Vancouver Energy
NPDES Engineering Report

EFSEC Application for Site Certification No. 2013-01
Docket No. EF131590

Appendix F
Conveyance System Model Results

Project Description

File Name ..... POV Savage-Tesoro SSA Model_25-Year_022516.SPF
Description .....

Tesoro Savage PBR Facility

Port of Vancouver, WA

25-Year, 24-Hour Storm Conveyance Model

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Santa Barbara UH
Time of Concentration (TOC) Method	Kirpich
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	NO

Analysis Options

Start Analysis On	Mar 26, 2014	00:00:00
End Analysis On	Mar 27, 2014	00:00:00
Start Reporting On	Mar 26, 2014	00:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	1 00:01:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	1 00:05:00	days hh:mm:ss
Reporting Time Step	1 00:05:00	days hh:mm:ss
Routing Time Step	1	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	30
Nodes	64
Junctions	57
Outfalls	4
Flow Diversions	0
Inlets	0
Storage Nodes	3
Links	59
Channels	0
Pipes	56
Pumps	2
Orifices	1
Weirs	0
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1		Time Series	25-Year Storm	Intensity	inches	Washington	Clark	25	3.60	SCS Type IA 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Impervious Area (%)	Impervious Area Curve Number	Pervious Area Curve Number	Average Slope (%)	Flow Length (ft)	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	0200-1	0.62	100.00	98.00	76.00	1.0000	500.00	3.59	3.36	2.08	0.52	0 00:05:00
2	0200-10	0.15	0.00	98.00	76.00	0.5000	500.00	3.59	1.43	0.21	0.05	0 00:05:00
3	0200-11	0.16	0.00	98.00	76.00	0.5000	500.00	3.59	1.43	0.23	0.05	0 00:05:00
4	0200-2	0.18	100.00	98.00	76.00	0.5000	500.00	3.59	3.36	0.60	0.15	0 00:07:10
5	0200-3	0.32	0.00	98.00	76.00	0.5000	500.00	3.59	1.43	0.45	0.10	0 00:05:00
6	0200-4	0.11	0.00	98.00	76.00	0.5000	500.00	3.59	1.43	0.16	0.03	0 00:05:00
7	0200-5	0.23	0.00	98.00	76.00	0.5000	500.00	3.59	1.43	0.33	0.07	0 00:05:00
8	0200-6	0.10	0.00	98.00	76.00	0.5000	500.00	3.59	1.43	0.15	0.03	0 00:05:00
9	0200-7	0.13	24.00	98.00	76.00	0.5000	500.00	3.59	1.89	0.24	0.05	0 00:05:00
10	0200-8	0.13	10.00	98.00	76.00	0.5000	500.00	3.59	1.63	0.21	0.05	0 00:05:00
11	0200-9	0.45	0.00	98.00	76.00	0.5000	500.00	3.59	1.43	0.65	0.14	0 00:05:00
12	0300-1	0.48	75.00	98.00	76.00	0.5000	500.00	3.59	2.88	1.38	0.34	0 00:05:00
13	0300-2	0.55	73.00	98.00	76.00	2.0000	500.00	3.59	2.84	1.56	0.38	0 00:05:00
14	0300-3	0.55	73.00	98.00	76.00	2.0000	500.00	3.59	2.84	1.56	0.38	0 00:05:00
15	0300-4	0.97	100.00	98.00	76.00	2.0000	500.00	3.59	3.36	3.27	0.82	0 00:05:00
16	0300-5	1.20	100.00	98.00	76.00	2.0000	500.00	3.59	3.36	4.04	1.02	0 00:05:00
17	0300-6	1.29	100.00	98.00	76.00	0.5000	500.00	3.59	3.36	4.34	1.06	0 00:07:10
18	0300-7	1.37	100.00	98.00	76.00	0.5000	500.00	3.59	3.36	4.61	1.13	0 00:07:10
19	0300-8	1.21	100.00	98.00	76.00	2.0000	500.00	3.59	3.36	4.05	1.02	0 00:05:00
20	0300-9	1.75	100.00	98.00	76.00	2.0000	500.00	3.59	3.36	5.88	1.48	0 00:05:00
21	0600-1	0.19	100.00	98.00	76.00	0.5000	500.00	3.59	3.36	0.64	0.16	0 00:07:10
22	0600-2	0.05	80.00	98.00	76.00	2.0000	500.00	3.59	2.97	0.15	0.04	0 00:05:00
23	0600-3	0.20	50.00	98.00	76.00	1.0000	500.00	3.59	2.39	0.48	0.11	0 00:05:30
24	Future Tank 1	1.06	100.00	98.00	76.00	0.5000	500.00	3.59	3.36	3.56	0.87	0 00:07:10
25	Future Tank 2	1.06	100.00	98.00	76.00	0.5000	500.00	3.59	3.36	3.56	0.87	0 00:07:10
26	Rail Shed Roof - East	1.90	100.00	98.00	76.00	0.5000	500.00	3.59	3.36	6.37	1.56	0 00:07:10
27	Rail Unloading Shed - West	1.57	100.00	98.00	76.00	0.5000	500.00	3.59	3.36	5.28	1.29	0 00:07:10
28	Tank Roofs	4.22	100.00	98.00	76.00	0.5000	500.00	3.59	3.36	14.16	3.47	0 00:07:10
29	Vanexo Cap - East	4.76	100.00	98.00	76.00	0.5000	500.00	3.59	3.36	15.98	3.91	0 00:07:10
30	Vanexo Cap - West	2.62	100.00	98.00	76.00	0.5000	500.00	3.59	3.36	8.79	2.15	0 00:07:10

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	0200-CB-001	Junction	28.07	32.50	0.00	0.00	0.00	0.52	28.53	0.00	3.97	0 00:00	0.00	0.00
2	0200-CB-002	Junction	27.37	32.78	0.00	32.78	131000.00	0.15	27.63	0.00	5.15	0 00:00	0.00	0.00
3	0200-CB-003	Junction	24.20	31.58	0.00	0.00	100.00	0.13	24.64	0.00	6.94	0 00:00	0.00	0.00
4	0200-CB-004	Junction	26.27	31.58	0.00	31.58	10.00	0.03	26.35	0.00	5.23	0 00:00	0.00	0.00
5	0200-CB-005	Junction	25.59	31.58	0.00	0.00	0.00	0.41	25.71	0.00	5.87	0 00:00	0.00	0.00
6	0200-CB-006	Junction	25.86	31.58	0.00	0.00	0.00	0.13	26.09	0.00	5.49	0 00:00	0.00	0.00
7	0200-CB-007	Junction	26.88	31.58	0.00	0.00	0.00	0.10	27.08	0.00	4.50	0 00:00	0.00	0.00
8	0200-CB-008	Junction	27.50	31.58	0.00	31.58	10.00	0.05	27.64	0.00	3.94	0 00:00	0.00	0.00
9	0200-CB-009	Junction	26.36	31.58	0.00	6.00	0.00	0.22	26.66	0.00	4.92	0 00:00	0.00	0.00
10	0200-CB-010	Junction	27.07	31.58	0.00	0.00	0.00	0.09	27.27	0.00	4.31	0 00:00	0.00	0.00
11	0200-CB-011	Junction	27.50	30.74	0.00	30.74	10.00	0.05	27.65	0.00	3.09	0 00:00	0.00	0.00
12	0200-SDMH-001	Junction	26.62	33.34	0.00	0.00	0.00	0.67	27.11	0.00	6.23	0 00:00	0.00	0.00
13	0200-SDMH-002	Junction	25.92	34.31	0.00	0.00	0.00	0.66	26.41	0.00	7.90	0 00:00	0.00	0.00
14	0200-SDMH-003	Junction	25.18	32.55	0.00	0.00	0.00	0.97	25.73	0.00	6.82	0 00:00	0.00	0.00
15	0200-SDMH-004	Junction	24.46	30.40	0.00	0.00	100.00	0.97	25.41	0.00	4.99	0 00:00	0.00	0.00
16	0200-SDMH-005	Junction	24.10	31.77	0.00	0.00	100.00	1.06	24.30	0.00	7.47	0 00:00	0.00	0.00
17	0200-SDMH-006	Junction	21.50	30.39	0.00	0.00	100.00	2.32	22.03	0.00	8.36	0 00:00	0.00	0.00
18	0200-SDMH-009	Junction	28.05	31.77	0.00	0.00	0.00	1.29	28.36	0.00	3.41	0 00:00	0.00	0.00
19	0200-SDMH-010	Junction	21.72	31.75	0.00	6.00	0.00	2.15	22.49	0.00	9.26	0 00:00	0.00	0.00
20	0200-SDMH-011	Junction	21.39	30.52	0.00	0.00	0.00	2.15	22.25	0.00	8.27	0 00:00	0.00	0.00
21	0200-SDMH-012	Junction	21.03	30.50	0.00	0.00	0.00	2.55	21.70	0.00	8.80	0 00:00	0.00	0.00
22	0200-SDMH-013	Junction	21.08	30.70	0.00	0.00	0.00	0.41	21.71	0.00	8.99	0 00:00	0.00	0.00
23	0200-SDMH-018	Junction	22.86	31.75	0.00	0.00	0.00	5.46	24.32	0.00	7.43	0 00:00	0.00	0.00
24	0200-SDMH-019	Junction	23.67	31.81	0.00	0.00	0.00	3.91	24.76	0.00	7.05	0 00:00	0.00	0.00
25	0200-SDMH-020	Junction	24.20	31.30	0.00	0.00	0.00	0.12	24.76	0.00	6.54	0 00:00	0.00	0.00
26	0200-SDMH-021	Junction	23.73	31.83	0.00	0.00	0.00	3.91	24.87	0.00	6.96	0 00:00	0.00	0.00
27	0200-SDMH-022	Junction	27.50	31.81	0.00	0.00	0.00	1.56	27.94	0.00	3.87	0 00:00	0.00	0.00
28	0300 STM-2	Junction	18.90	25.96	0.00	0.00	0.00	1.74	25.96	0.00	0.00	0 07:54	6.97	1303.00
29	0300-CB-001	Junction	23.00	26.61	0.00	0.00	10.00	4.25	23.50	0.00	3.11	0 00:00	0.00	0.00
30	0300-CB-002	Junction	24.20	26.88	0.00	26.88	10.00	0.76	24.77	0.00	2.11	0 00:00	0.00	0.00
31	0300-CB-003	Junction	24.88	27.88	0.00	27.88	10.00	0.38	25.27	0.00	2.61	0 00:00	0.00	0.00
32	0300-CB-004	Junction	23.50	24.04	0.00	0.00	72000.00	1.27	24.14	0.10	0.00	0 07:54	2.05	737.00
33	0300-CB-005	Junction	24.70	25.24	0.00	25.24	78000.00	1.01	25.25	0.01	0.00	0 07:54	0.22	97.00
34	0300-CB-006	Junction	24.62	25.16	0.00	25.16	74000.00	1.06	25.18	0.02	0.00	0 07:54	0.37	164.00
35	0300-CB-007	Junction	24.61	25.14	0.00	25.14	90000.00	1.13	25.16	0.02	0.00	0 07:54	0.44	208.00
36	0300-CB-008	Junction	24.98	25.51	0.00	25.51	130680.00	1.02	25.39	0.00	1.09	0 00:00	0.00	0.00
37	0300-CB-009	Junction	24.63	25.17	0.00	0.00	152000.00	1.48	25.19	0.02	0.00	0 07:54	0.85	611.00
38	0300-OWS-001	Junction	22.12	27.61	0.00	0.00	0.00	2.05	23.04	0.00	4.57	0 00:00	0.00	0.00
39	0300-SDMH-001	Junction	19.74	26.79	0.00	6.00	0.00	4.02	20.81	0.00	5.98	0 00:00	0.00	0.00
40	0300-SDMH-002	Junction	23.80	27.19	0.00	0.00	0.00	3.94	24.55	0.00	2.64	0 00:00	0.00	0.00
41	0300-SDMH-003	Junction	24.53	27.86	0.00	6.00	0.00	0.38	24.86	0.00	3.00	0 00:00	0.00	0.00
42	0300-SDMH-004	Junction	22.00	26.87	0.00	0.00	0.00	2.07	24.58	0.00	2.29	0 00:00	0.00	0.00
43	0300-SDMH-005	Junction	22.50	26.12	0.00	0.00	0.00	2.07	24.68	0.00	1.44	0 00:00	0.00	0.00
44	0300-SDMH-006	Junction	22.69	25.72	0.00	0.00	0.00	2.50	24.76	0.00	0.96	0 00:00	0.00	0.00
45	0300-SDMH-007	Junction	22.74	25.92	0.00	0.00	0.00	2.50	24.82	0.00	1.10	0 00:00	0.00	0.00
46	0300-SDMH-008	Junction	22.91	26.09	0.00	0.00	0.00	2.02	24.85	0.00	1.24	0 00:00	0.00	0.00
47	0300-SDMH-009	Junction	23.47	26.04	0.00	0.00	0.00	1.37	24.93	0.00	1.11	0 00:00	0.00	0.00
48	0600-CB-001	Junction	26.97	29.47	0.00	29.47	10.00	0.16	27.19	0.00	2.28	0 00:00	0.00	0.00
49	0600-CB-002	Junction	26.72	30.05	0.00	0.00	0.00	0.15	27.05	0.00	3.00	0 00:00	0.00	0.00
50	0600-CB-0300	Junction	27.05	31.40	0.00	31.40	10.00	0.11	27.28	0.00	4.12	0 00:00	0.00	0.00
51	0600-SDMH-001	Junction	26.62	29.35	0.00	0.00	0.00	0.30	26.98	0.00	2.37	0 00:00	0.00	0.00
52	EXIST SDMH	Junction	19.65	27.18	19.65	0.00	0.00	7.48	20.53	0.00	6.65	0 00:00	0.00	0.00
53	Jun-27	Junction	24.40	26.04	0.00	0.00	0.00	0.01	24.76	0.00	1.28	0 00:00	0.00	0.00
54	Jun-46	Junction	23.95	27.64	0.00	10000.00	0.00	3.53	29.58	1.94	0.00	0 00:00	0.00	0.00
55	Jun-47	Junction	23.14	26.63	0.00	10000.00	0.00	4.18	25.16	0.00	1.47	0 00:00	0.00	0.00
56	Jun-50	Junction	19.77	30.00	0.00	0.00	0.00	1.74	26.50	0.00	3.50	0 00:00	0.00	0.00
57	Jun-51	Junction	21.70	30.00	0.00	0.00	0.00	0.87	26.82	0.00	3.18	0 00:00	0.00	0.00
58	0200 STM-1	Outfall	21.40					2.32	21.54					
59	0200 STM-2	Outfall	20.98					2.55	21.56					
60	0200 STM-3	Outfall	22.86					5.46	24.08					
61	0300 STM-1	Outfall	19.60					7.48	20.25					
62	0300-CS-001	Storage Node	22.00	32.00	0.00		0.00	2.08	24.43				0.00	0.00
63	0300-PS-001 WW	Storage Node	10.00	26.63	0.00		0.00	4.21	18.08				0.00	0.00
64	0300-PS-002 WW	Storage Node	15.00	27.64	0.00		0.00	2.05	22.06				0.00	0.00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
1	03	Pipe	0600-CB-001	0600-SDMH-001	111.80	26.97	26.72	0.2200	1.000	0.0150	0.16	1.46	0.11	1.11	0.24	0.24	0.00	Calculated
2	04	Pipe	0600-SDMH-001	0200-SDMH-003	201.11	26.62	26.18	0.2200	1.000	0.0150	0.30	1.44	0.21	1.59	0.29	0.29	0.00	Calculated
3	05	Pipe	0200-SDMH-002	0200-SDMH-003	157.26	25.92	25.68	0.1500	1.500	0.0150	0.66	3.56	0.19	1.78	0.39	0.26	0.00	Calculated
4	06	Pipe	0200-SDMH-001	0200-SDMH-002	293.00	26.62	26.12	0.1700	1.500	0.0150	0.66	3.76	0.18	1.76	0.40	0.27	0.00	Calculated
5	07	Pipe	0200-CB-002	0200-SDMH-001	24.65	27.37	27.32	0.2000	0.667	0.0150	0.15	0.47	0.31	1.48	0.22	0.33	0.00	Calculated
6	08	Pipe	0600-CB-0300	0600-CB-002	34.01	27.05	26.98	0.2100	0.667	0.0150	0.11	0.48	0.24	1.34	0.19	0.29	0.00	Calculated
7	09	Pipe	0600-CB-002	0600-SDMH-001	26.85	26.78	26.72	0.2200	0.667	0.0150	0.15	0.50	0.30	1.20	0.26	0.40	0.00	Calculated
8	10	Pipe	0200-CB-001	0200-SDMH-001	301.17	28.07	27.32	0.2500	1.000	0.0150	0.52	1.54	0.34	1.91	0.38	0.38	0.00	Calculated
9	12	Pipe	0200-SDMH-003	0200-SDMH-004	346.68	25.18	24.84	0.1000	2.000	0.0150	0.97	6.14	0.16	1.37	0.56	0.28	0.00	Calculated
10	13	Pipe	0200-SDMH-004	0200-SDMH-005	328.80	24.79	24.46	0.1000	2.000	0.0150	0.95	6.21	0.15	1.65	0.48	0.24	0.00	Calculated
11	14	Pipe	0200-CB-003	0200-SDMH-005	56.91	24.49	24.20	0.5100	1.500	0.0150	0.13	6.50	0.02	1.51	0.14	0.09	0.00	Calculated
12	17	Pipe	0200-SDMH-010	0200-SDMH-011	170.96	21.72	21.44	0.1600	2.000	0.0150	2.15	7.93	0.27	1.87	0.79	0.40	0.00	Calculated
13	20	Pipe	0200-CB-006	0200-CB-005	159.13	25.86	25.59	0.1700	1.500	0.0150	0.13	3.75	0.03	1.09	0.18	0.12	0.00	Calculated
14	21	Pipe	0200-CB-007	0200-CB-006	216.85	26.88	26.36	0.2400	1.000	0.0150	0.10	1.51	0.06	1.16	0.16	0.16	0.00	Calculated
15	22	Pipe	0200-CB-008	0200-CB-007	159.02	27.50	27.08	0.2600	1.000	0.0150	0.05	1.59	0.03	0.95	0.11	0.11	0.00	Calculated
16	23	Pipe	0200-CB-009	0200-CB-005	300.00	26.36	25.85	0.1700	1.500	0.0150	0.22	3.75	0.06	1.23	0.23	0.16	0.00	Calculated
17	24	Pipe	0200-CB-010	0200-CB-009	300.00	27.07	26.56	0.1700	1.500	0.0150	0.09	3.75	0.02	0.92	0.15	0.10	0.00	Calculated
18	25	Pipe	0200-CB-011	0200-CB-010	137.04	27.50	27.27	0.1700	1.500	0.0150	0.05	3.73	0.01	0.77	0.11	0.08	0.00	Calculated
19	26	Pipe	Jun-27	0200-SDMH-020	37.09	24.40	24.30	0.2700	1.500	0.0150	0.01	4.73	0.00	0.24	0.41	0.27	0.00	Calculated
20	27	Pipe	0200-SDMH-020	0200-SDMH-019	277.00	24.20	23.78	0.1500	1.500	0.0150	0.12	3.54	0.03	0.21	0.77	0.51	0.00	Calculated
21	28	Pipe	0200-SDMH-021	0200-SDMH-019	15.07	23.73	23.71	0.1300	2.000	0.0150	3.91	7.14	0.55	2.25	1.09	0.55	0.00	Calculated
22	29	Pipe	0200-SDMH-019	0200-SDMH-018	127.25	23.67	23.53	0.1100	2.000	0.0150	3.90	6.50	0.60	2.71	0.94	0.47	0.00	Calculated
23	30	Pipe	0200-SDMH-022	0200-SDMH-018	164.24	27.50	24.53	1.8100	1.000	0.0150	1.56	4.15	0.38	4.78	0.43	0.43	0.00	Calculated
24	31	Pipe	0200-SDMH-018	0200 STM-3	165.62	23.03	22.86	0.1000	2.500	0.0150	5.46	11.39	0.48	2.21	1.25	0.50	0.00	Calculated
25	32	Pipe	0200-SDMH-011	0200-SDMH-012	370.18	21.39	21.03	0.1000	2.000	0.0150	2.15	6.11	0.35	1.93	0.77	0.38	0.00	Calculated
26	33	Pipe	0200-SDMH-013	0200-SDMH-012	41.91	21.08	21.03	0.1200	2.000	0.0150	0.42	6.77	0.06	0.48	0.65	0.33	0.00	Calculated
27	34	Pipe	0200-CB-005	0200-SDMH-013	59.75	25.09	21.13	6.6300	2.000	0.0150	0.41	53.57	0.01	1.38	0.35	0.18	0.00	Calculated
28	36	Pipe	0200-SDMH-005	0200-SDMH-006	37.14	24.00	21.50	6.7300	2.000	0.0150	1.06	51.87	0.02	2.92	0.36	0.18	0.00	Calculated
29	37	Pipe	0200-SDMH-009	0200-SDMH-006	128.94	28.05	22.25	4.5000	1.000	0.0150	1.29	6.55	0.20	6.33	0.31	0.31	0.00	Calculated
30	38	Pipe	0200-CB-004	0200-CB-003	316.25	26.27	24.69	0.5000	1.500	0.0150	0.03	6.43	0.01	1.01	0.07	0.05	0.00	Calculated
31	39	Pipe	0300-CB-008	0300-SDMH-009	73.01	24.98	24.52	0.6300	1.500	0.0150	1.02	7.23	0.14	2.74	0.41	0.27	0.00	Calculated
32	40	Pipe	0300-CB-009	0300-SDMH-009	41.38	24.63	24.50	0.3100	0.500	0.0150	0.37	0.27	1.37	2.19	0.47	0.93	0.00	> CAPACITY
33	54	Pipe	0300-SDMH-002	0300-CB-001	43.05	23.80	23.20	1.3900	1.500	0.0150	3.92	10.75	0.36	4.99	0.68	0.46	0.00	Calculated
34	55	Pipe	0300-CB-001	0300-PS-001 WW	89.70	23.00	18.35	5.1800	1.500	0.0150	4.21	20.73	0.20	8.68	0.48	0.32	0.00	Calculated
35	56	Pipe	0300-SDMH-001	EXIST SDMH	64.99	19.74	19.65	0.1400	2.000	0.0150	4.03	7.30	0.55	3.14	0.97	0.49	0.00	Calculated
36	58	Pipe	0300-OWS-001	0300-PS-002 WW	23.65	22.12	22.07	0.2100	1.000	0.0150	2.05	1.42	1.44	3.18	0.76	0.76	0.00	> CAPACITY
37	59	Pipe	Jun-46	0300-SDMH-002	45.61	23.95	23.95	0.0000	1.000	0.0150	3.20	0.17	19.15	4.37	0.89	0.90	0.00	> CAPACITY
38	60	Pipe	0200-SDMH-012	0200 STM-2	16.69	21.03	20.98	0.3000	3.000	0.0150	2.55	31.64	0.08	2.39	0.62	0.21	0.00	Calculated
39	63	Pipe	Jun-47	0300-SDMH-001	17.95	23.14	23.14	0.0000	1.000	0.0150	4.02	0.28	14.53	5.30	0.92	0.92	0.00	> CAPACITY
40	64	Pipe	EXIST SDMH	0300 STM-1	4.47	19.65	19.60	1.1200	4.000	0.0150	7.48	131.66	0.06	4.47	0.76	0.19	0.00	Calculated
41	65	Pipe	0300-SDMH-005	0300-SDMH-004	142.65	22.40	22.19	0.1500	1.500	0.0150	2.07	4.24	0.49	1.26	1.50	1.00	215.00	SURCHARGED
42	66	Pipe	0200-SDMH-006	0200 STM-1	0.10	21.50	21.40	100.0000	3.000	0.0150	2.32	578.05	0.00	5.43	0.33	0.11	0.00	Calculated
43	67	Pipe	Jun-51	Jun-50	385.63	21.70	20.79	0.2400	1.000	0.0150	0.87	1.50	0.58	1.11	1.00	1.00	1304.00	SURCHARGED
44	68	Pipe	Jun-50	0300 STM-2	133.68	19.57	18.90	0.5000	1.000	0.0150	1.74	2.49	0.70	2.22	1.00	1.00	1345.00	SURCHARGED
45	178	Pipe	0300-SDMH-003	0300-CB-002	65.12	24.53	24.40	0.2000	1.500	0.0150	0.38	4.07	0.09	1.30	0.35	0.23	0.00	Calculated
46	179	Pipe	0300-CB-003	0300-SDMH-003	75.09	24.88	24.73	0.2000	1.000	0.0150	0.38	1.38	0.28	1.75	0.32	0.32	0.00	Calculated
47	199	Pipe	0300-CB-002	0300-SDMH-002	97.58	24.20	24.00	0.2000	1.000	0.0150	0.83	1.40	0.59	2.14	0.55	0.55	0.00	Calculated
48	204	Pipe	0300-SDMH-004	0300-CS-001	175.87	22.09	22.00	0.0500	1.500	0.0150	2.08	2.06	1.01	1.17	1.50	1.00	390.00	SURCHARGED
49	205	Pipe	0300-SDMH-006	0300-SDMH-005	126.22	22.69	22.50	0.1500	1.500	0.0150	2.07	3.53	0.59	1.32	1.50	1.00	145.00	SURCHARGED
50	206	Pipe	0300-SDMH-007	0300-SDMH-006	34.53	22.74	22.69	0.1400	1.500	0.0150	2.50	3.46	0.72	1.42	1.50	1.00	137.00	SURCHARGED
51	207	Pipe	0300-SDMH-008	0300-SDMH-007	113.77	22.91	22.74	0.1500	1.500	0.0150	2.02	3.52	0.57	1.14	1.50	1.00	122.00	SURCHARGED
52	211	Pipe	0300-CB-004	0300-SDMH-006	66.96	23.50	23.20	0.4500	0.500	0.0150	0.45	0.33	1.37	2.28	0.50	1.00	341.00	SURCHARGED
53	213	Pipe	0300-CB-005	0300-SDMH-007	39.21	24.70	23.48	3.1100	0.500	0.0150	0.65	0.86	0.76	3.61	0.50	1.00	118.00	SURCHARGED
54	215	Pipe	0300-CB-006	0300-SDMH-008	57.30	24.62	23.47	2.0100	0.500	0.0150	0.57	0.69	0.83	3.11	0.50	1.00	184.00	SURCHARGED
55	217	Pipe	0300-CB-007	0300-SDMH-008	60.46	24.61	24.07	0.8900	0.500	0.0150	0.49	0.46	1.06	2.70	0.50	1.00	57.00	SURCHARGED
56	223	Pipe	0300-SDMH-009	0300-SDMH-008	369.87	23.47	22.91	0.1500	1.500	0.0150	1.36	3.54	0.38	0.94	1.48	0.99	0.00	Calculated
57	0300-CS-001 Orr	Orifice	0300-CS-001	0300-OWS-001		22.00	22.12		0.670		2.05							
58	0600 PS 001	Pump	0300-PS-001 WW	Jun-47		10.00	23.14				4.18							

