	4.70	273,701	393.84	4.98
15.65	4.64	273,645	393.84	4.98
15.70	4.59	273,580	393.84	4.98
15.75	4.54	273,505	393.83	4.98
15.80	4.48	273,420	393.83	4.98
15.85	4.43	273,326	393.83	4.97
15.90	4.37	273,223	393.83	4.97
15.95	4.32	273,110	393.83	4.97
16.00	4.27	272,988	393.83	4.97
16.05	4.21	272,857	393.83	4.97
16.10	4.16	272,716	393.83	4.96
16.15	4.10	272,566	393.83	4.96
16.20	4.05	272,406	393.83	4.96
16.25	4.00	272,238	393.83	4.96
16.30	3.95	272,061	393.83	4.95
16.35	3.90	271,876	393.83	4.95
16.40	3.85	271,683	393.83	4.95
16.45	3.81	271,482	393.83	4.94
16.50	3.77	271,275	393.82	4.94
16.55	3.73	271,062	393.82	4.94
16.60	3.70	270,843	393.82	4.93
16.65	3.67	270,619	393.82	4.93
16.70	3.64	270,390	393.82	4.93
16.75	3.61	270,157	393.82	4.92
16.80	3.59	269,919	393.82	4.92
16.85	3.56	269,678	393.82	4.91
16.90	3.54	269,433	393.82	4.91
16.95	3.52	269,185	393.81	4.91
17.00	3.49	268,933	393.81	4.90
17.05	3.47	268,678	393.81	4.90
17.10	3.45	268,421	393.81	4.89
17.15	3.43	268,160	393.81	4.89
17.20	3.41	267,896	393.81	4.88
17.25	3.39	267,630	393.81	4.88
17.30	3.37	267,360	393.81	4.87
17.35	3.35	267,088	393.80	4.87
17.40	3.33	266,813	393.80	4.86
17.45	3.31	266,535	393.80	4.86
17.50	3.29	266,255	393.80	4.86
17.55	3.27	265,972	393.80	4.85
17.60	3.25	265,686	393.80	4.85
17.65	3.23	265,398	393.80	4.84
17.70	3.21	265,107	393.79	4.84
17.75	3.19	264,813	393.79	4.83
17.80	3.17	264,517	393.79	4.83
17.85	3.15	264,219	393.79	4.82
17.90	3.14	263,917	393.79	4.82
17.95	3.12	263,614	393.79	4.81

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Hydrograph for Pond DB #1: Det. Basin #1 (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
18.00	3.10	263,307	393.79	4.80
18.05	3.08	262,999	393.78	4.80
18.10	3.06	262,687	393.78	4.79
18.15	3.04	262,373	393.78	4.79
18.20	3.02	262,057	393.78	4.78
18.25	3.00	261,738	393.78	4.78
18.30	2.98	261,417	393.78	4.77
18.35	2.96	261,093	393.78	4.77
18.40	2.94	260,767	393.77	4.76
18.45	2.92	260,438	393.77	4.75
18.50	2.90	260,107	393.77	4.75
18.55	2.88	259,773	393.77	4.74
18.60	2.86	259,437	393.77	4.74
18.65	2.84	259,099	393.77	4.73
18.70	2.82	258,758	393.76	4.73
18.75	2.81	258,414	393.76	4.72
18.80	2.78	258,068	393.76	4.71
18.85	2.77	257,720	393.76	4.71
18.90	2.75	257,369	393.76	4.70
18.95	2.73	257,016	393.76	4.70
19.00	2.71	256,660	393.75	4.69
19.05	2.69	256,301	393.75	4.69
19.10	2.67	255,940	393.75	4.68
19.15	2.65	255,576	393.75	4.68
19.20	2.63	255,210	393.75	4.67
19.25	2.61	254,841	393.75	4.66
19.30	2.59	254,470	393.74	4.66
19.35	2.57	254,096	393.74	4.65
19.40	2.55	253,719	393.74	4.65
19.45	2.53	253,340	393.74	4.64
19.50	2.51	252,959	393.74	4.64
19.55	2.49	252,575	393.73	4.63
19.60	2.47	252,188	393.73	4.63
19.65	2.45	251,799	393.73	4.62
19.70	2.43	251,407	393.73	4.61
19.75	2.41	251,013	393.73	4.61
19.80	2.39	250,617	393.73	4.60
19.85	2.37	250,217	393.72	4.60
19.90	2.35	249,816	393.72	4.59
19.95	2.33	249,411	393.72	4.59
20.00	2.31	249,005	393.72	4.58

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Stage-Discharge for Pond DB #1: Det. Basin #1

<u>Elevation (feet)</u>	<u>Primary (cfs)</u>
392.50	0.00
392.60	0.05
392.70	0.19
392.80	0.42
392.90	0.73
393.00	1.10
393.10	1.54
393.20	2.01
393.30	2.53
393.40	3.06
393.50	3.58
393.60	4.08
393.70	4.52
393.80	4.85
393.90	5.20
394.00	5.53
394.10	5.83
394.20	6.13
394.30	6.41
394.40	6.67
394.50	6.93

Stage-Area-Storage for Pond DB #1: Det. Basin #1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
392.50	199,698	0
392.60	200,476	20,009
392.70	201,254	40,095
392.80	202,032	60,260
392.90	202,810	80,502
393.00	203,588	100,822
393.10	204,374	121,220
393.20	205,159	141,696
393.30	205,945	162,251
393.40	206,730	182,885
393.50	207,516	203,598
393.60	208,302	224,388
393.70	209,087	245,258
393.80	209,873	266,206
393.90	210,658	287,232
394.00	211,444	308,338
394.10	212,237	329,522
394.20	213,030	350,785
394.30	213,823	372,128
394.40	214,616	393,549
394.50	215,409	415,051

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Type II 24-hr 25-Year Rainfall=5.40"

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Summary for Subcatchment 3: #3 Dev

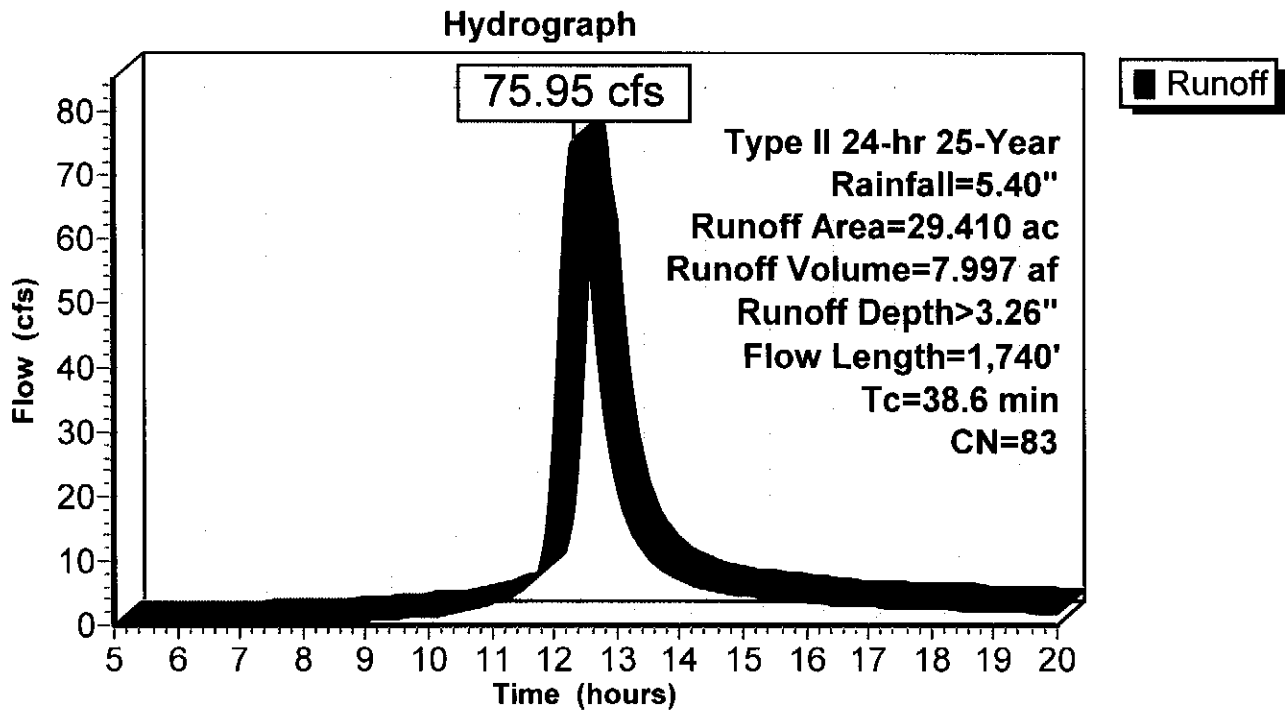
Runoff = 75.95 cfs @ 12.34 hrs, Volume= 7.997 af, Depth> 3.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
29.410	83	1/4 acre lots, 38% imp, HSG C
18.234		62.00% Pervious Area
11.176		38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	60	0.0092	0.05		Sheet Flow, Sheet Flow Woods Woods: Light underbrush n= 0.400 P2= 3.30"
14.1	108	0.0091	0.13		Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 3.30"
2.4	247	0.0071	1.71		Shallow Concentrated Flow, Shallow Concentrated Flow Paved Kv= 20.3 fps
2.9	1,325	0.0142	7.67	13.56	Pipe Channel, Storm Sewer 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012
38.6	1,740	Total			