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flo Dep
					(ft)	(ft)	(ft)	(%)	(ft)		(cfs)	(cfs)		(ft/sec)	(
59	0600 PS 002	Pump	0300-PS-002 WW	Jun-46		15.00	23.95				3.53				

Subbasin Hydrology

Subbasin : 0200-1

Input Data

Area (ac) 0.62
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 1.0000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.62		98

Time of Concentration

TOC Method : Kirpich

Sheet Flow Equation :

Tc = (0.0078 * ((Lf^0.77) * (Sf^-0.385)))

Where :

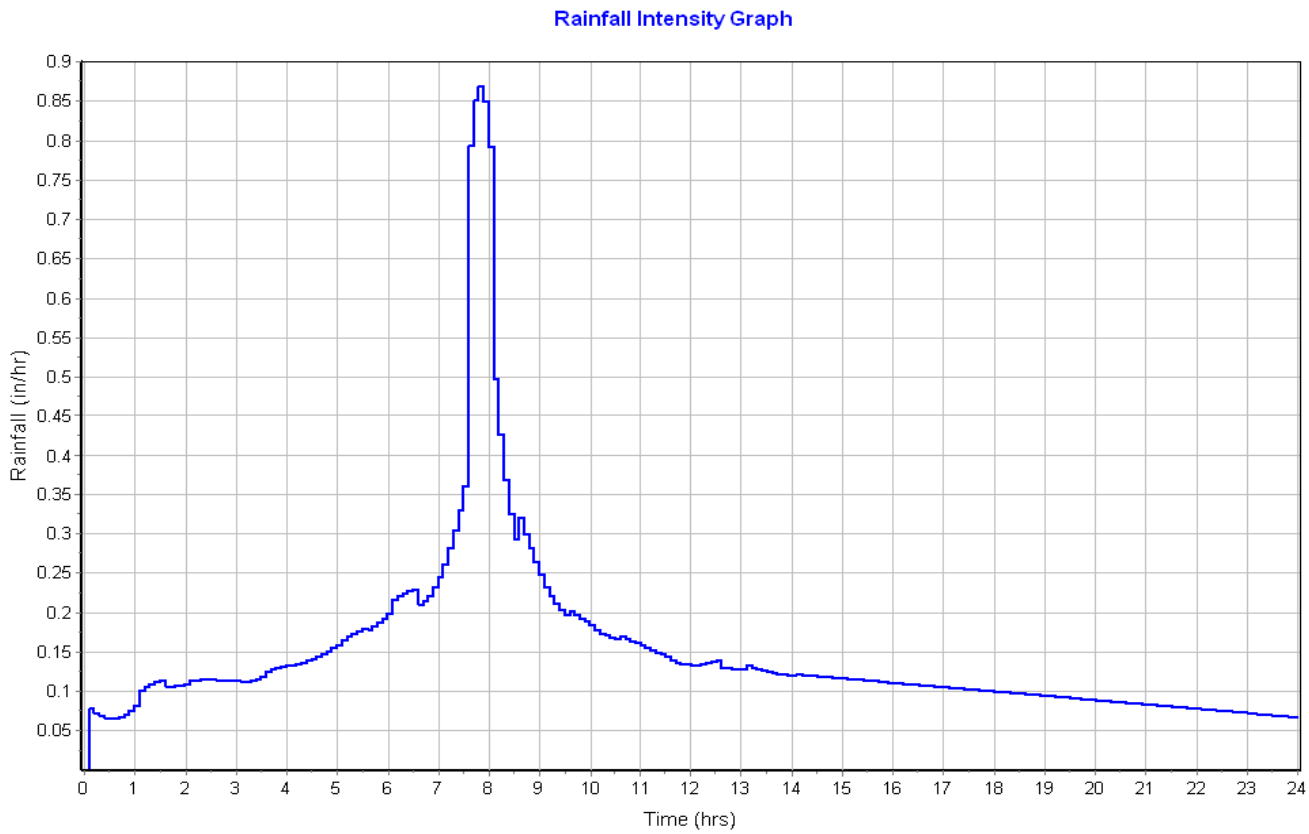
Tc = Time of Concentration (min)
Lf = Flow Length (ft)
Sf = Slope (ft/ft)

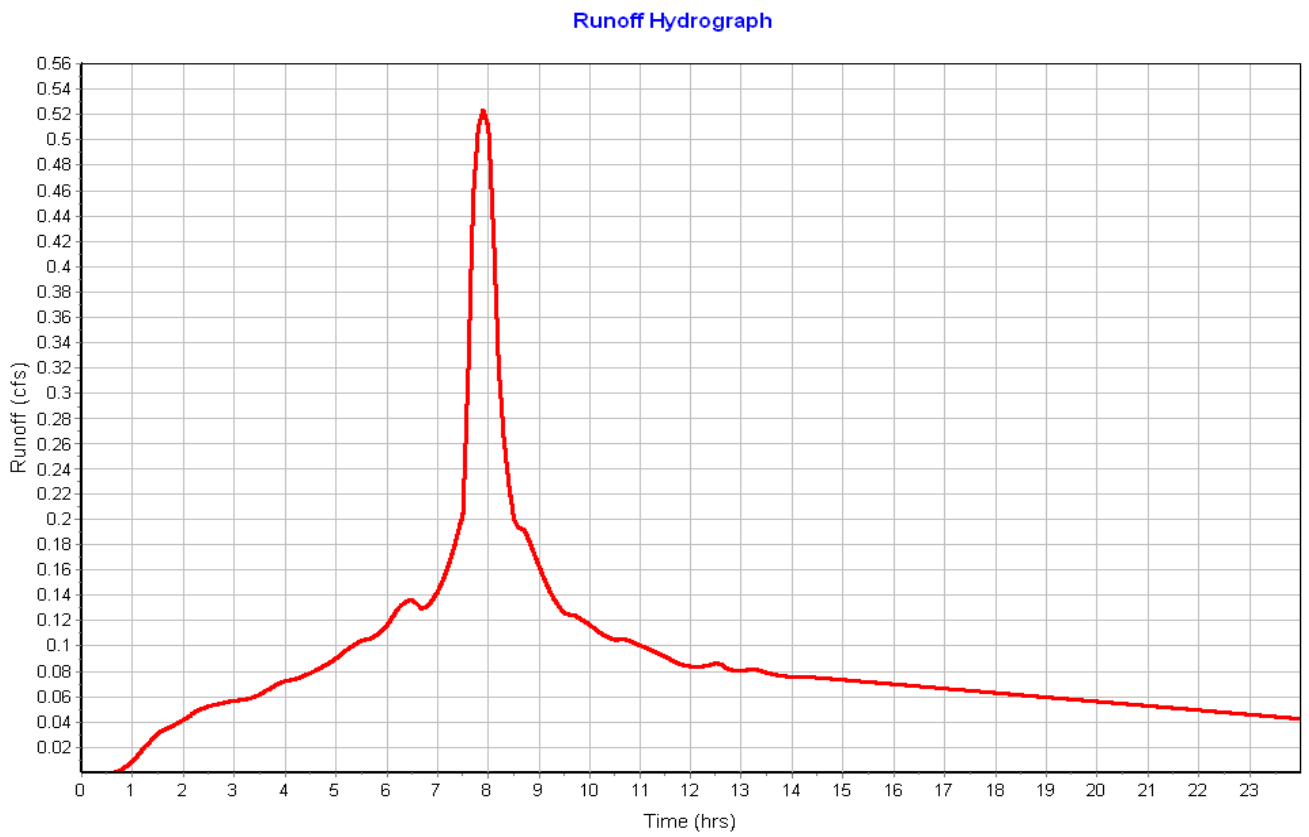
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 0.52
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-1





Subbasin : 0200-10

Input Data

Area (ac) 0.15
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.15		76

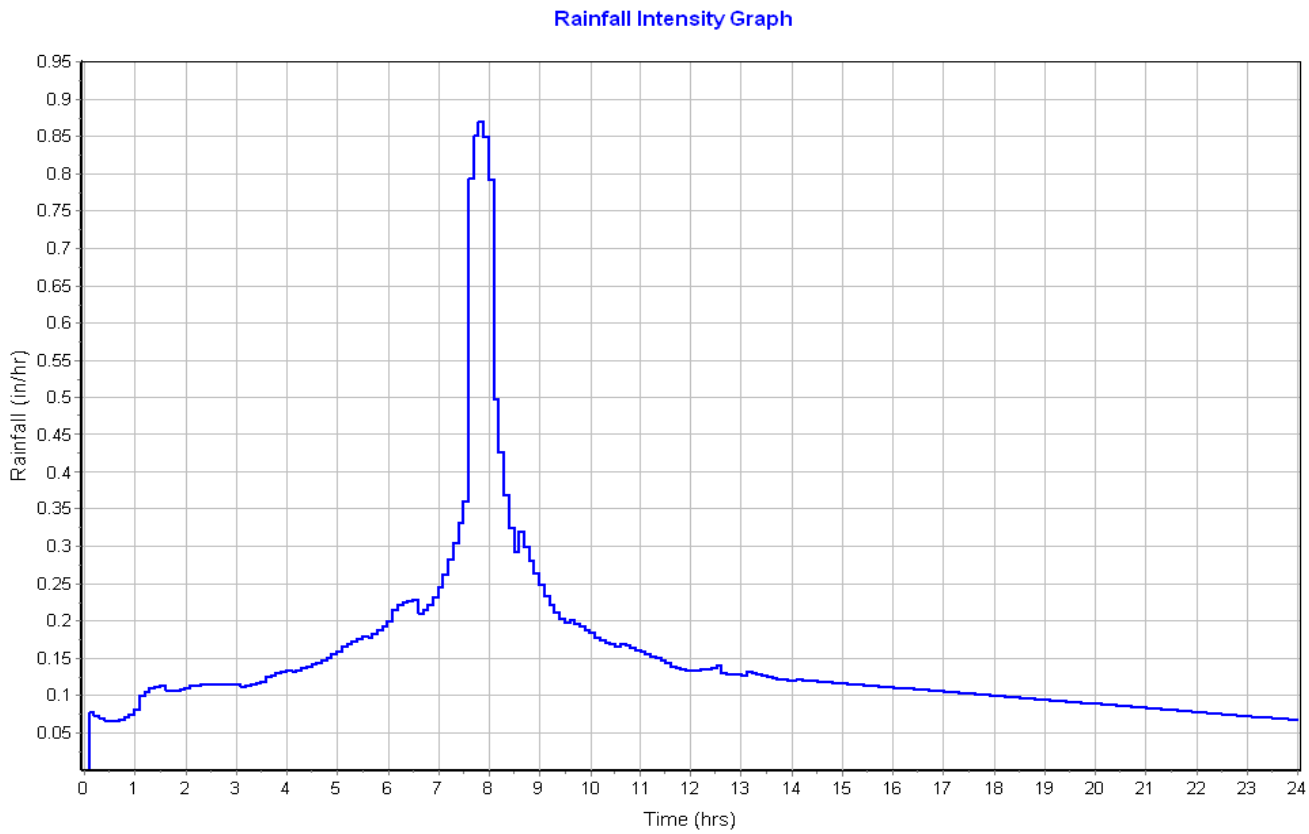
Time of Concentration

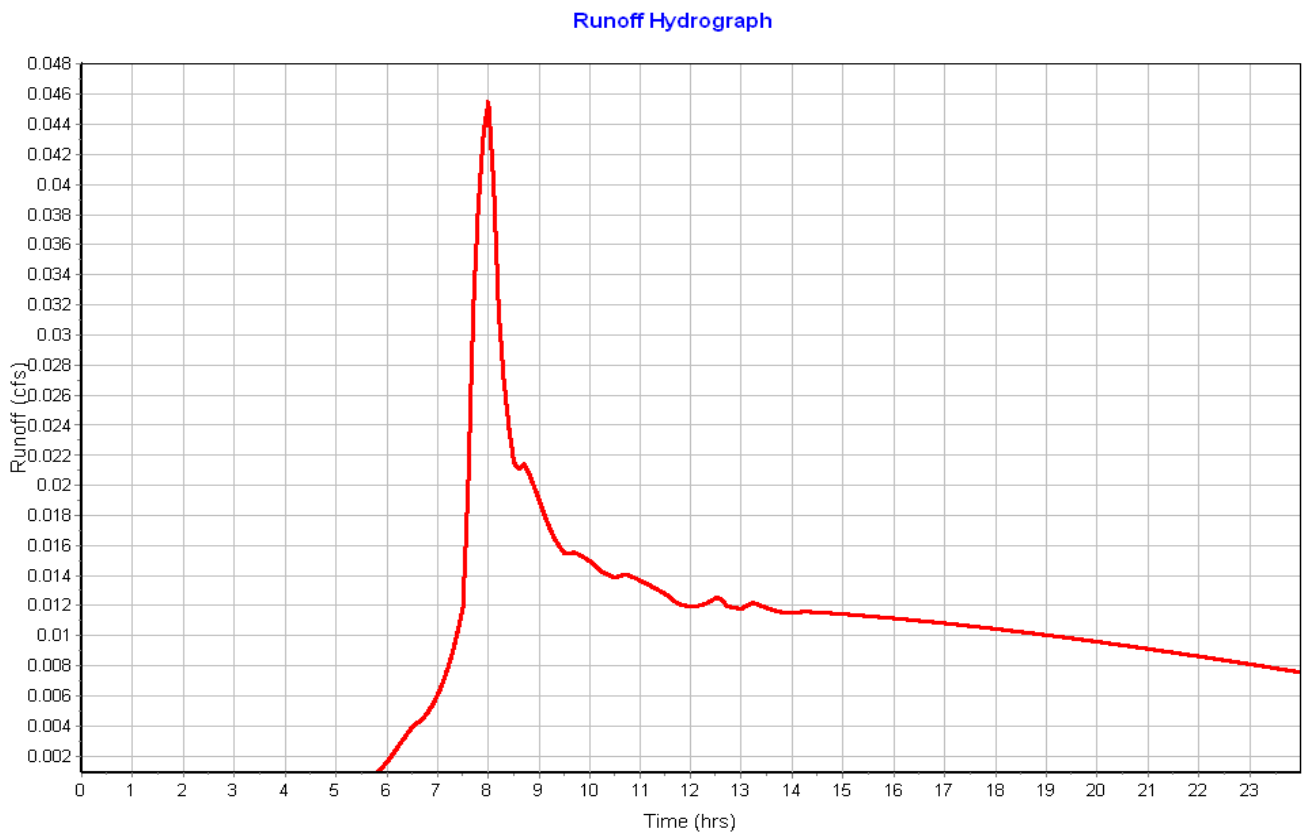
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 1.43
Peak Runoff (cfs) 0.05
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-10





Subbasin : 0200-11

Input Data

Area (ac) 0.16
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.16		76

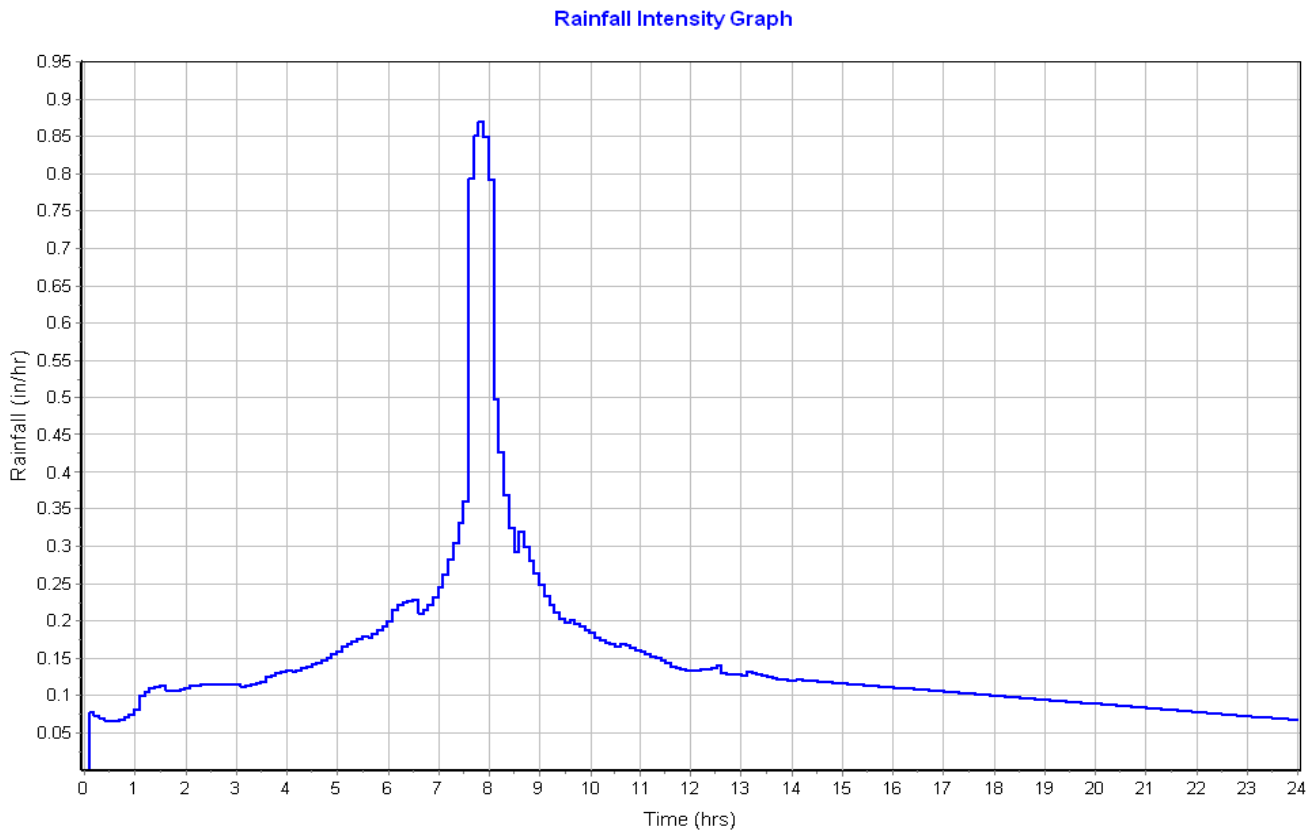
Time of Concentration

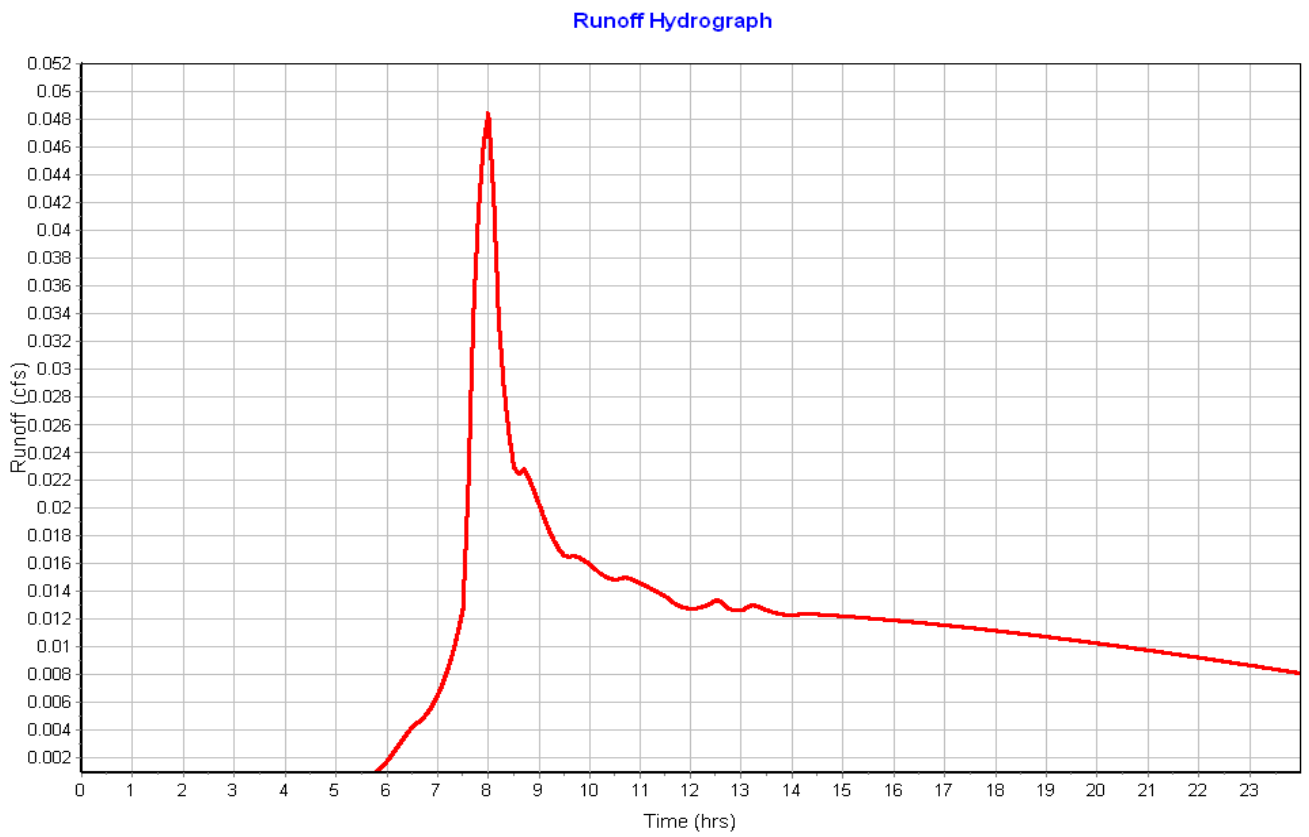
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 1.43
Peak Runoff (cfs) 0.05
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-11





Subbasin : 0200-2

Input Data

Area (ac) 0.18
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.18		98

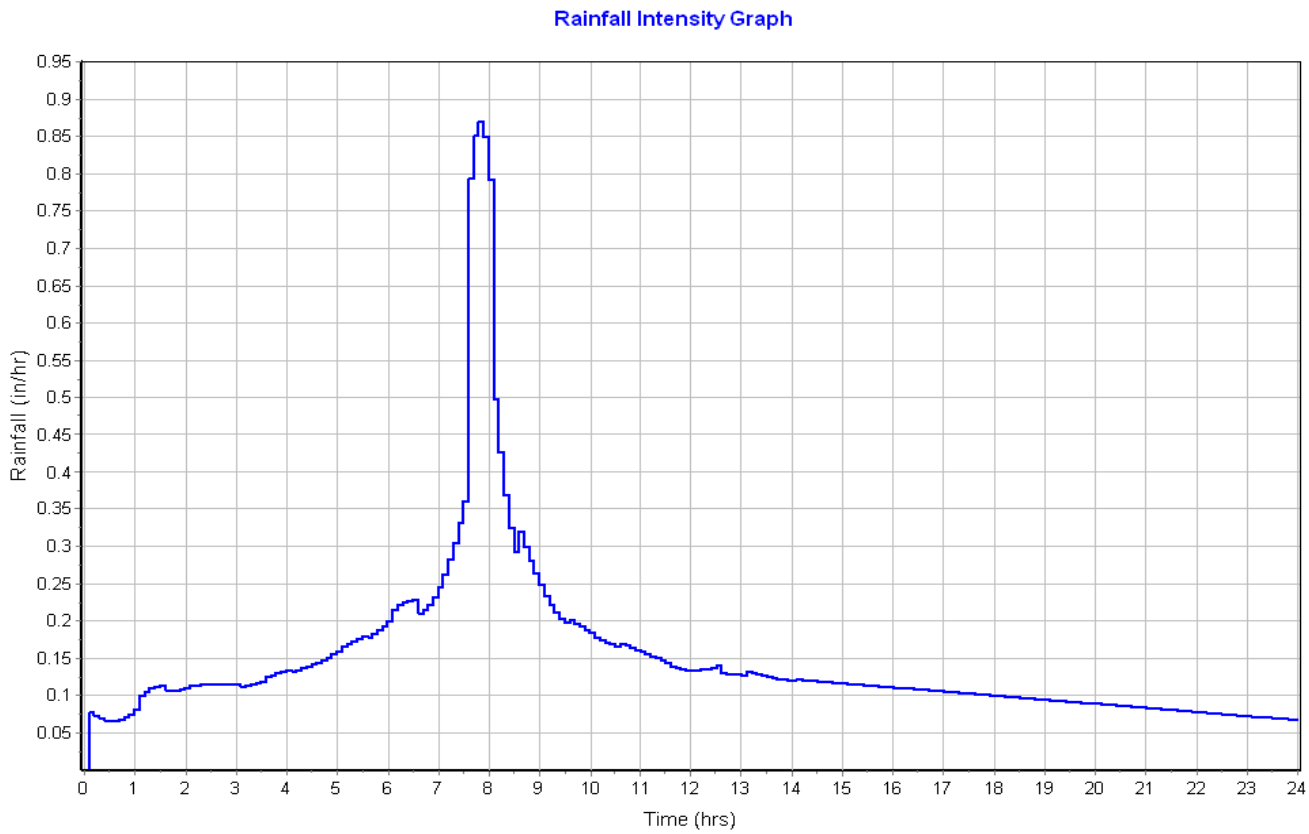
Time of Concentration

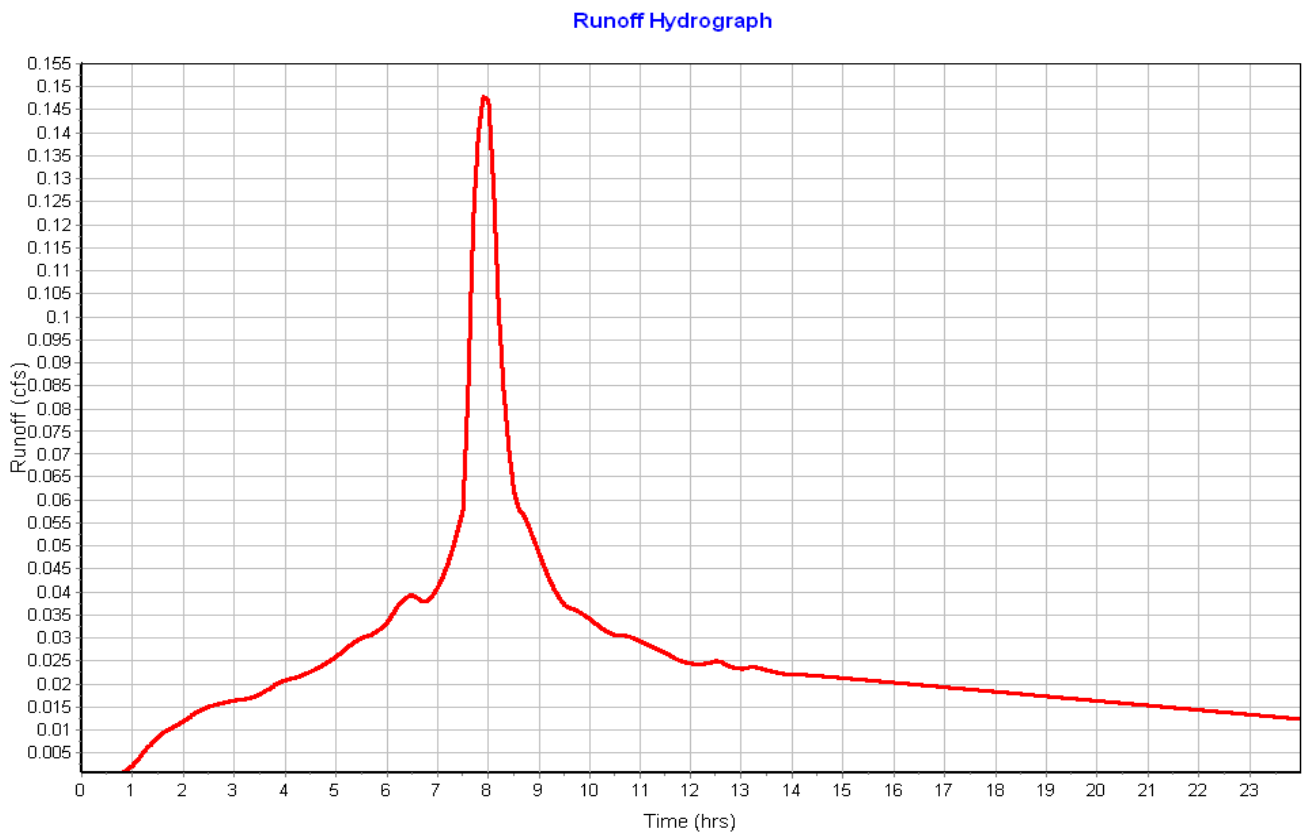
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 0.15
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : 0200-2





Subbasin : 0200-3

Input Data

Area (ac) 0.32
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.32		76

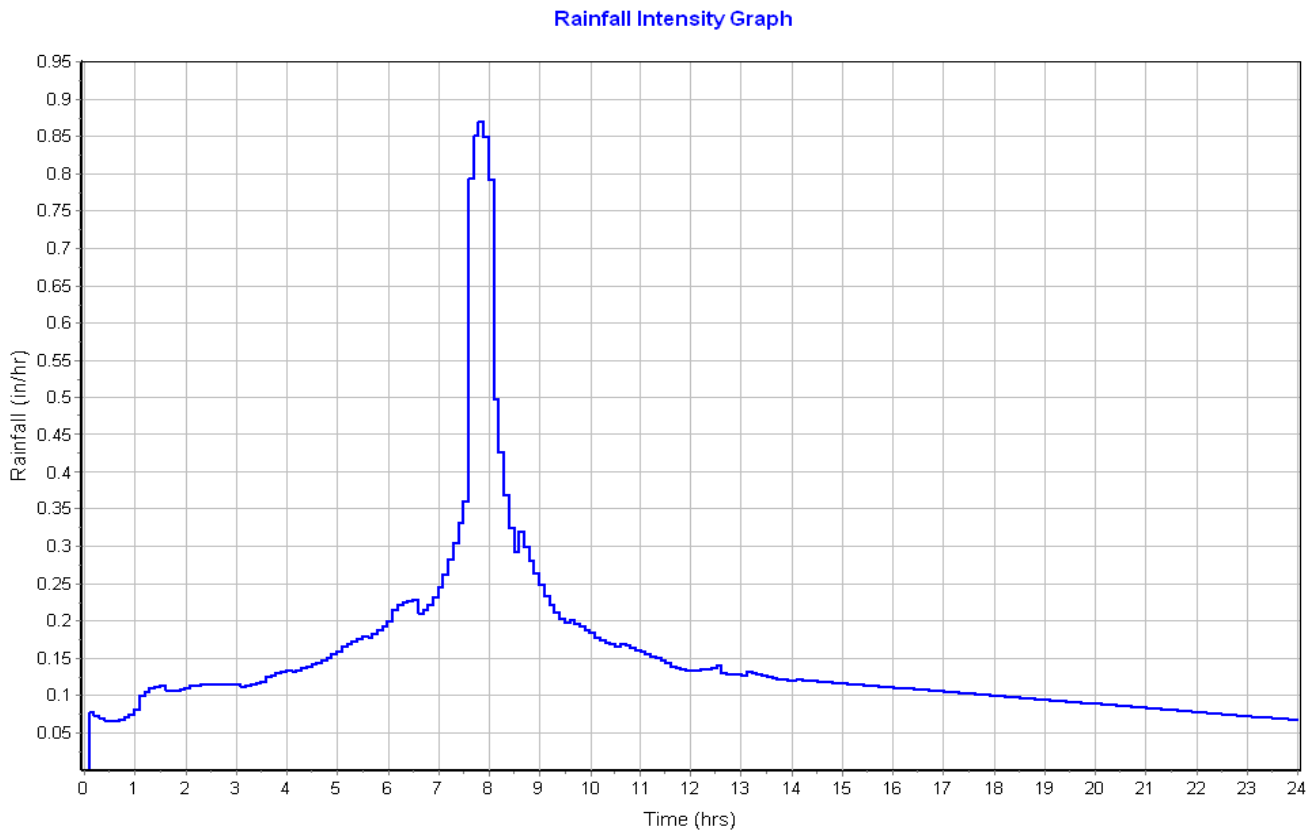
Time of Concentration

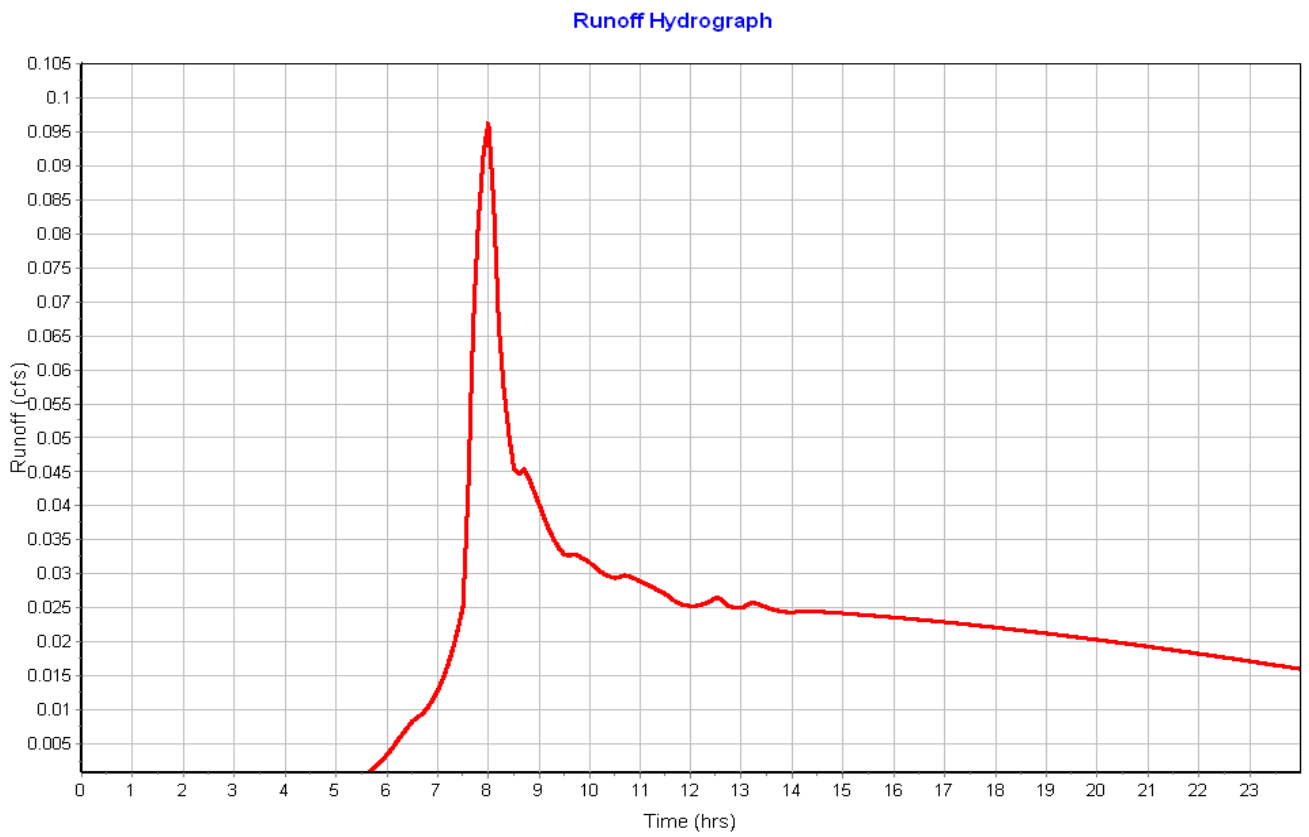
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 1.43
Peak Runoff (cfs) 0.10
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-3





Subbasin : 0200-4

Input Data

Area (ac) 0.11
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.11		76

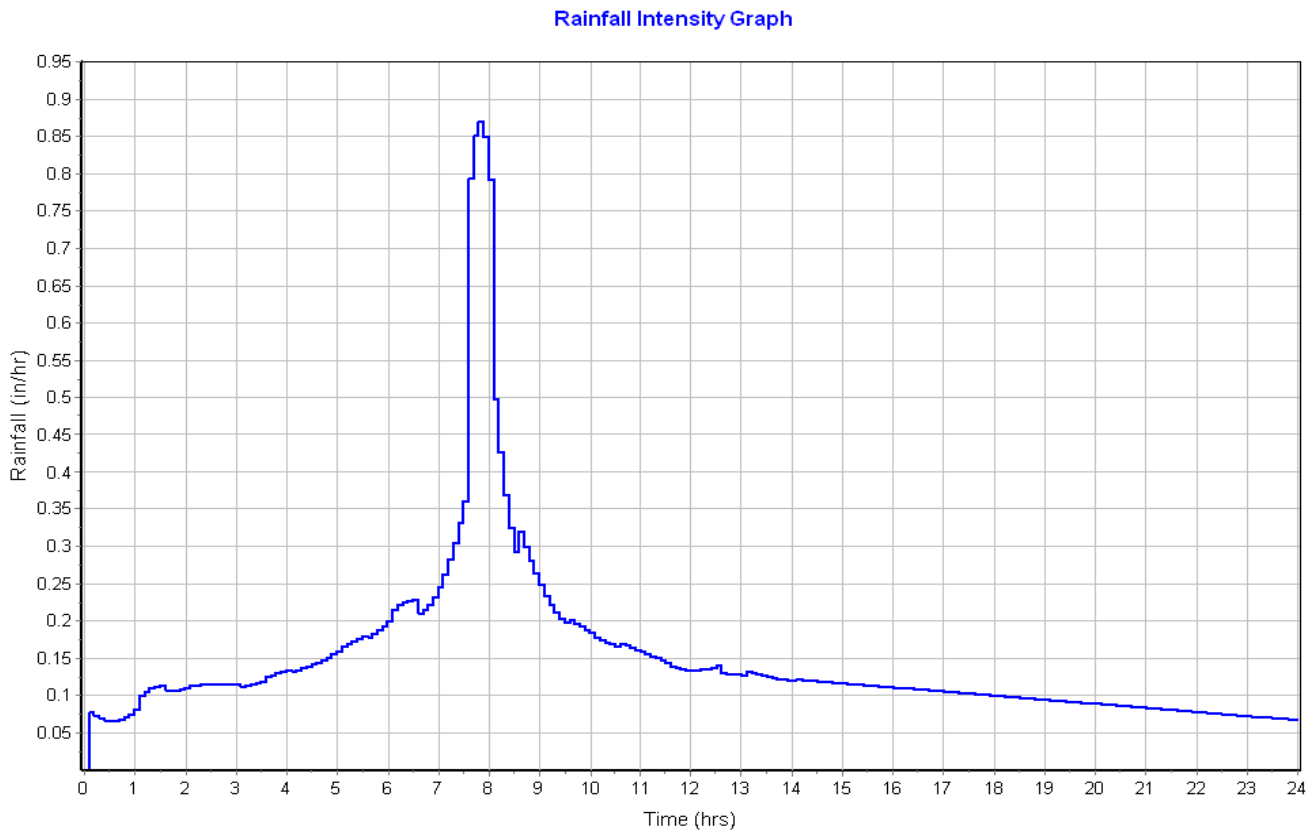
Time of Concentration

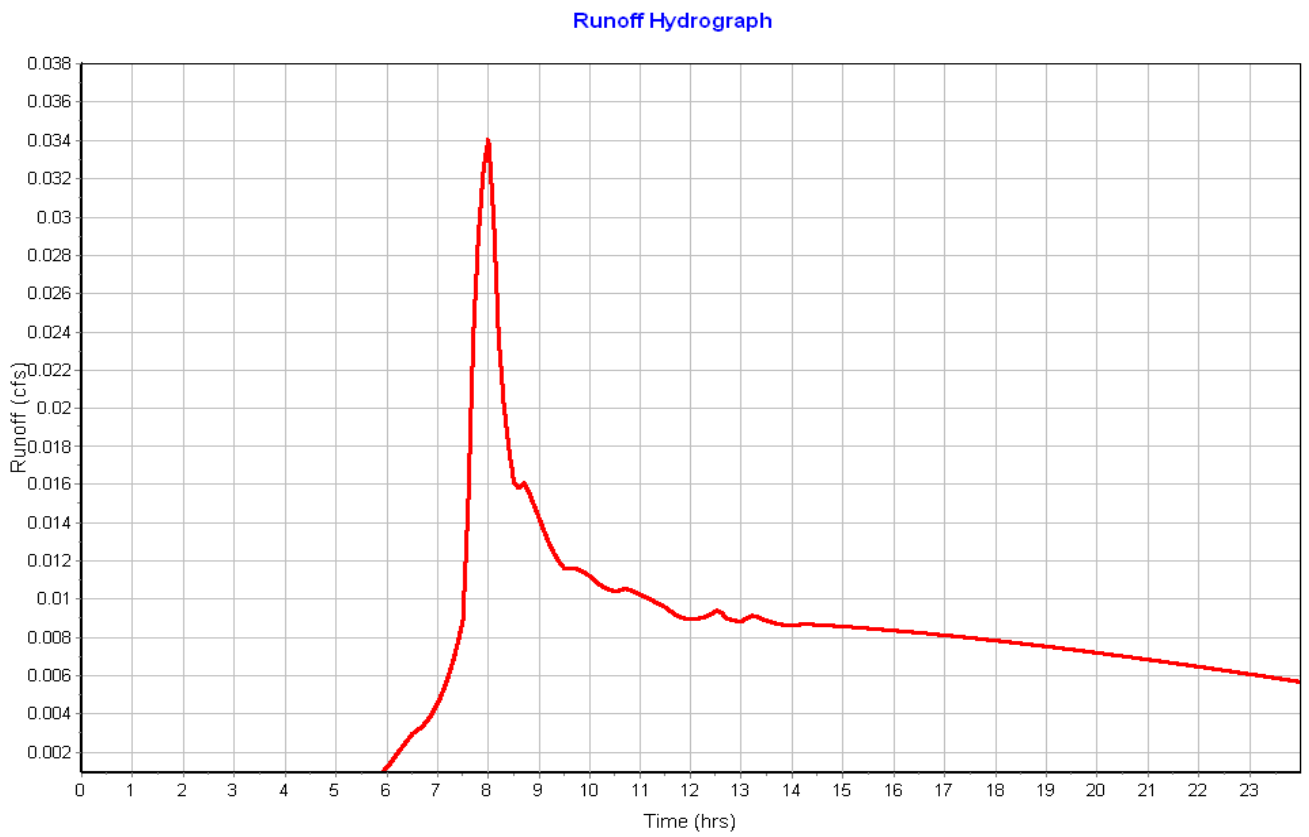
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 1.43
Peak Runoff (cfs) 0.03
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-4





Subbasin : 0200-5

Input Data

Area (ac) 0.23
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.23		76

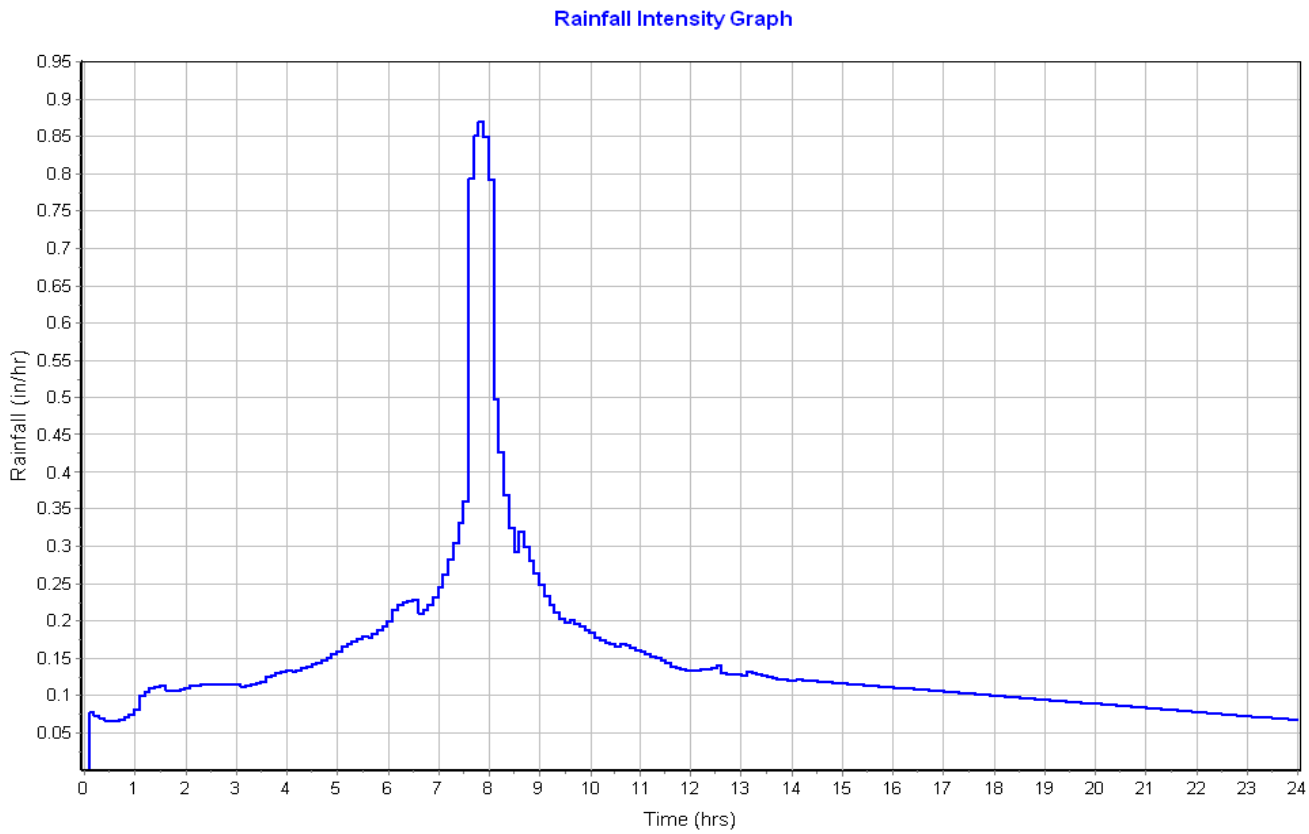
Time of Concentration

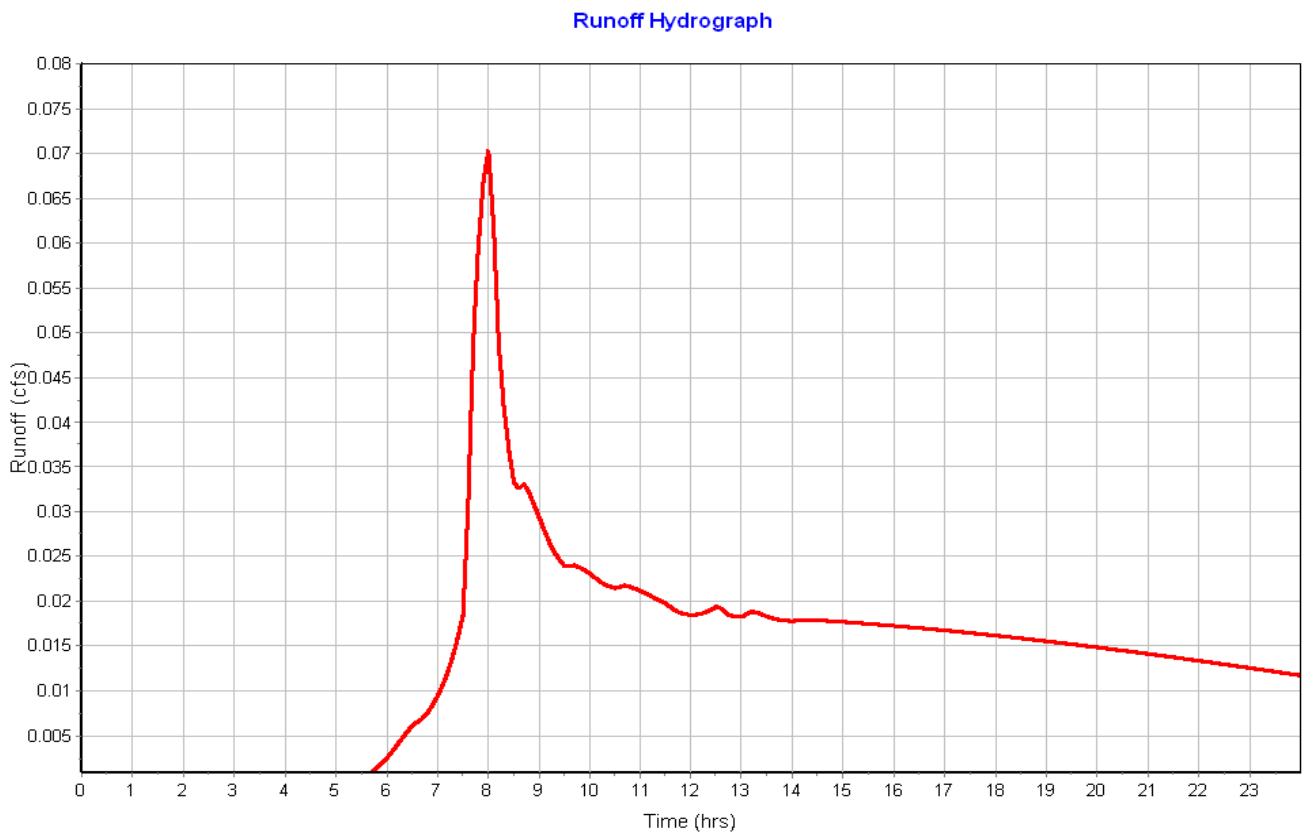
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 1.43
Peak Runoff (cfs) 0.07
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-5