Subcatchment 3: #3 Dev



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Type II 24-hr 25-Year Rainfall=5.40"

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Summary for Subcatchment 6: #6 Dev

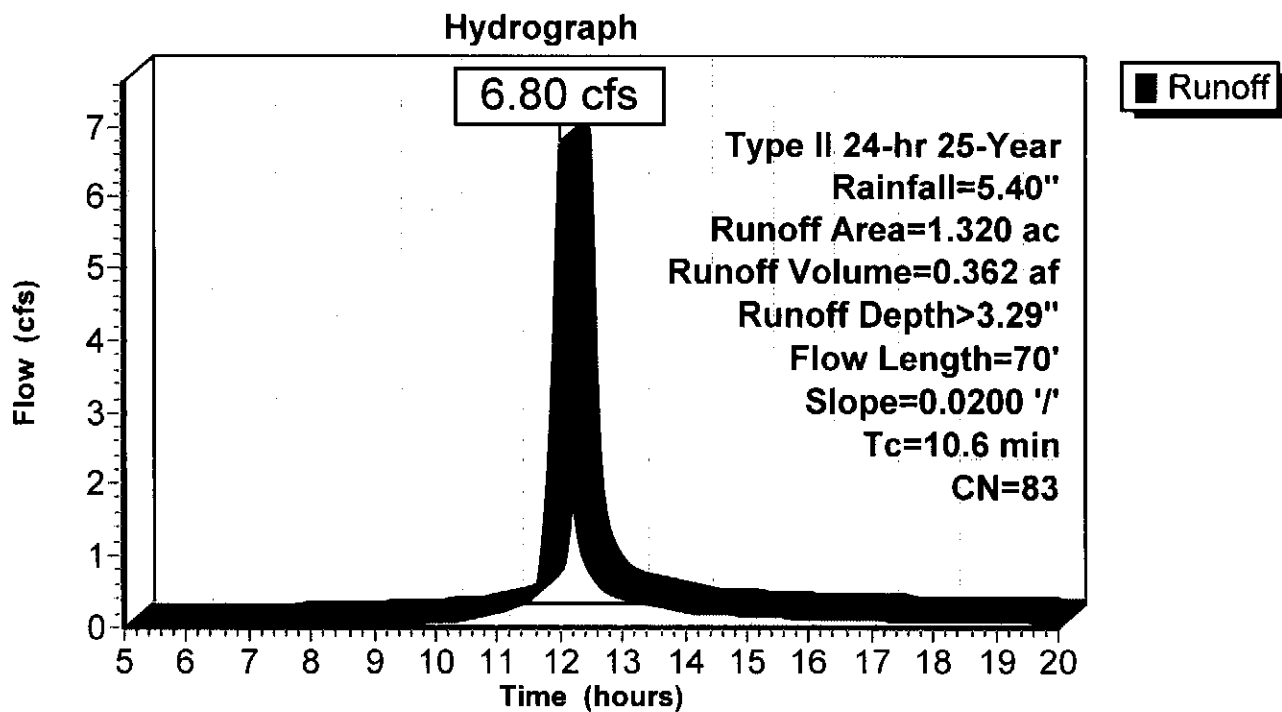
Runoff = 6.80 cfs @ 12.02 hrs, Volume= 0.362 af, Depth> 3.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
1.320	83	1/4 acre lots, 38% imp, HSG C
0.818		62.00% Pervious Area
0.502		38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	70	0.0200	0.11		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 3.30"

Subcatchment 6: #6 Dev



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Type II 24-hr 25-Year Rainfall=5.40"

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Summary for Subcatchment OS-1: OS-1