Subbasin : 0200-6

Input Data

Area (ac) 0.10
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.10		76

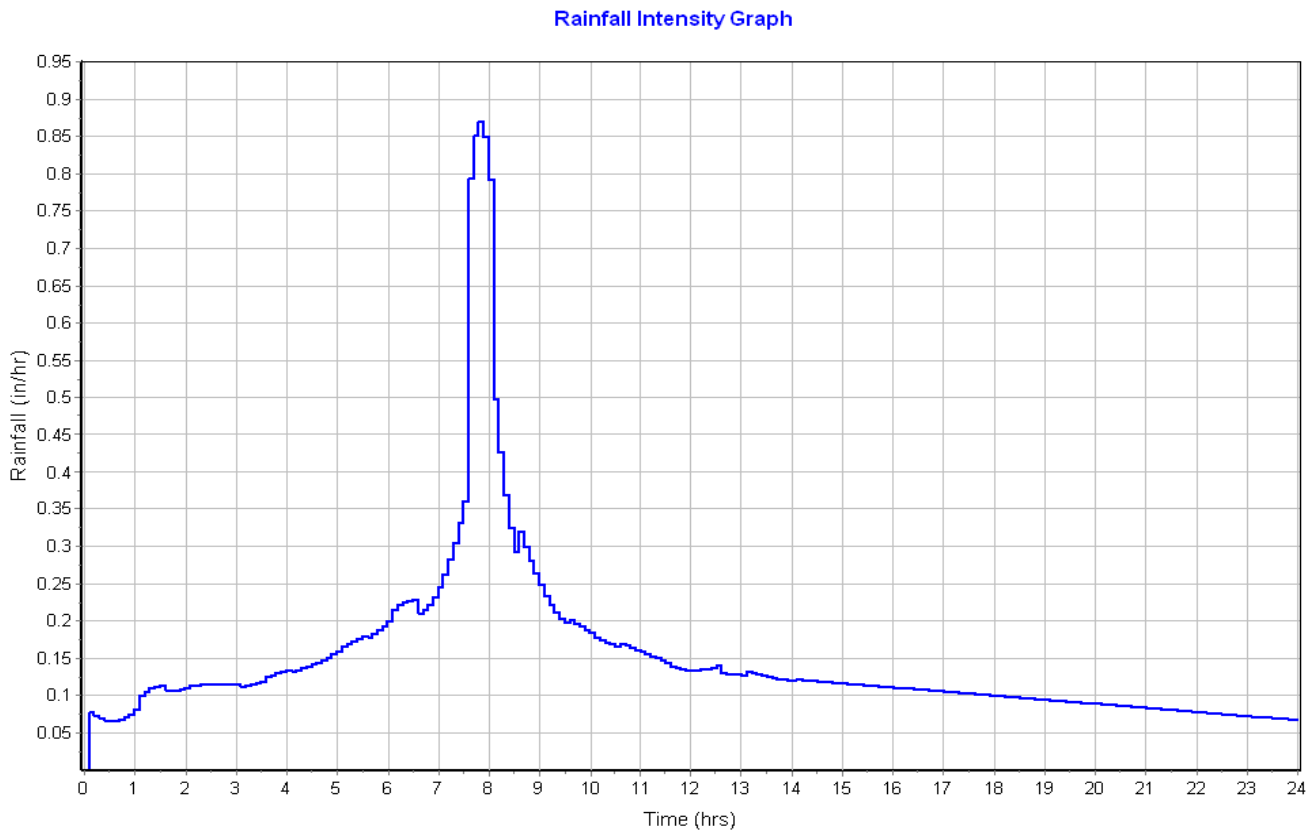
Time of Concentration

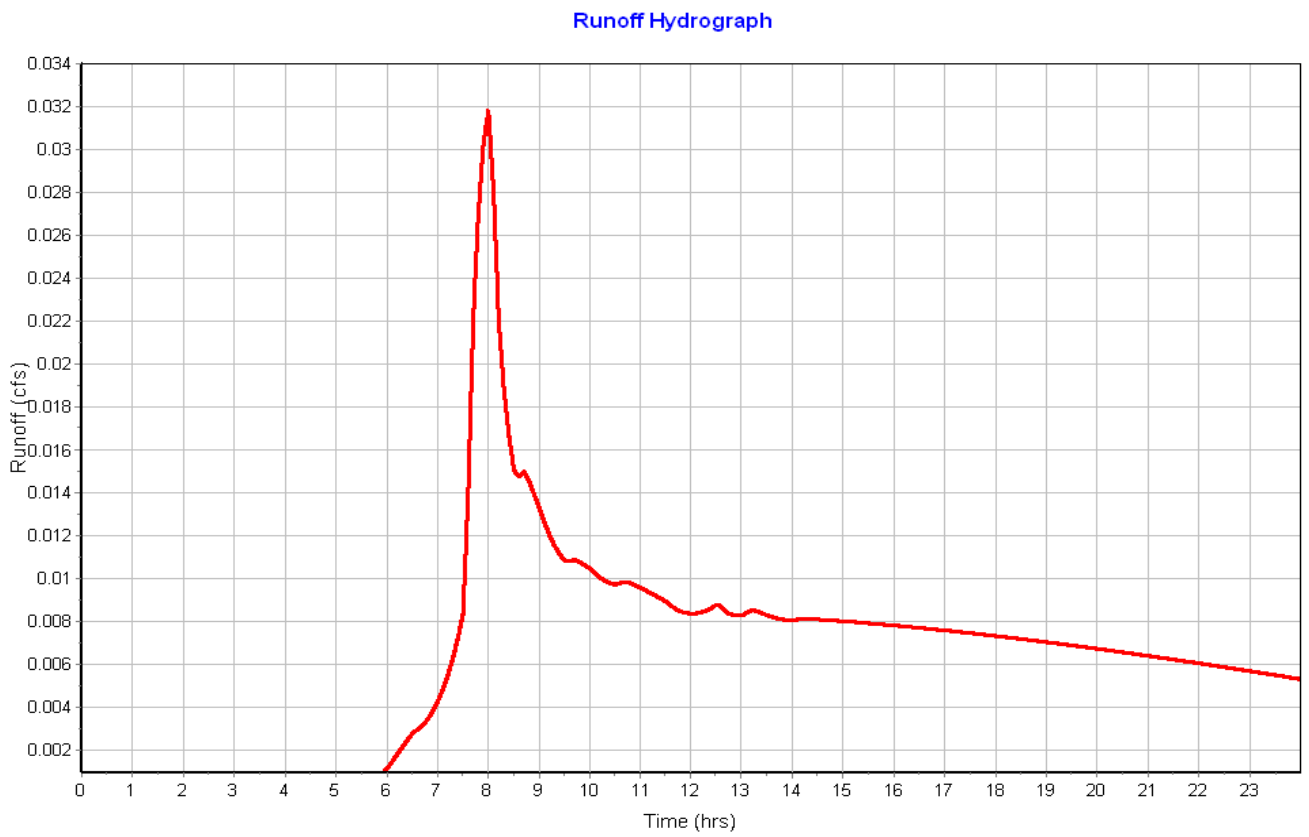
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 1.43
Peak Runoff (cfs) 0.03
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-6





Subbasin : 0200-7

Input Data

Area (ac) 0.13
Impervious Area (%) 24.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.13		81.28

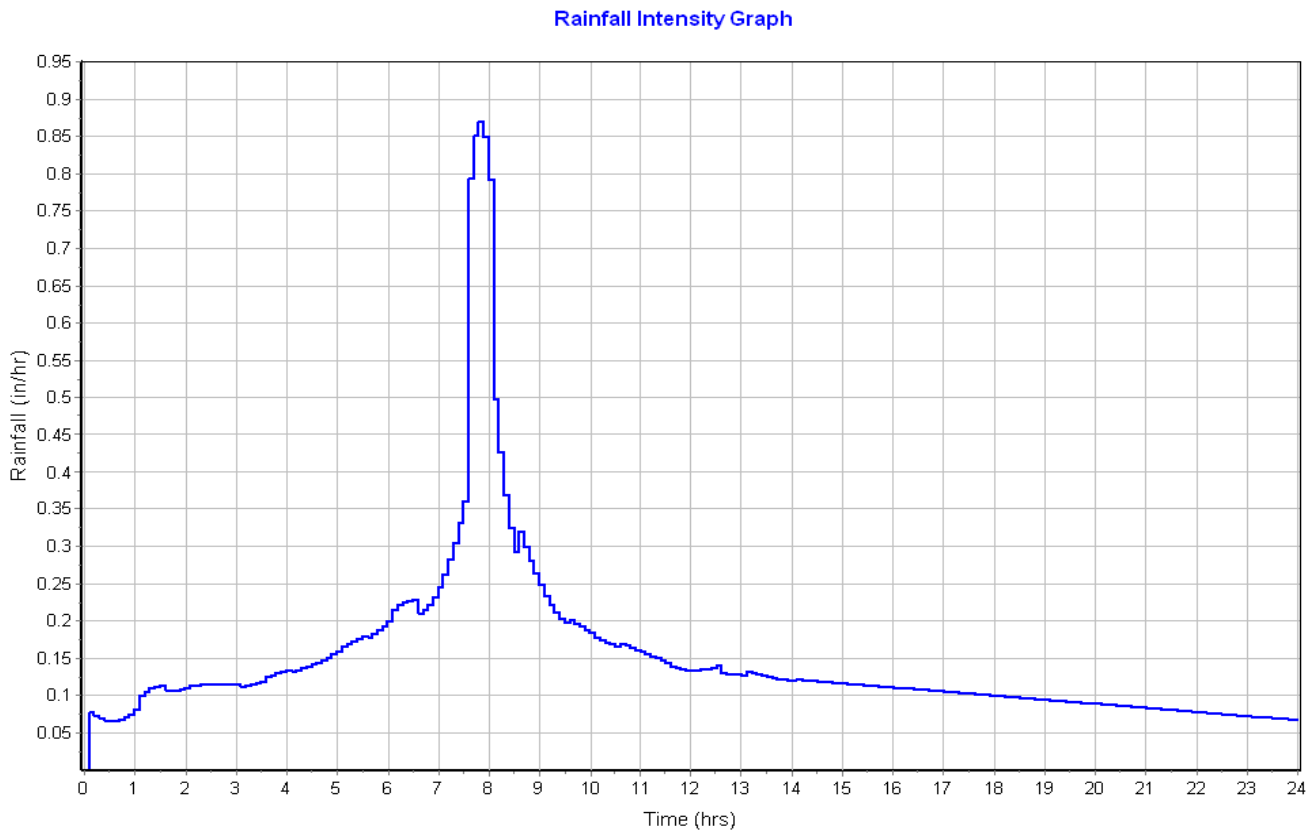
Time of Concentration

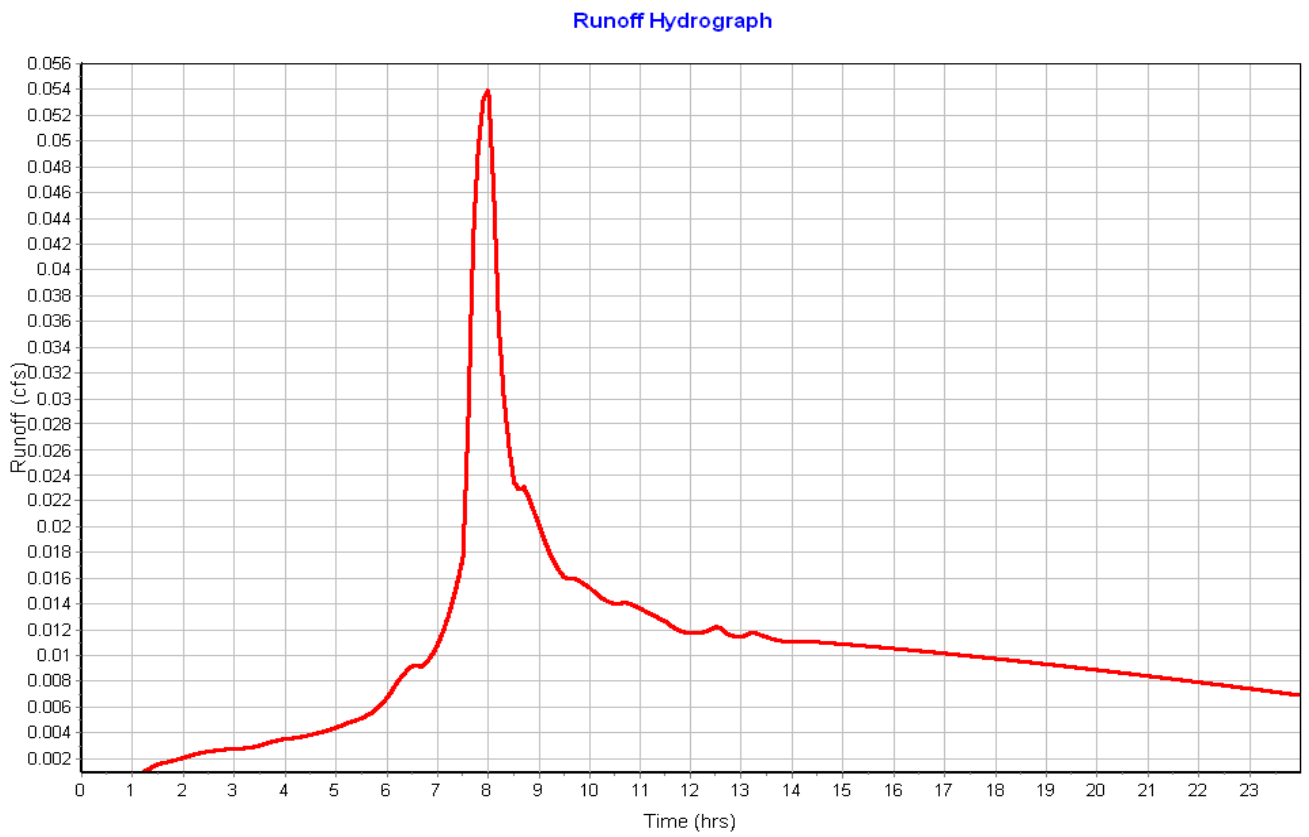
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 1.89
Peak Runoff (cfs) 0.05
Weighted Curve Number 81.28
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-7





Subbasin : 0200-8

Input Data

Area (ac) 0.13
Impervious Area (%) 10.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.13		78.2

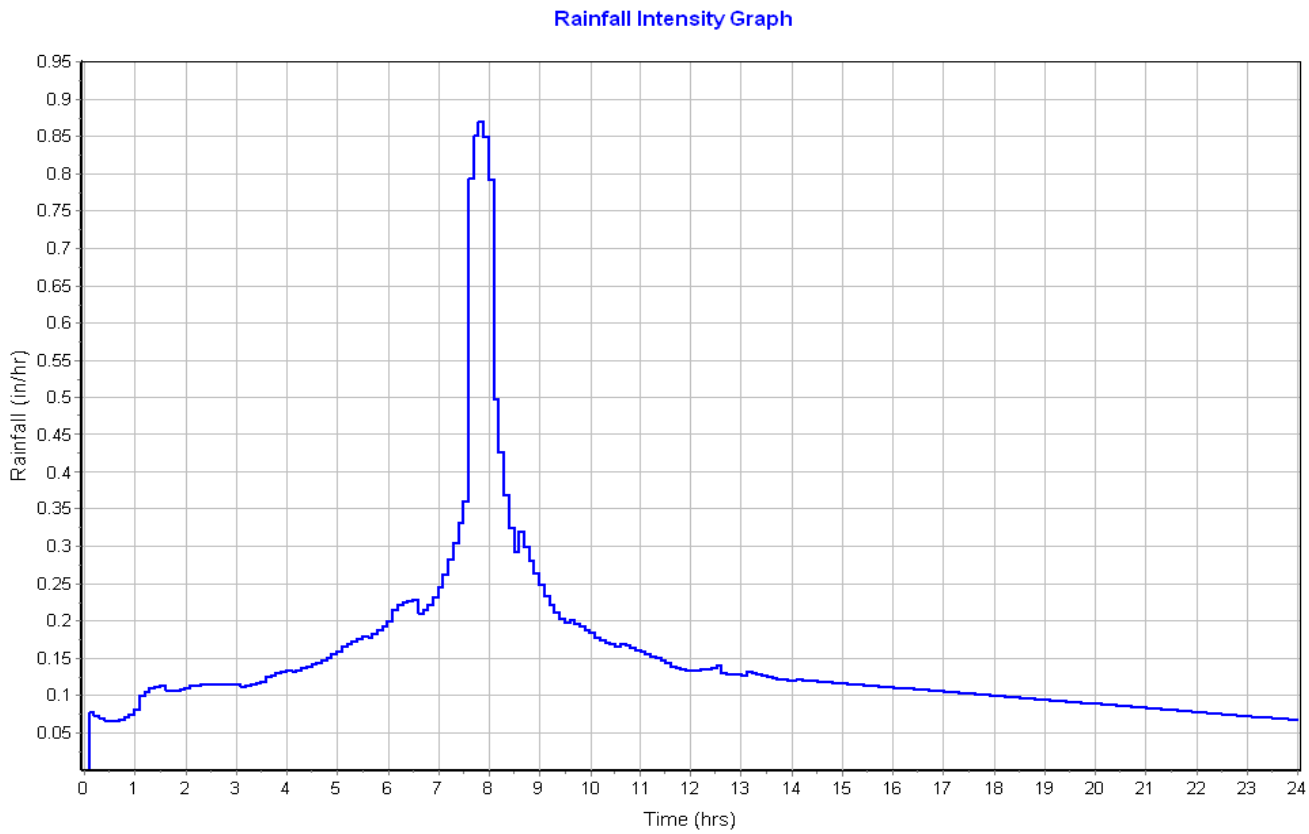
Time of Concentration

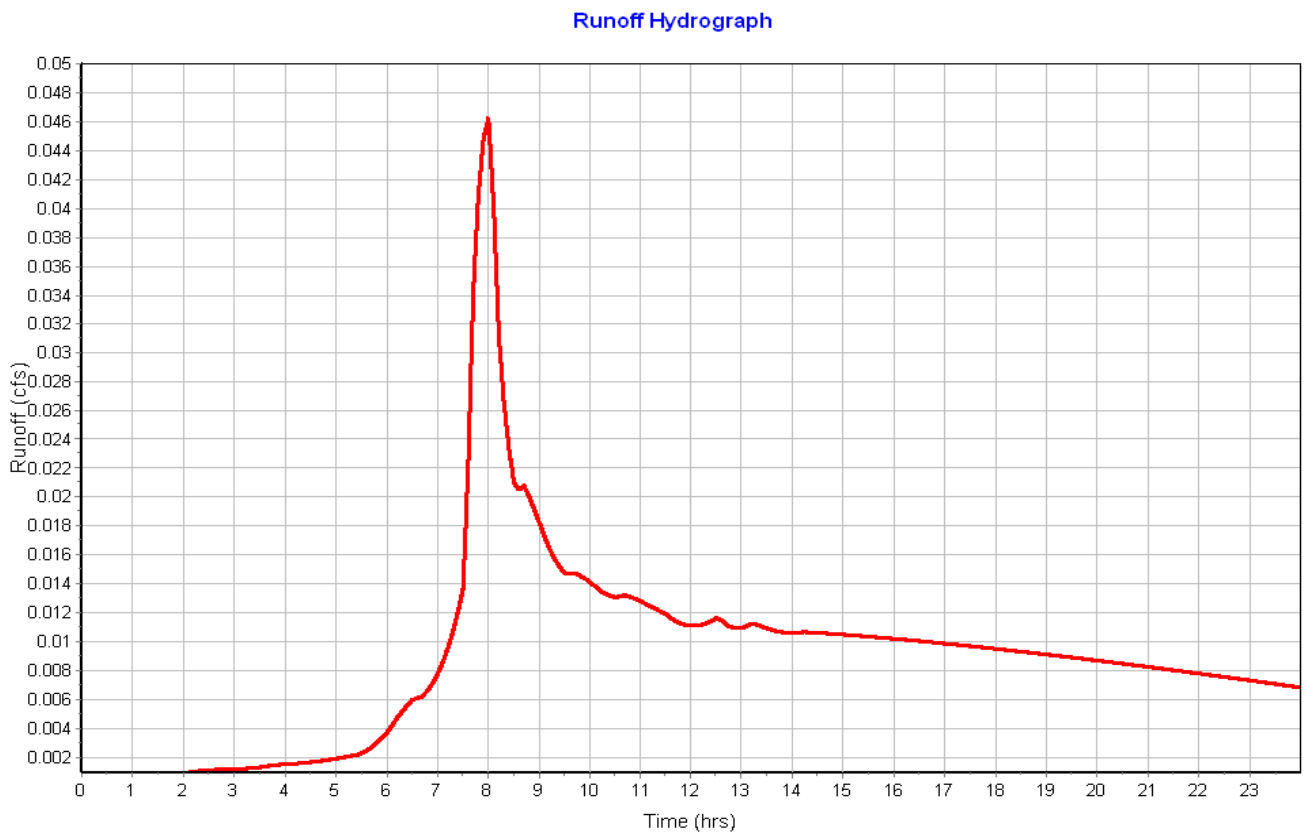
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 1.63
Peak Runoff (cfs) 0.05
Weighted Curve Number 78.20
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-8





Subbasin : 0200-9

Input Data

Area (ac) 0.45
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.45		76

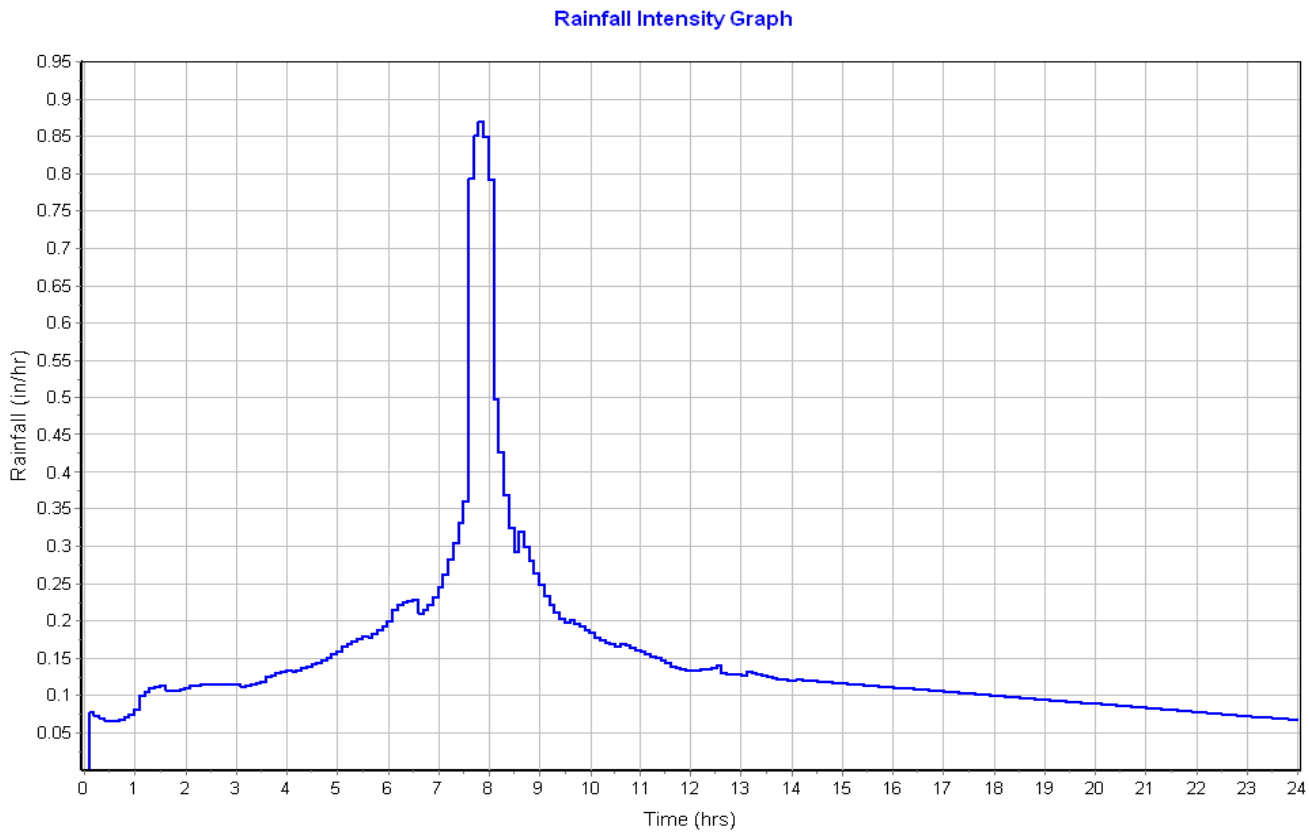
Time of Concentration

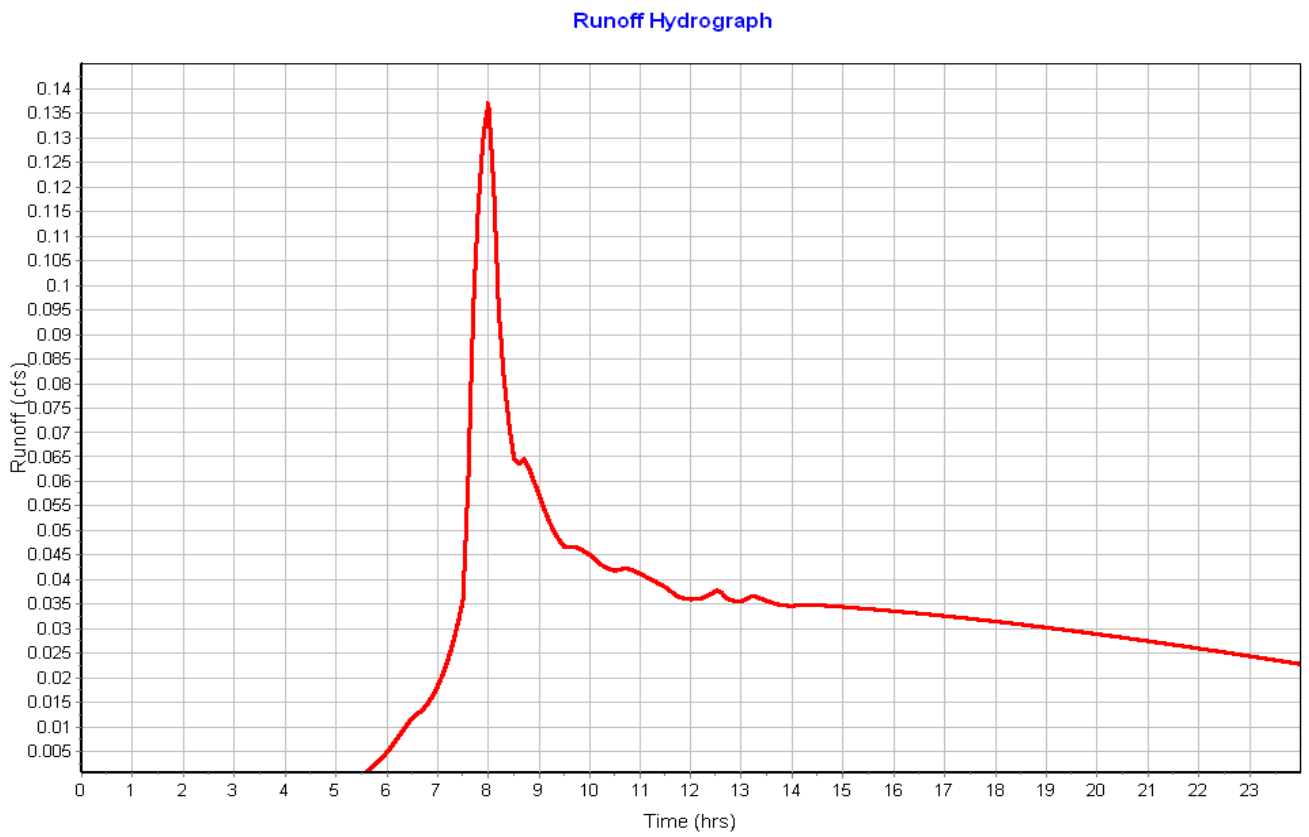
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 1.43
Peak Runoff (cfs) 0.14
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-9





Subbasin : 0300-1

Input Data

Area (ac) 0.48
Impervious Area (%) 75.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.48		92.5

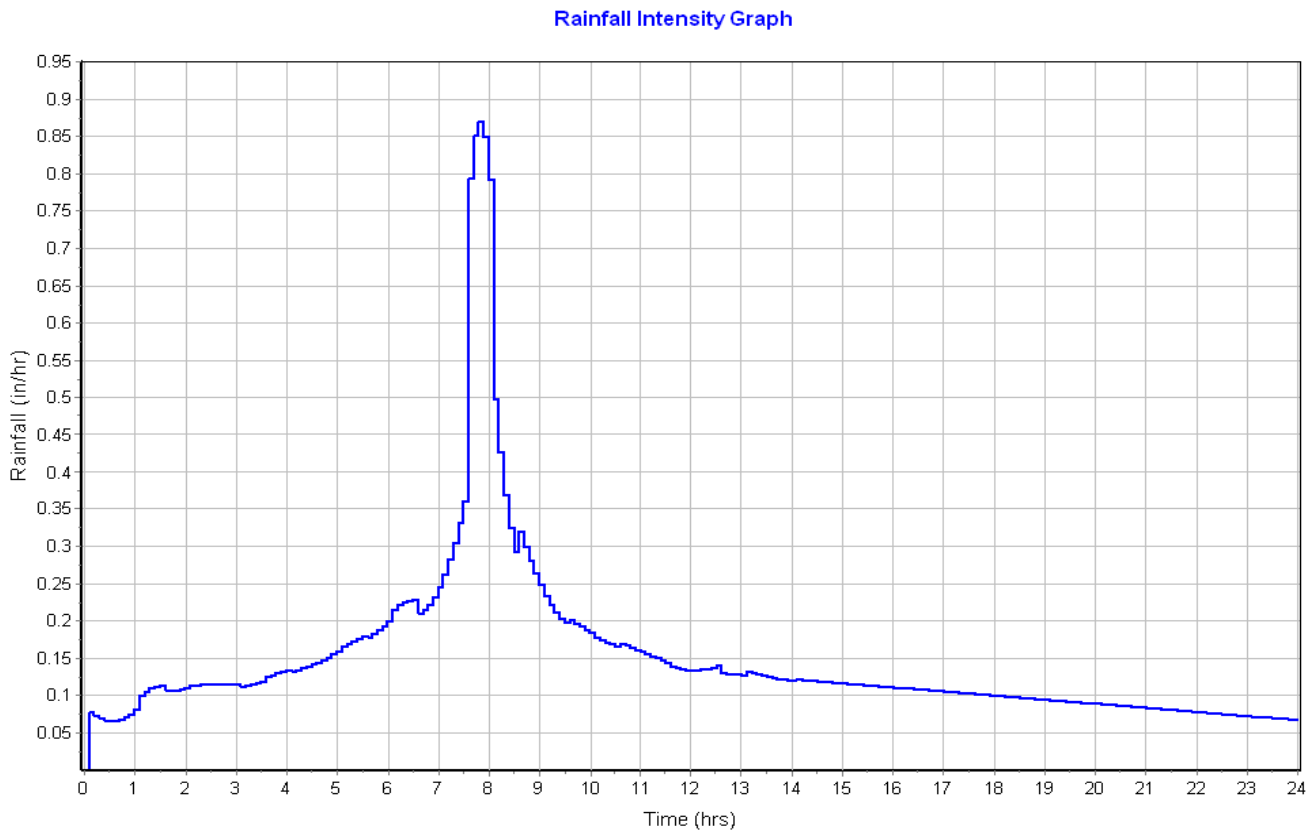
Time of Concentration

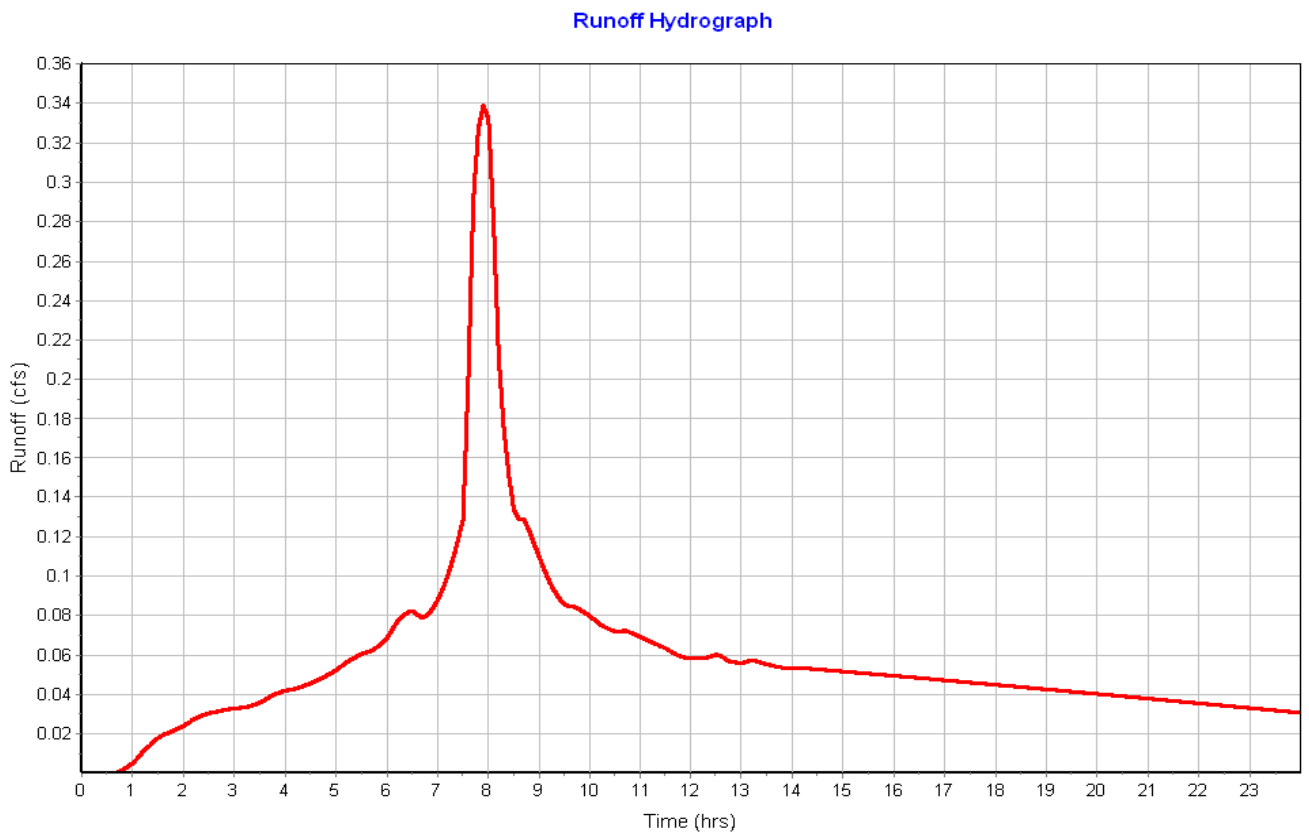
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 2.88
Peak Runoff (cfs) 0.34
Weighted Curve Number 92.50
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0300-1





Subbasin : 0300-2

Input Data

Area (ac) 0.55
Impervious Area (%) 73.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.55		92.06

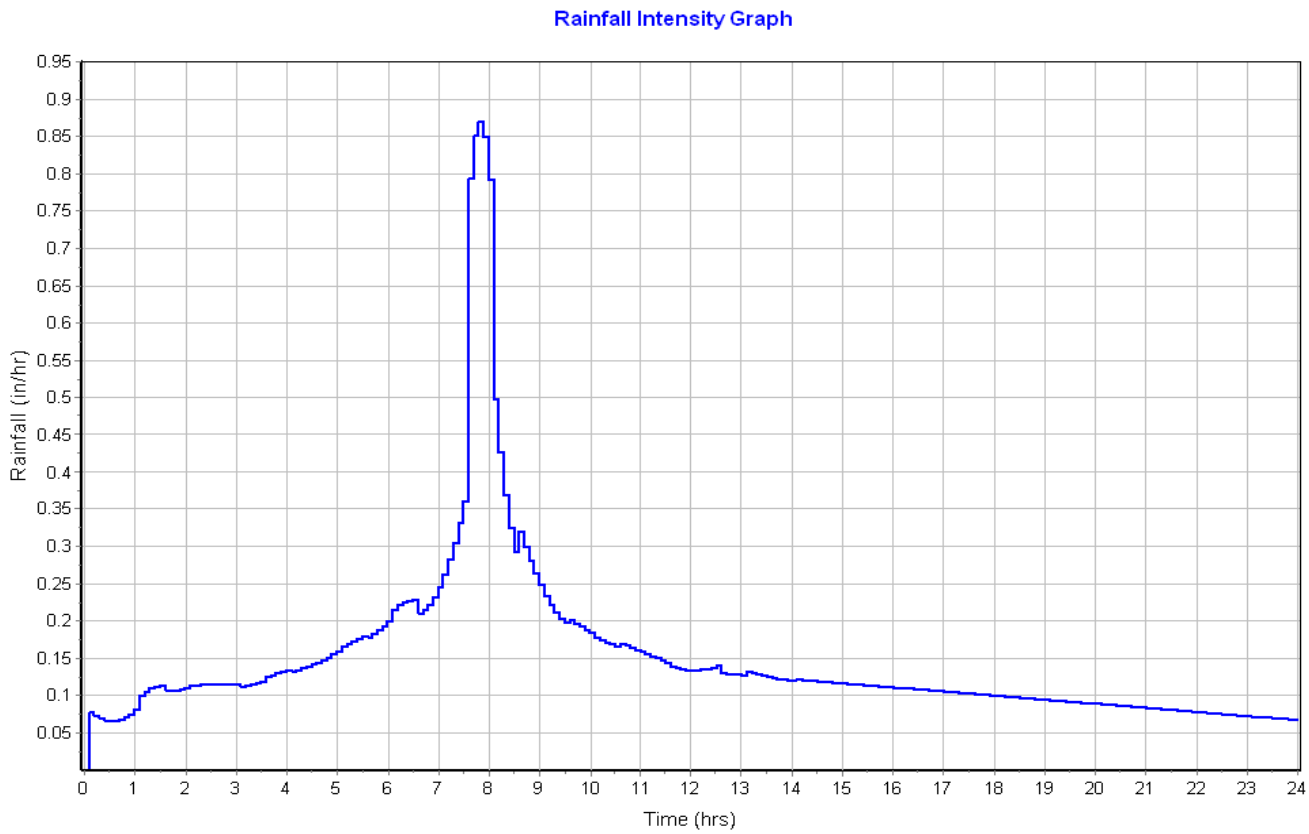
Time of Concentration

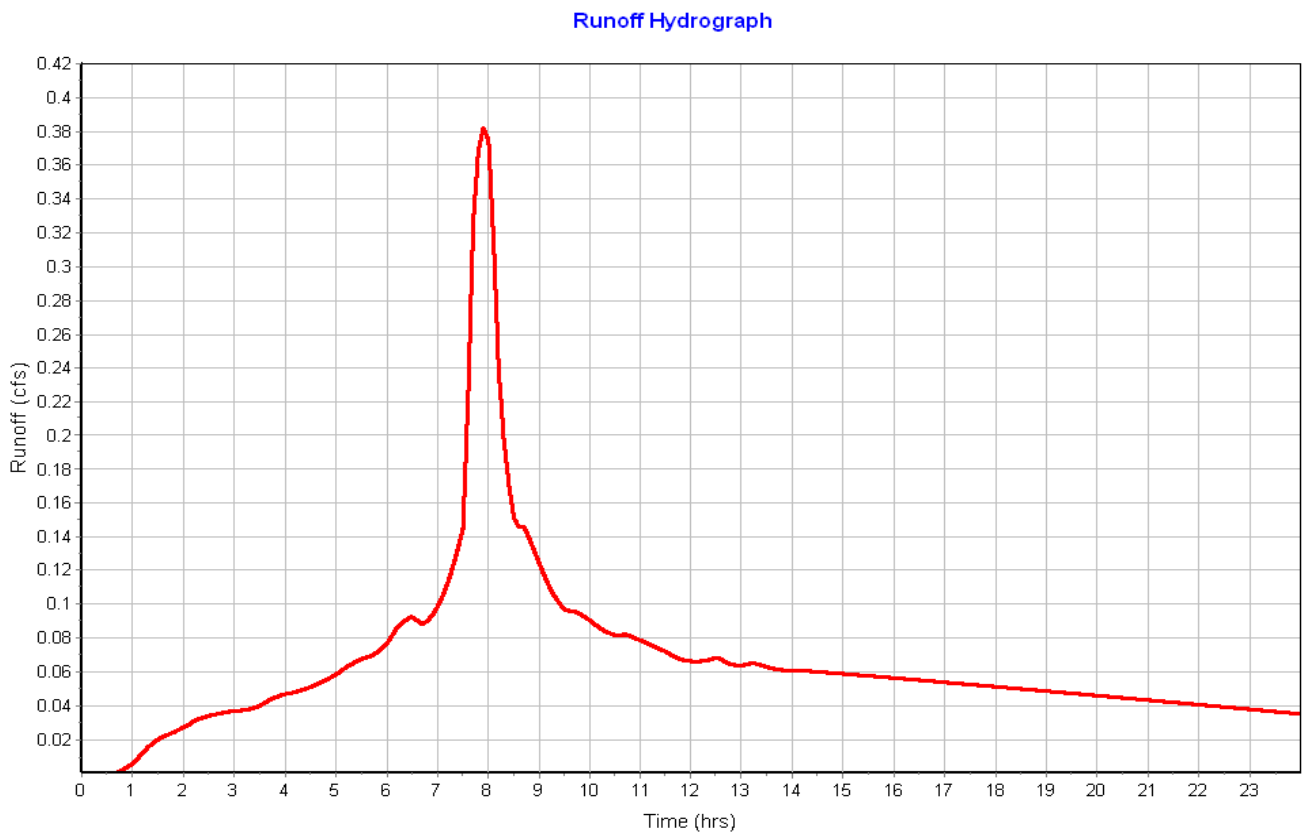
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 2.84
Peak Runoff (cfs) 0.38
Weighted Curve Number 92.06
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0300-2





Subbasin : 0300-3

Input Data

Area (ac) 0.55
Impervious Area (%) 73.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.55		92.06

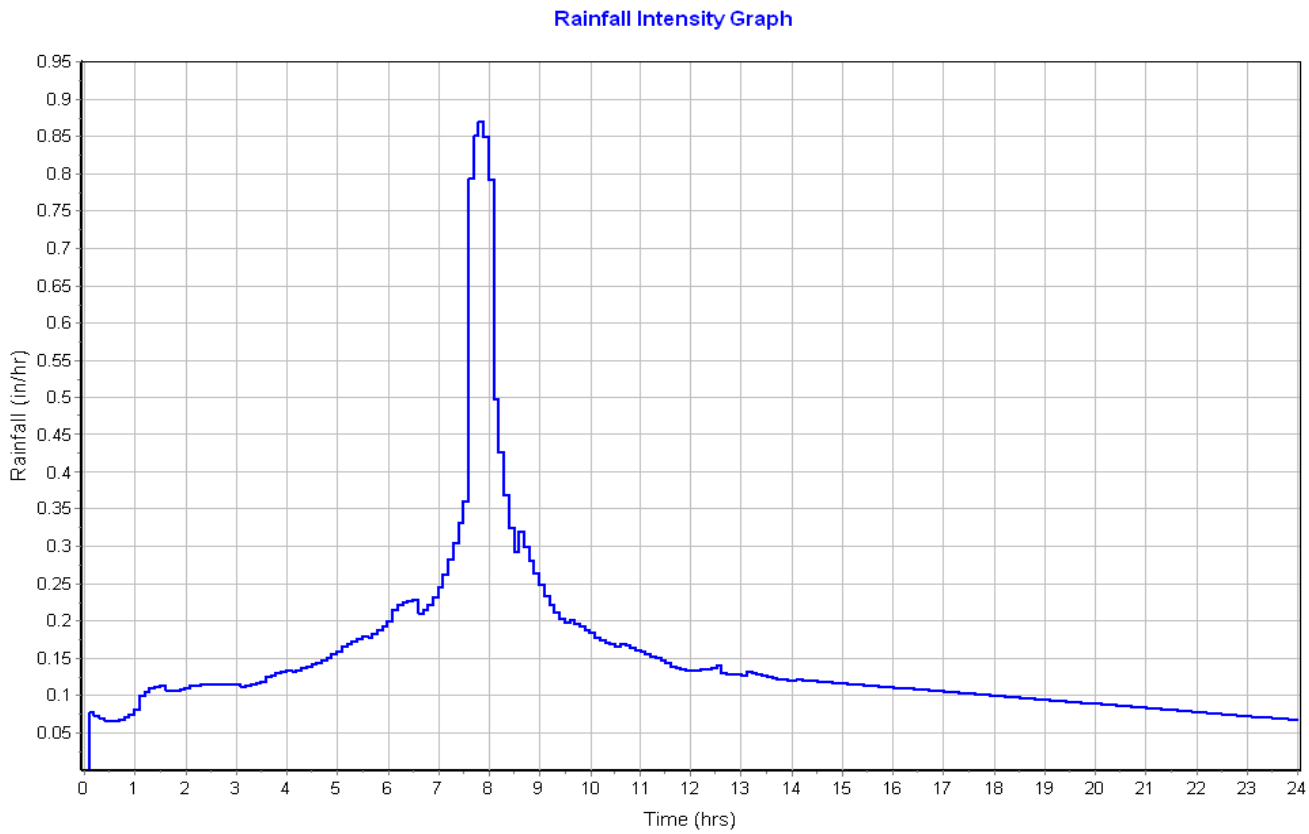
Time of Concentration

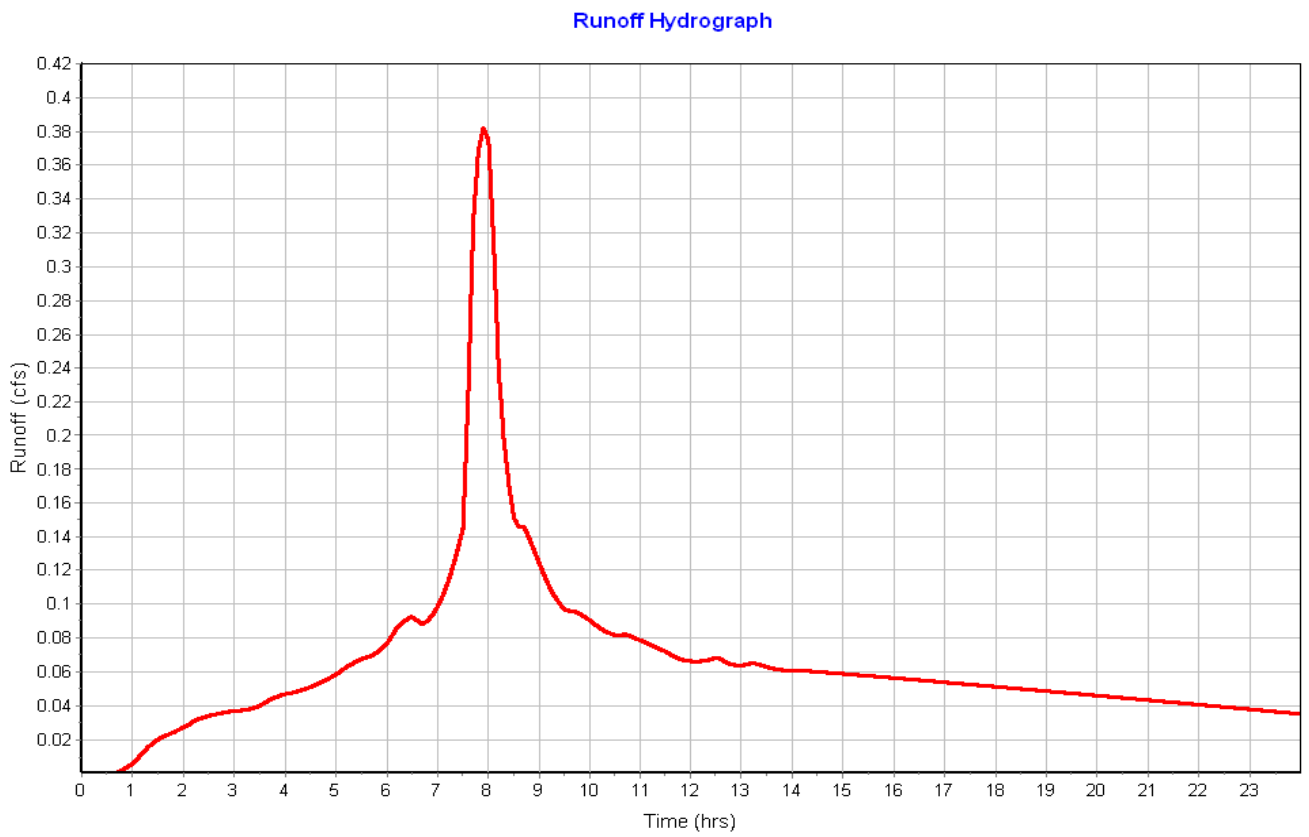
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 2.84
Peak Runoff (cfs) 0.38
Weighted Curve Number 92.06
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0300-3