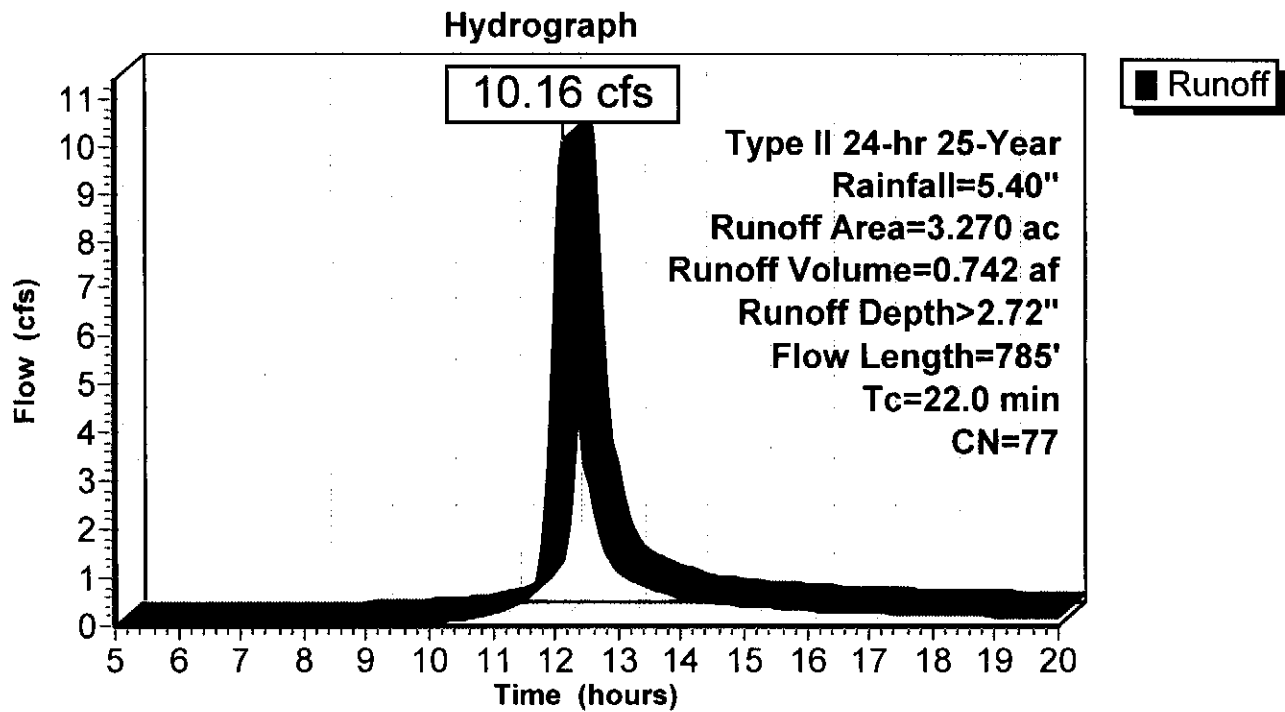
Runoff = 10.16 cfs @ 12.15 hrs, Volume= 0.742 af, Depth> 2.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-Year Rainfall=5.40"

Area (ac)	CN	Description
0.280	71	Meadow, non-grazed, HSG C
0.500	98	Paved parking, HSG C
0.020	98	Water Surface, HSG C
2.470	73	Woods, Fair, HSG C
3.270	77	Weighted Average
2.750		84.10% Pervious Area
0.520		15.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3	300	0.0933	0.27		Sheet Flow, Sheet Flow Grass: Dense n= 0.240 P2= 3.30"
3.2	300	0.0500	1.57		Shallow Concentrated Flow, Shallow Concentrated Short Grass Pasture Kv= 7.0 fps
0.5	185	0.0378	5.87	17.62	Channel Flow, Area= 3.0 sf Perim= 5.0' r= 0.60' n= 0.035 Earth, dense weeds
22.0	785	Total			

Subcatchment OS-1: OS-1



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Type II 24-hr 10-Year Rainfall=4.70"

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Summary for Subcatchment UN-1: UN-1

Runoff = 65.20 cfs @ 12.19 hrs, Volume= 5.225 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=4.70"

Area (ac)	CN	Description
19.160	82	Row crops, SR + CR, Good, HSG C
4.220	85	Row crops, SR + CR, Good, HSG D
23.380	83	Weighted Average
23.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.1	300	0.0417	0.26		Sheet Flow, Sheet Flow Cultivated: Residue>20% n= 0.170 P2= 3.30"
4.6	300	0.0147	1.09		Shallow Concentrated Flow, Shallow Concentrated Cultivated Straight Rows Kv= 9.0 fps
1.7	336	0.0063	3.38	6.75	Channel Flow, Area= 2.0 sf Perim= 4.0' r= 0.50' n= 0.022 Earth, clean & straight
25.4	936	Total			