Subbasin : 0300-4

Input Data

Area (ac) 0.97
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.97		98

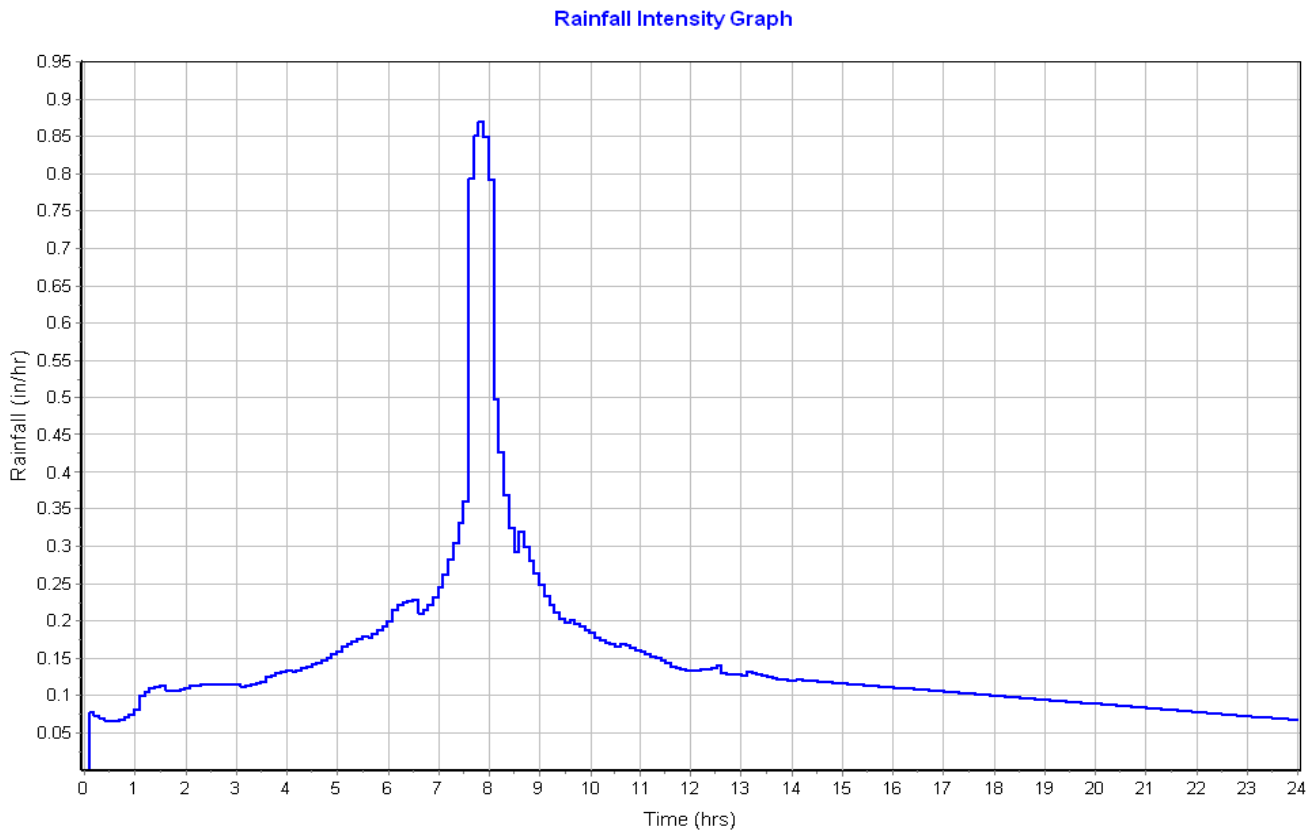
Time of Concentration

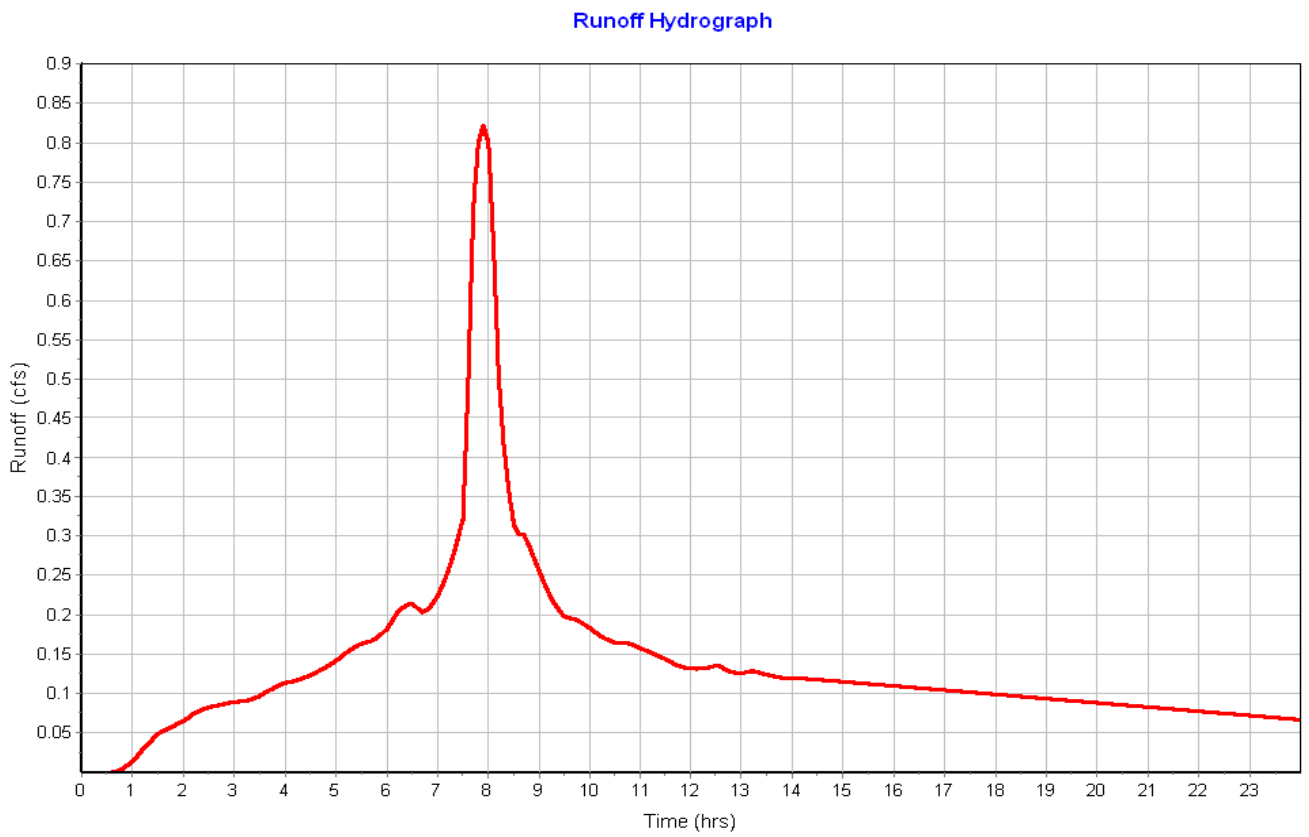
Flow Length (ft) 500.00
Slope (%) 2.0
Computed TOC (min) 4.21

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 0.82
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:04:13

Subbasin : 0300-4





Subbasin : 0300-5

Input Data

Area (ac) 1.20
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.20		98

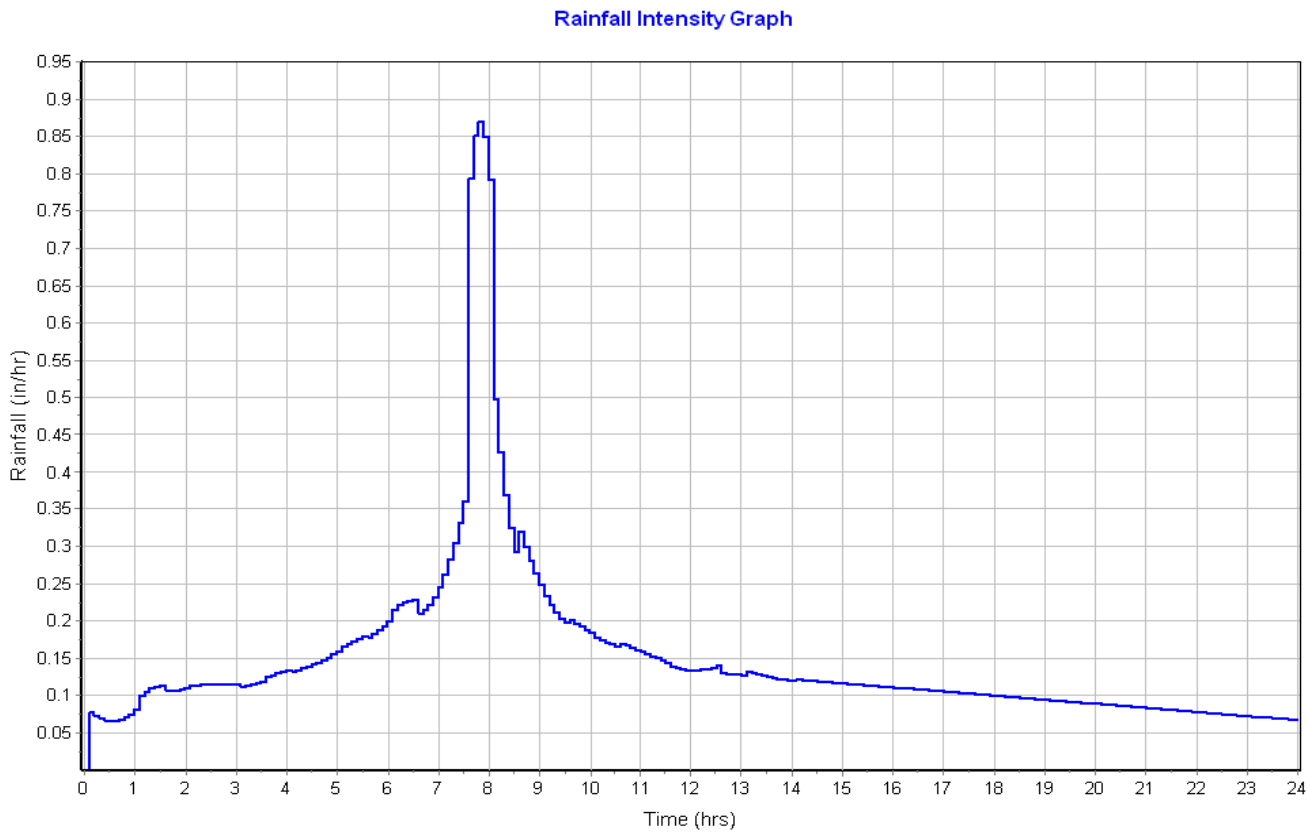
Time of Concentration

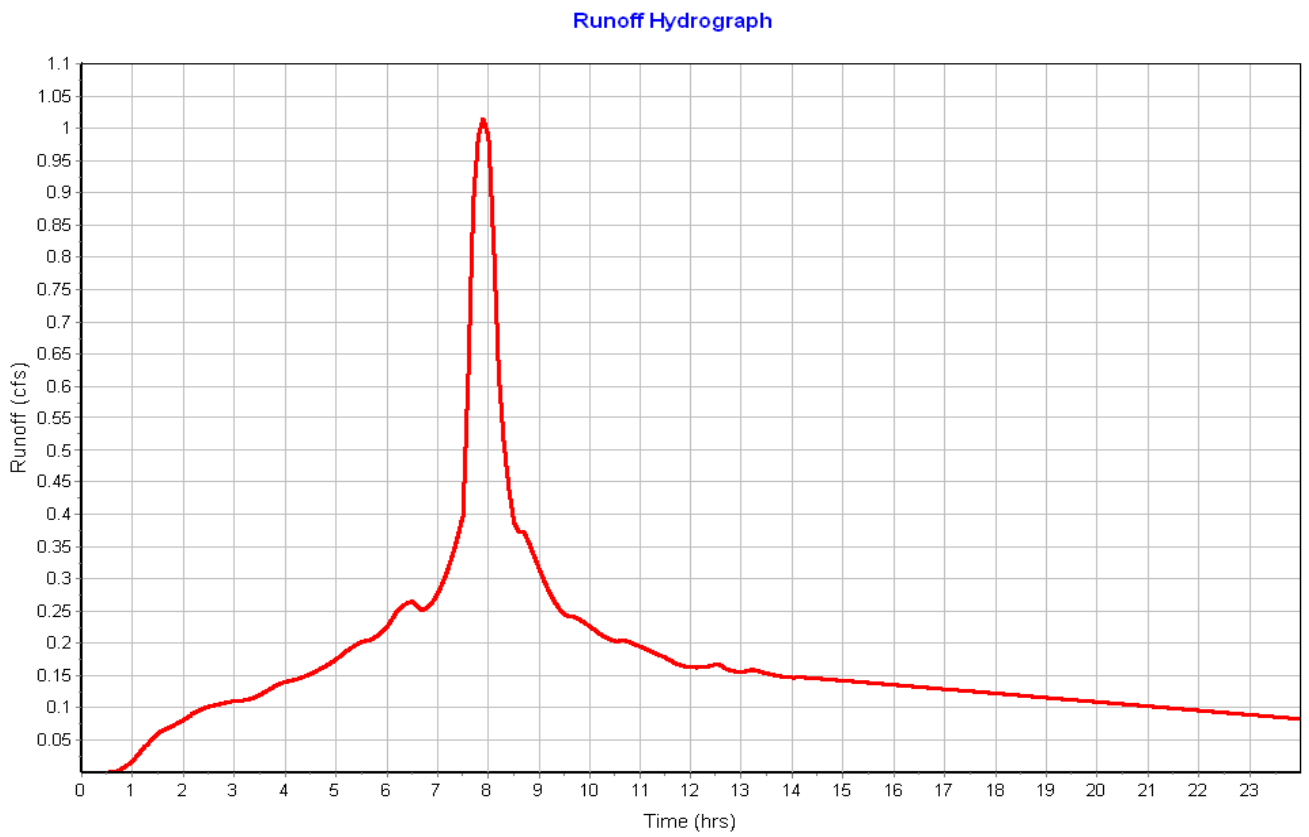
Flow Length (ft) 500.00
Slope (%) 2.0
Computed TOC (min) 4.21

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 1.02
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:04:13

Subbasin : 0300-5





Subbasin : 0300-6

Input Data

Area (ac) 1.29
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.29		98

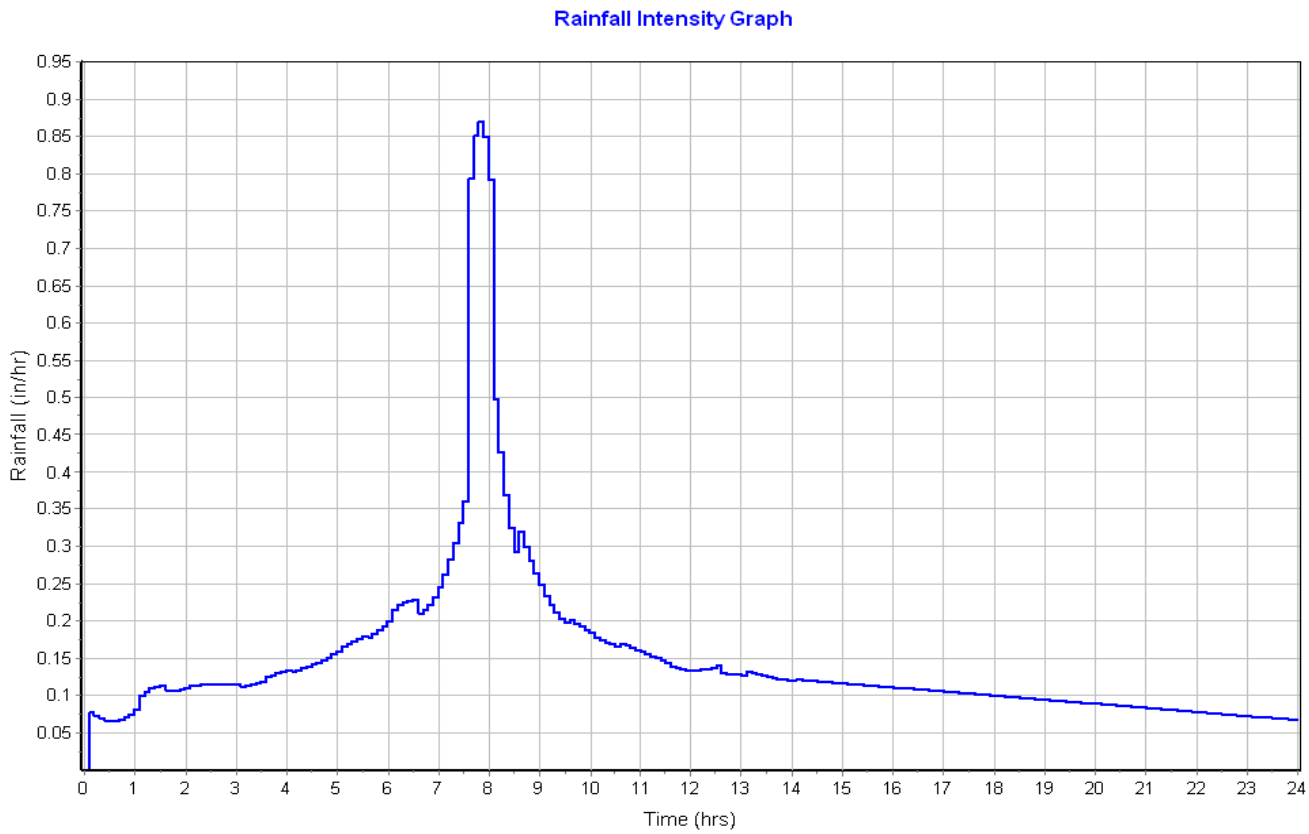
Time of Concentration

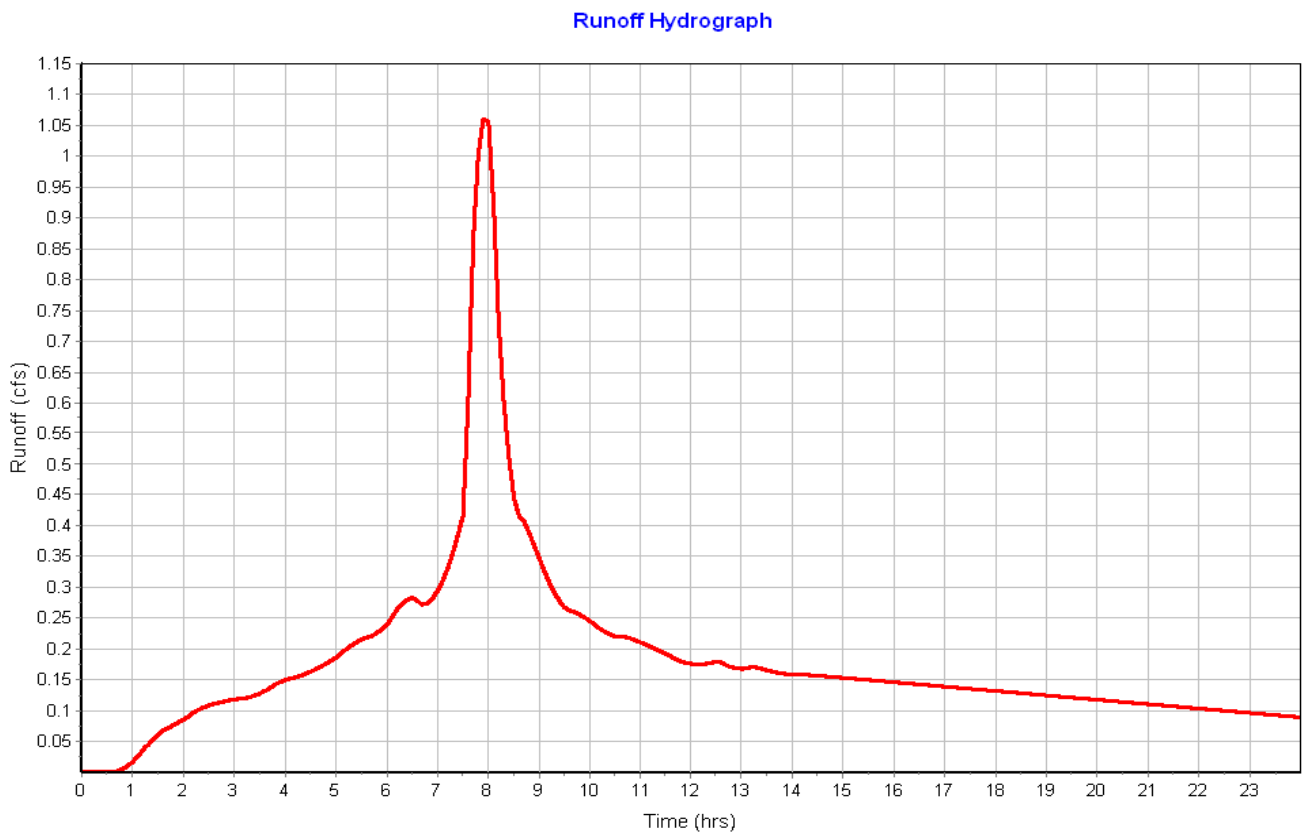
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 1.06
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : 0300-6





Subbasin : 0300-7

Input Data

Area (ac) 1.37
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.37		98

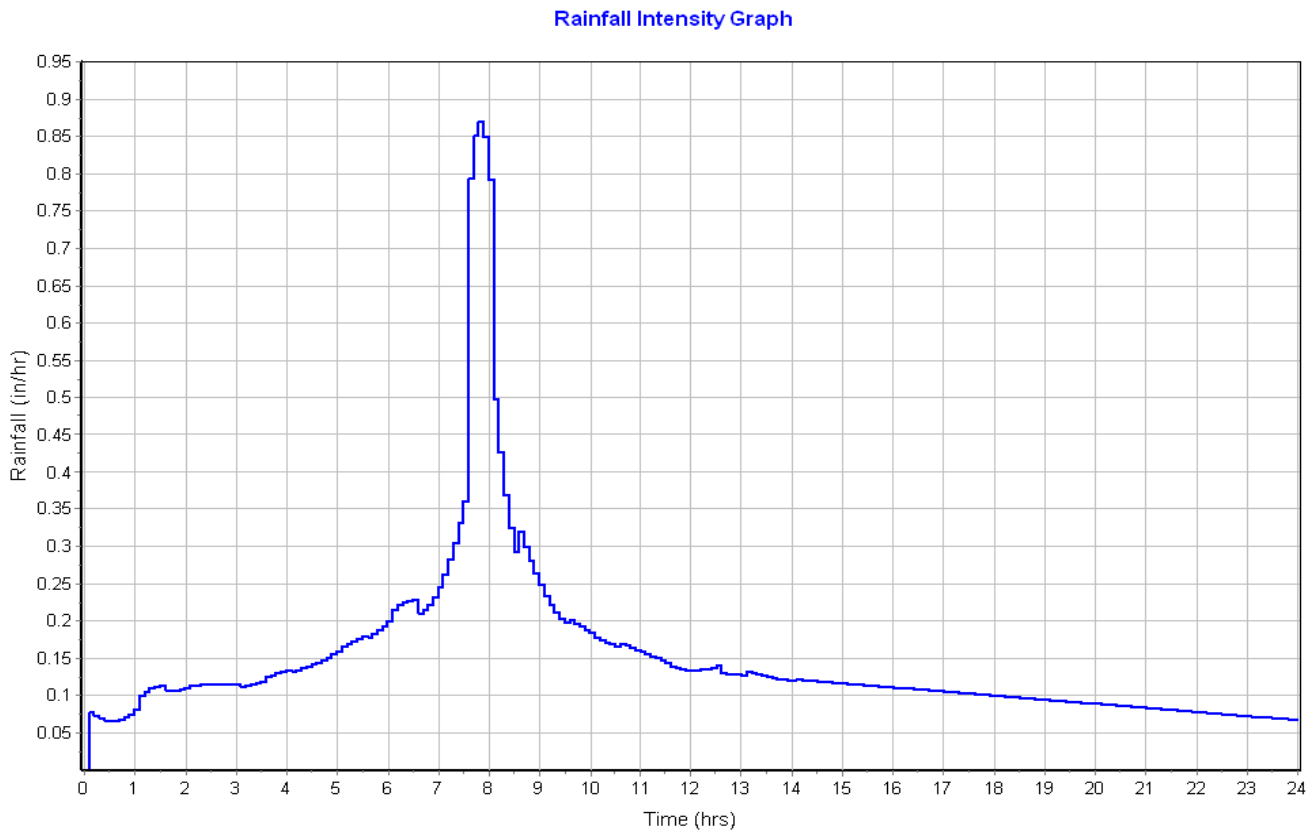
Time of Concentration

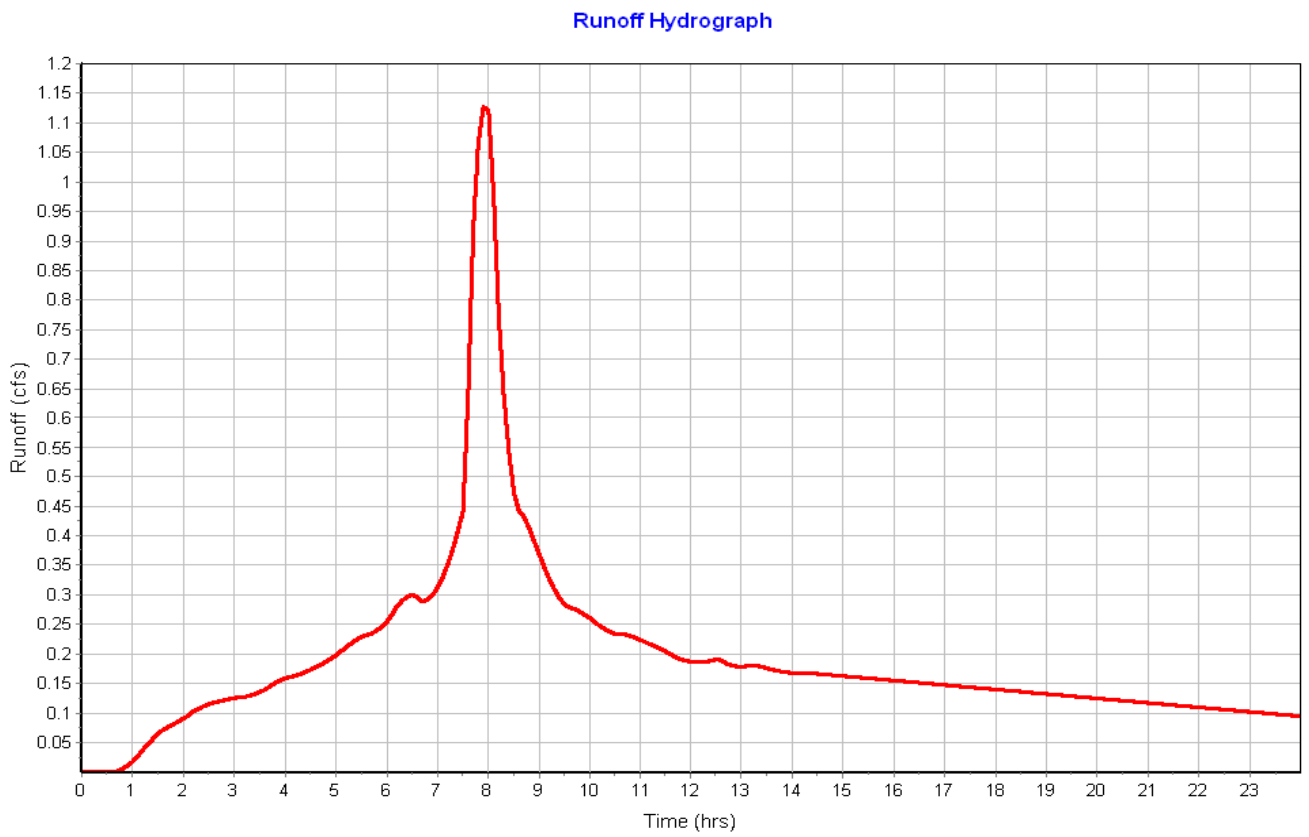
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 1.13
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : 0300-7





Subbasin : 0300-8

Input Data

Area (ac) 1.21
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.21		98

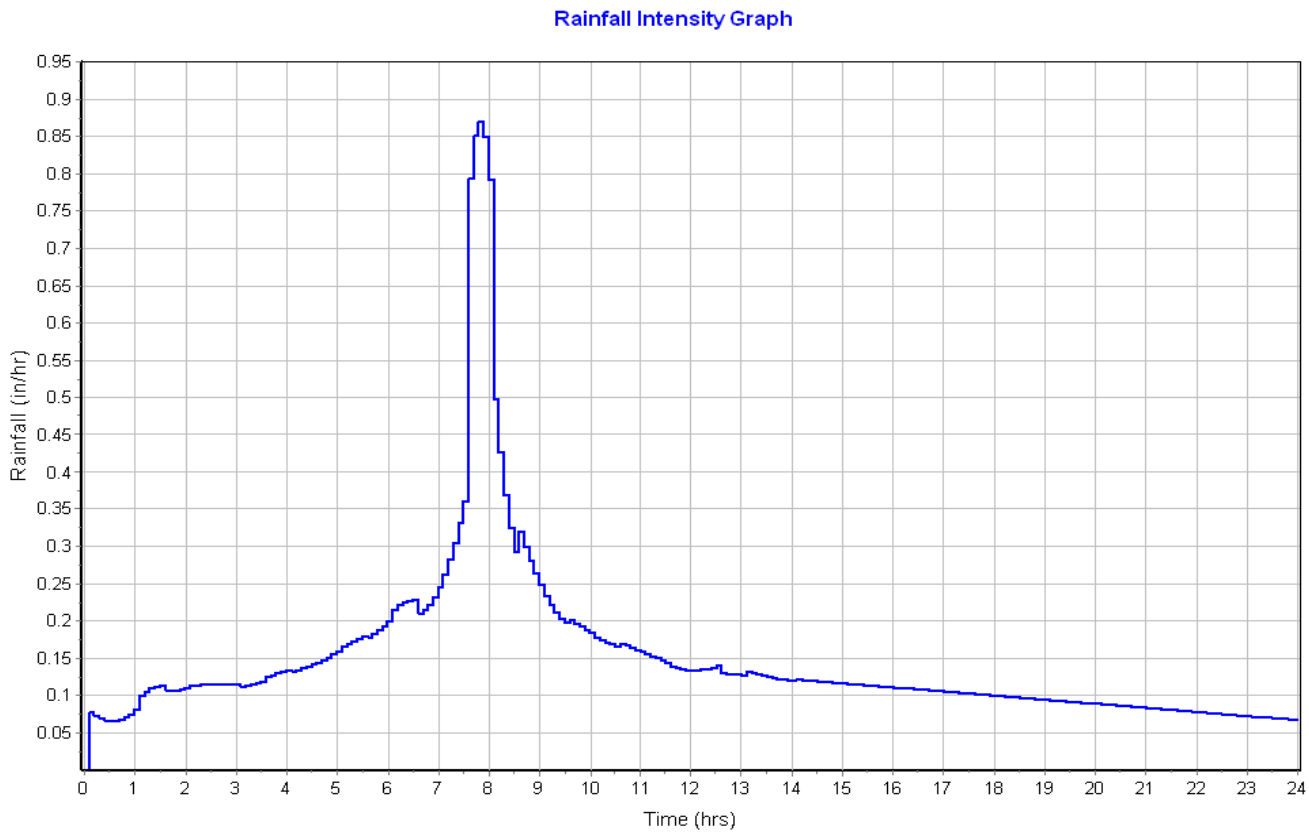
Time of Concentration

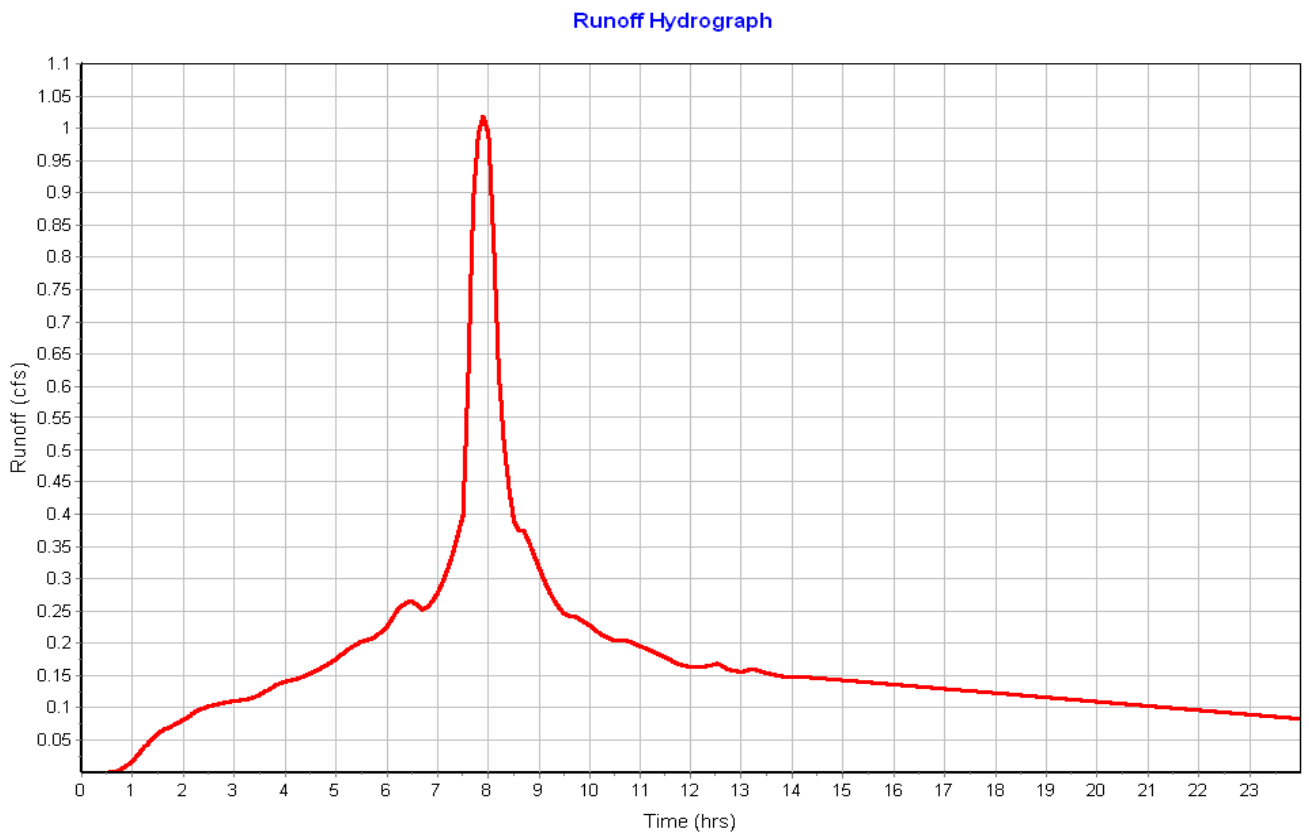
Flow Length (ft) 500.00
Slope (%) 2.0
Computed TOC (min) 4.21

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 1.02
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:04:13

Subbasin : 0300-8





Subbasin : 0300-9

Input Data

Area (ac) 1.75
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.75		98

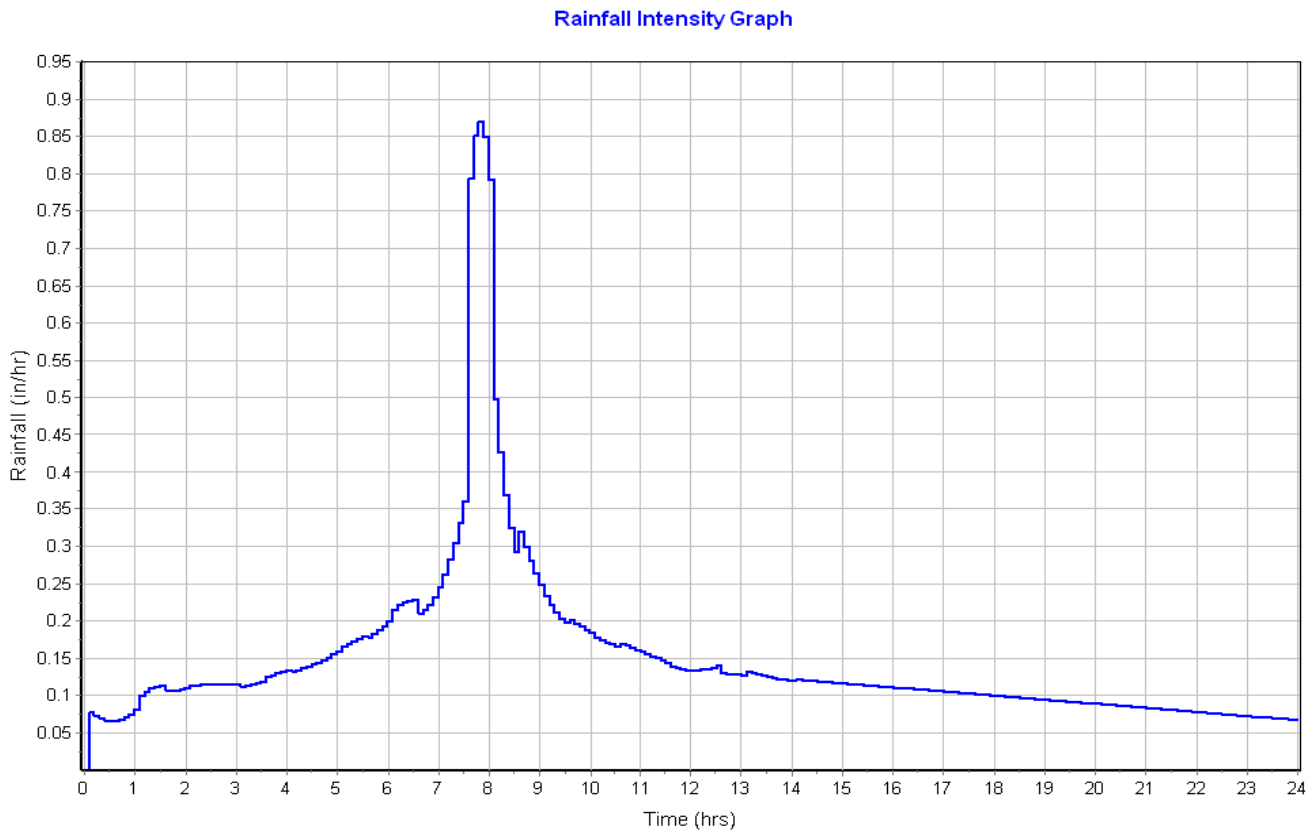
Time of Concentration

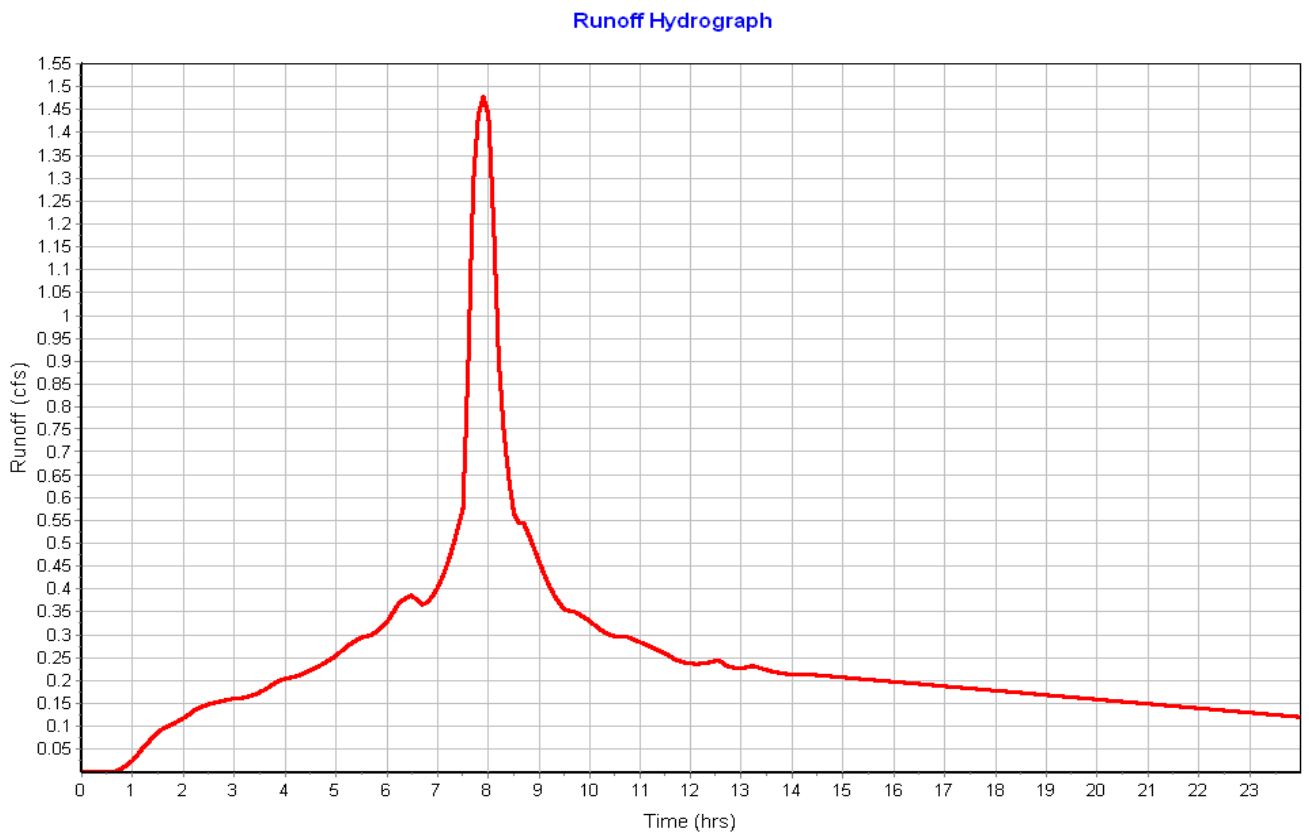
Flow Length (ft) 500.00
Slope (%) 2.0
Computed TOC (min) 4.21

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 1.48
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:04:13

Subbasin : 0300-9





Subbasin : 0600-1

Input Data

Area (ac) 0.19
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.19		98

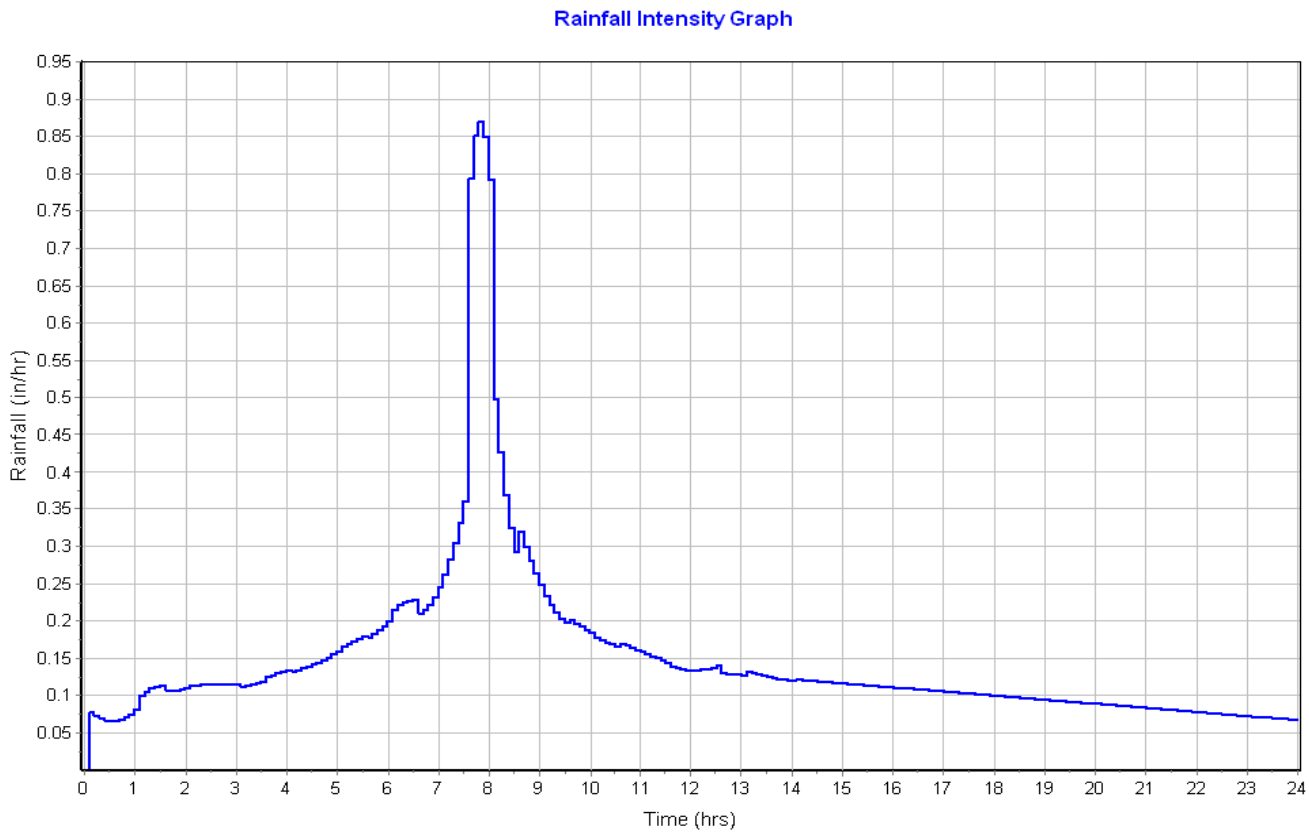
Time of Concentration

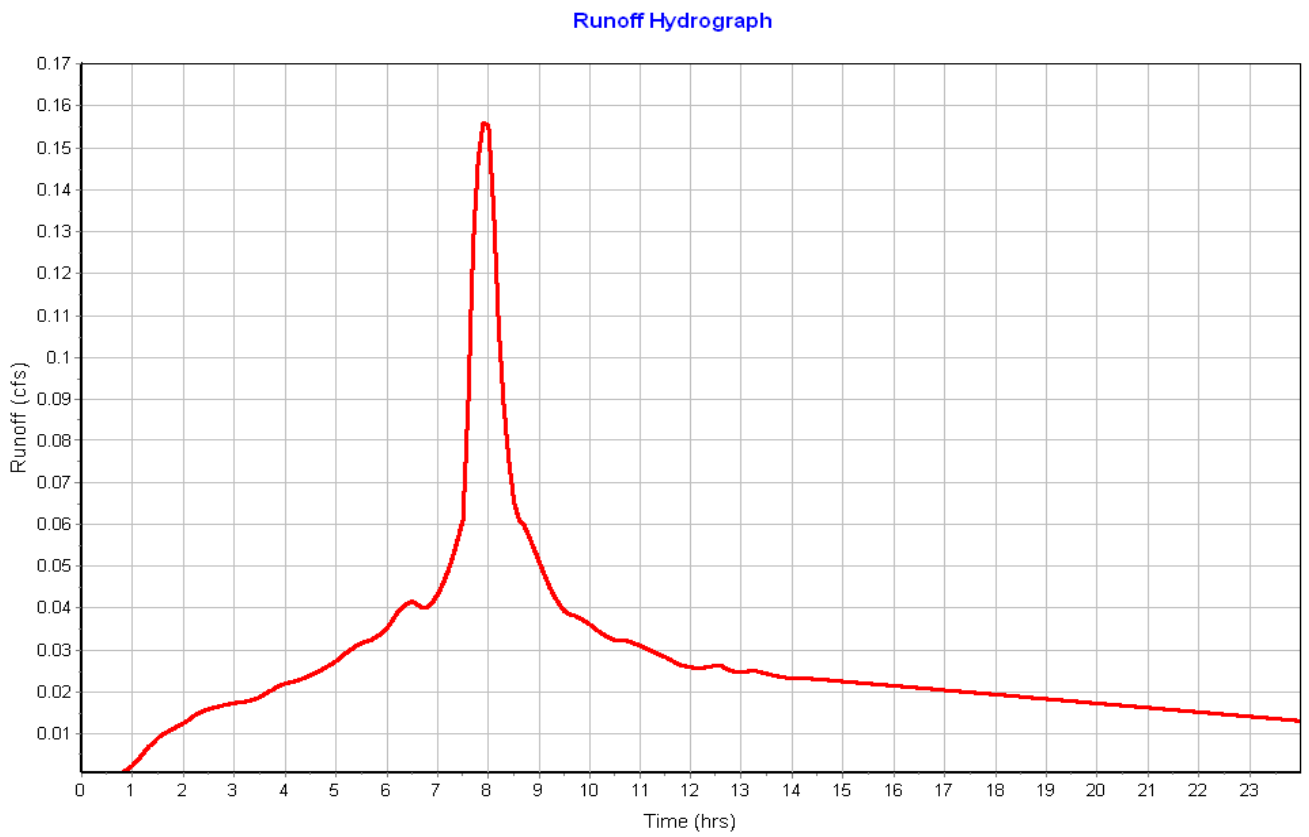
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 0.16
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : 0600-1





Subbasin : 0600-2

Input Data

Area (ac) 0.05
Impervious Area (%) 80.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.05		93.6

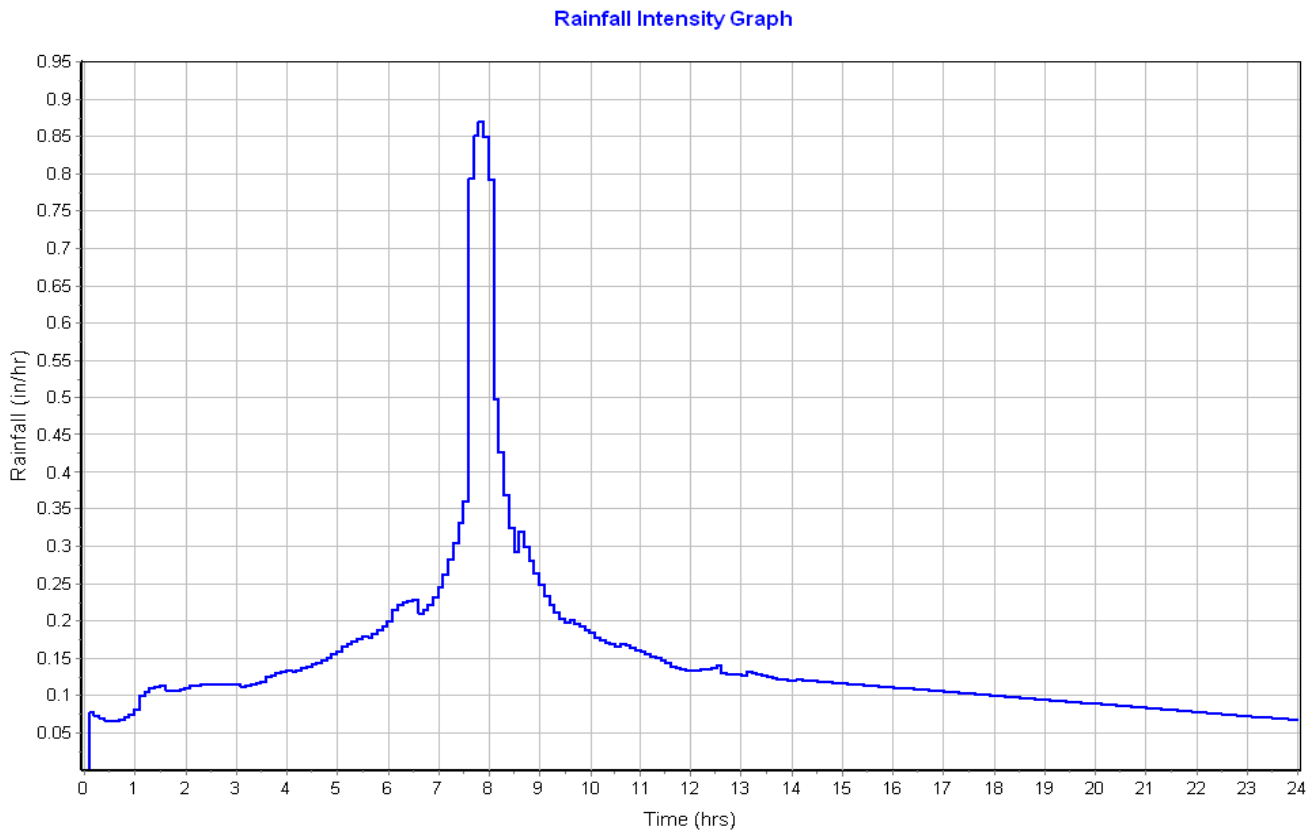
Time of Concentration

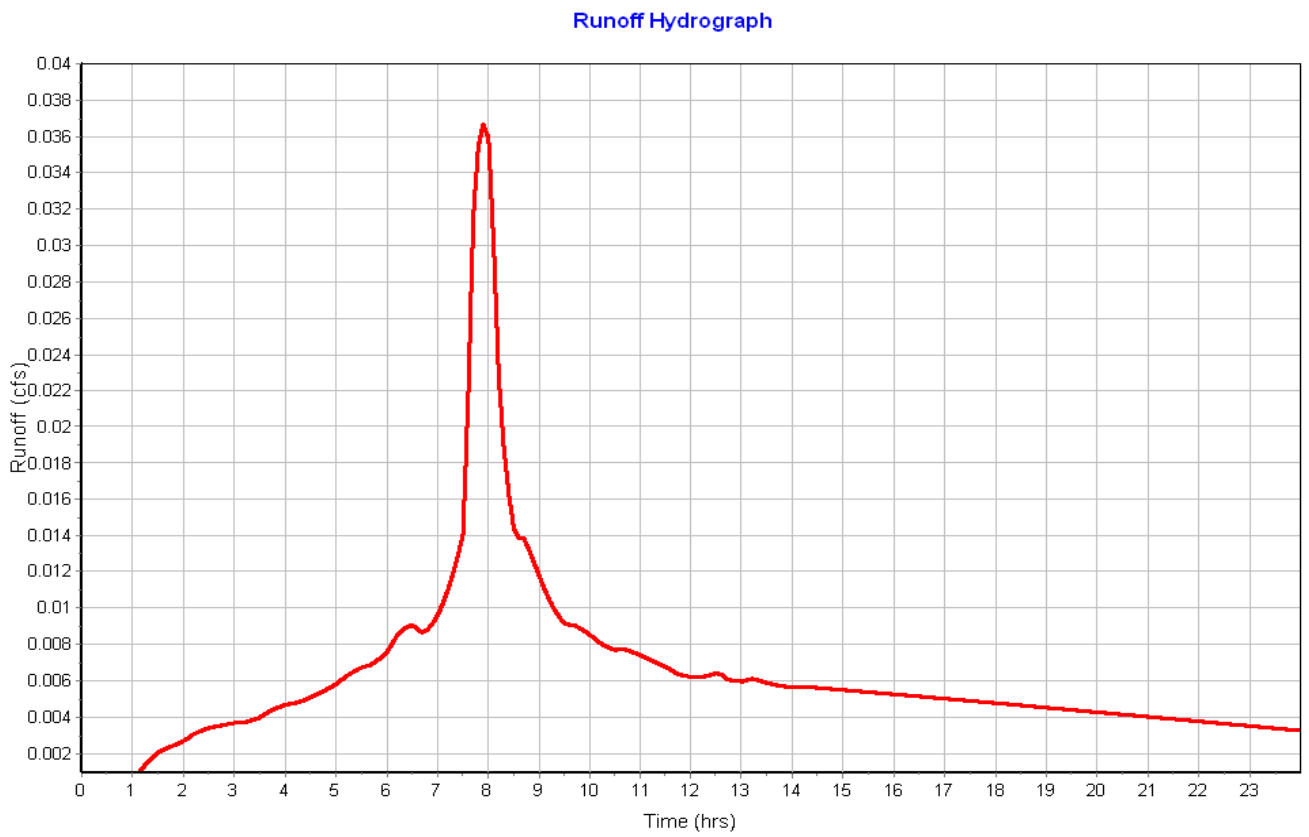
Flow Length (ft) 500.00
Slope (%) 2.0
Computed TOC (min) 4.21

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 2.97
Peak Runoff (cfs) 0.04
Weighted Curve Number 93.60
Time of Concentration (days hh:mm:ss) 0 00:04:13

Subbasin : 0600-2





Subbasin : 0600-3

Input Data

Area (ac) 0.20
Impervious Area (%) 50.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 1.0000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.20		87

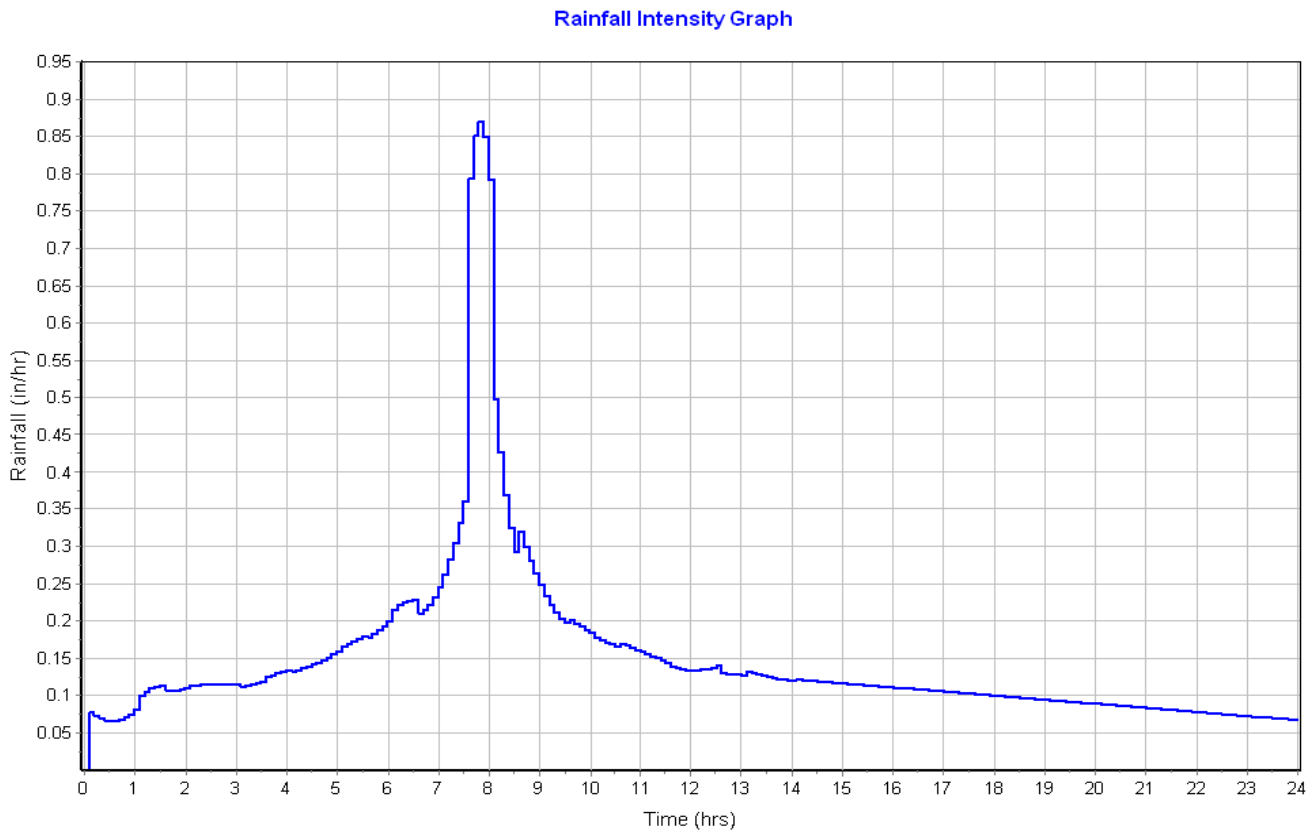
Time of Concentration

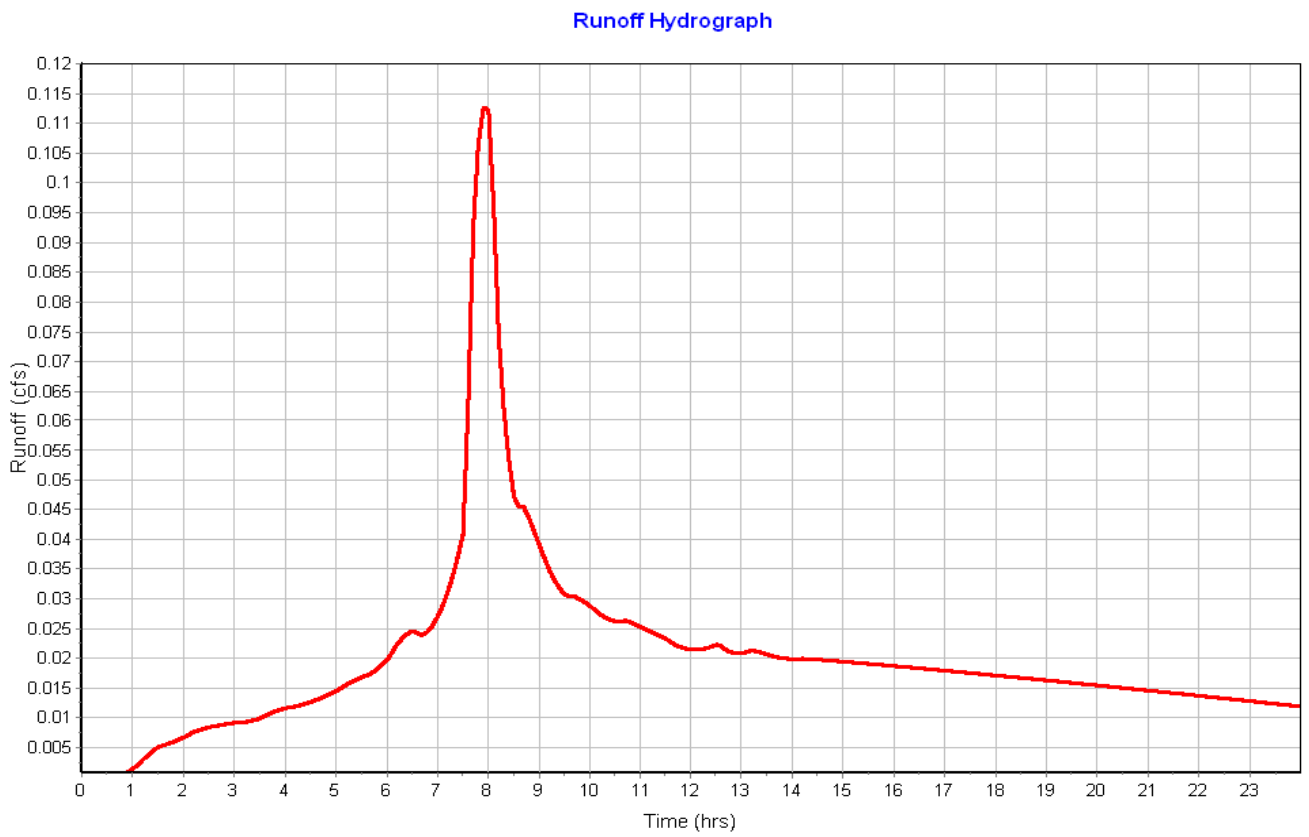
Flow Length (ft) 500.00
Slope (%) 1.0
Computed TOC (min) 5.50

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 2.39
Peak Runoff (cfs) 0.11
Weighted Curve Number 87.00
Time of Concentration (days hh:mm:ss) 0 00:05:30

Subbasin : 0600-3





Subbasin : Future Tank 1

Input Data

Area (ac) 1.06
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.06		98

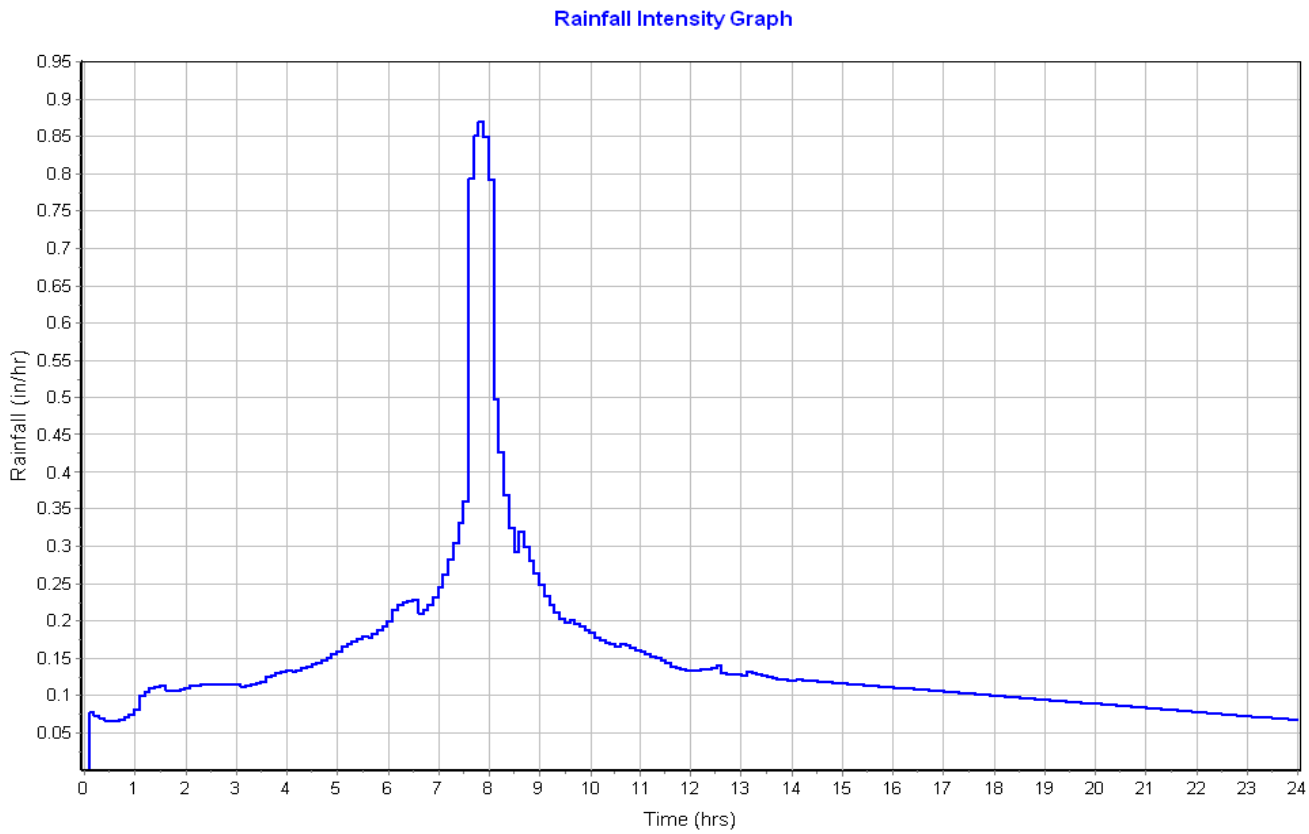
Time of Concentration

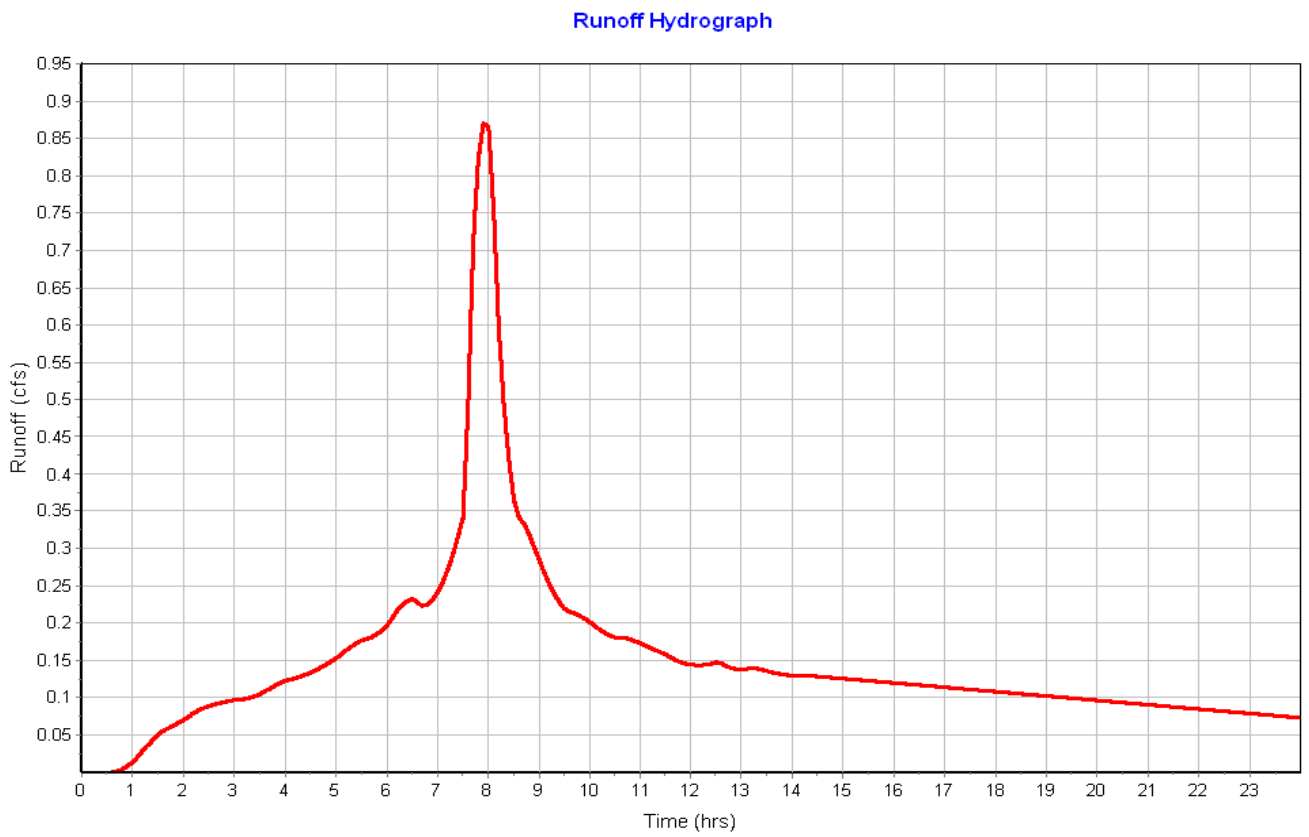
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 0.87
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Future Tank 1





Subbasin : Future Tank 2

Input Data

Area (ac) 1.06
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... *

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.06		98

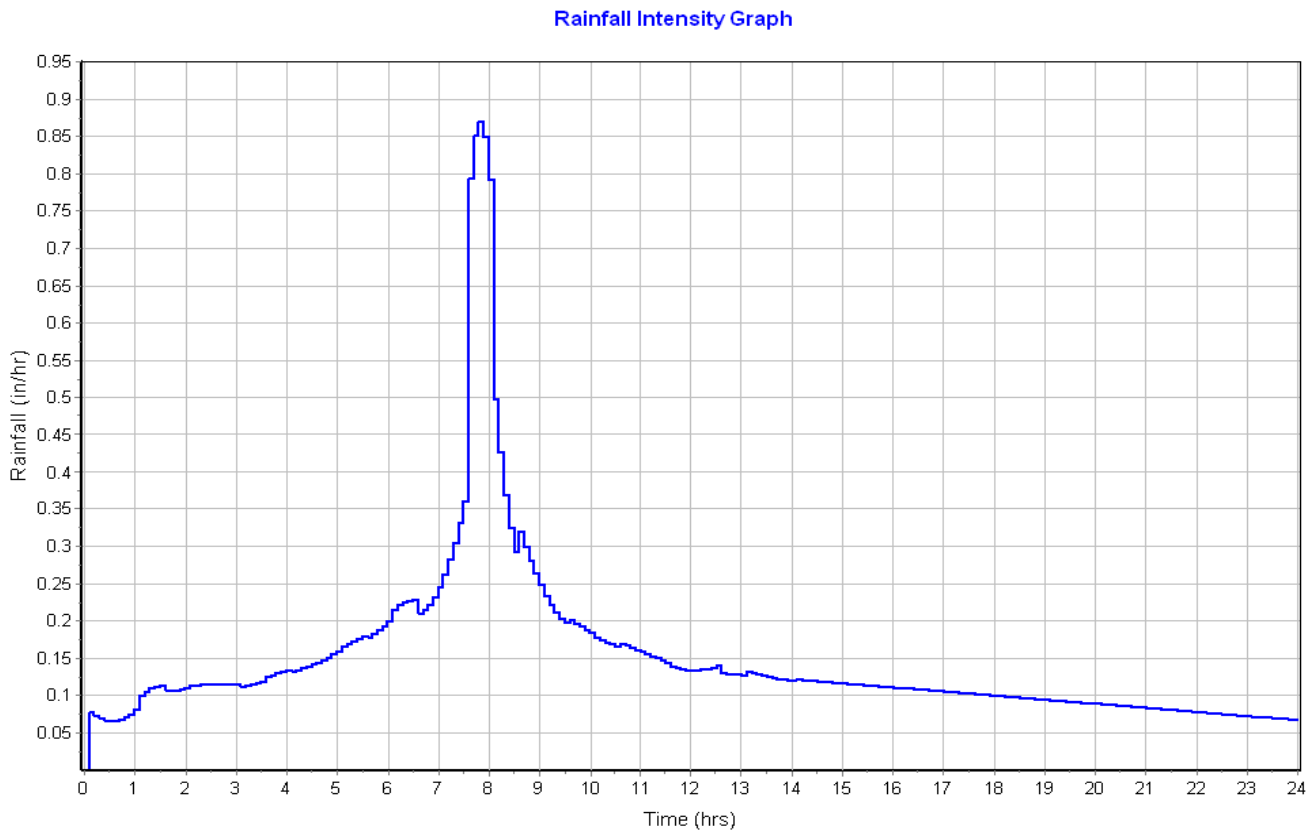
Time of Concentration

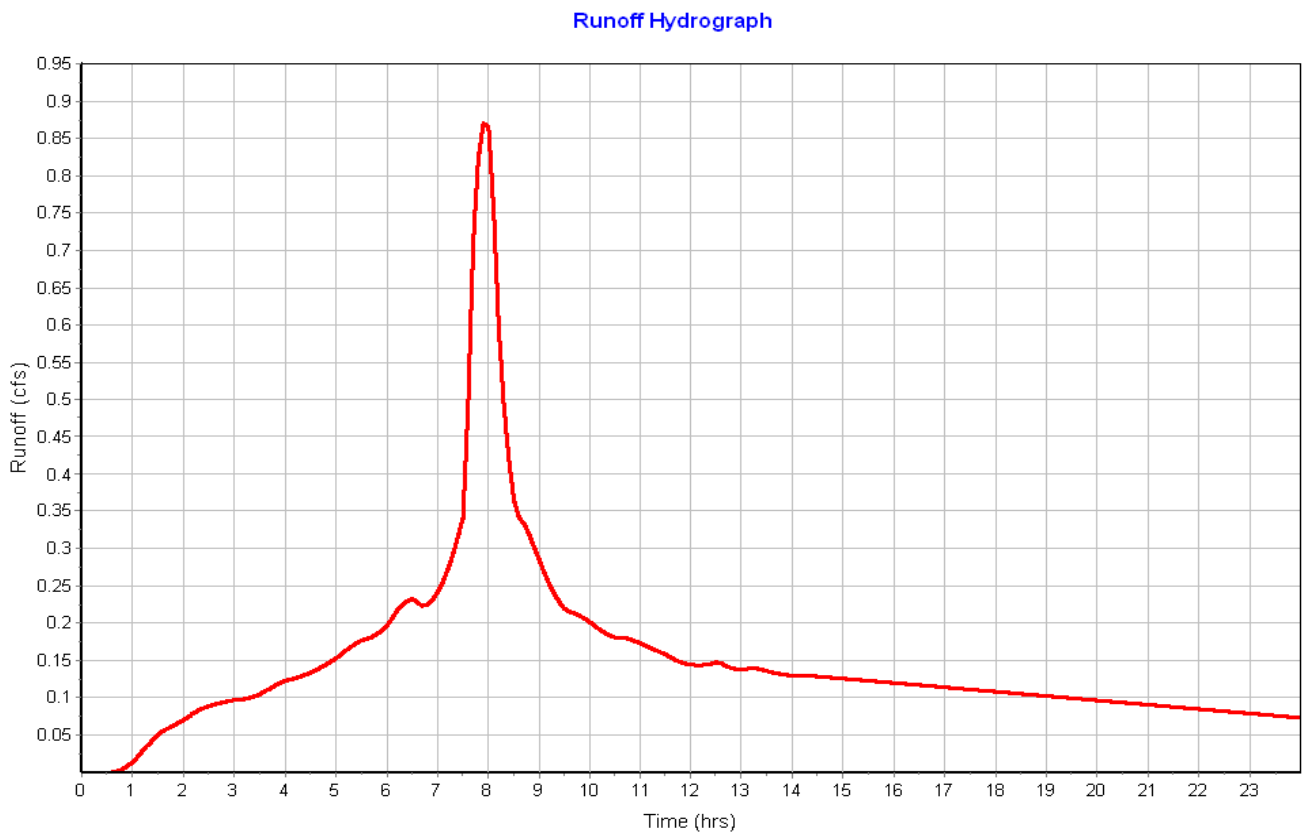
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 0.87
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Future Tank 2





Subbasin : Rail Shed Roof - East

Input Data

Area (ac) 1.90
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.90		98

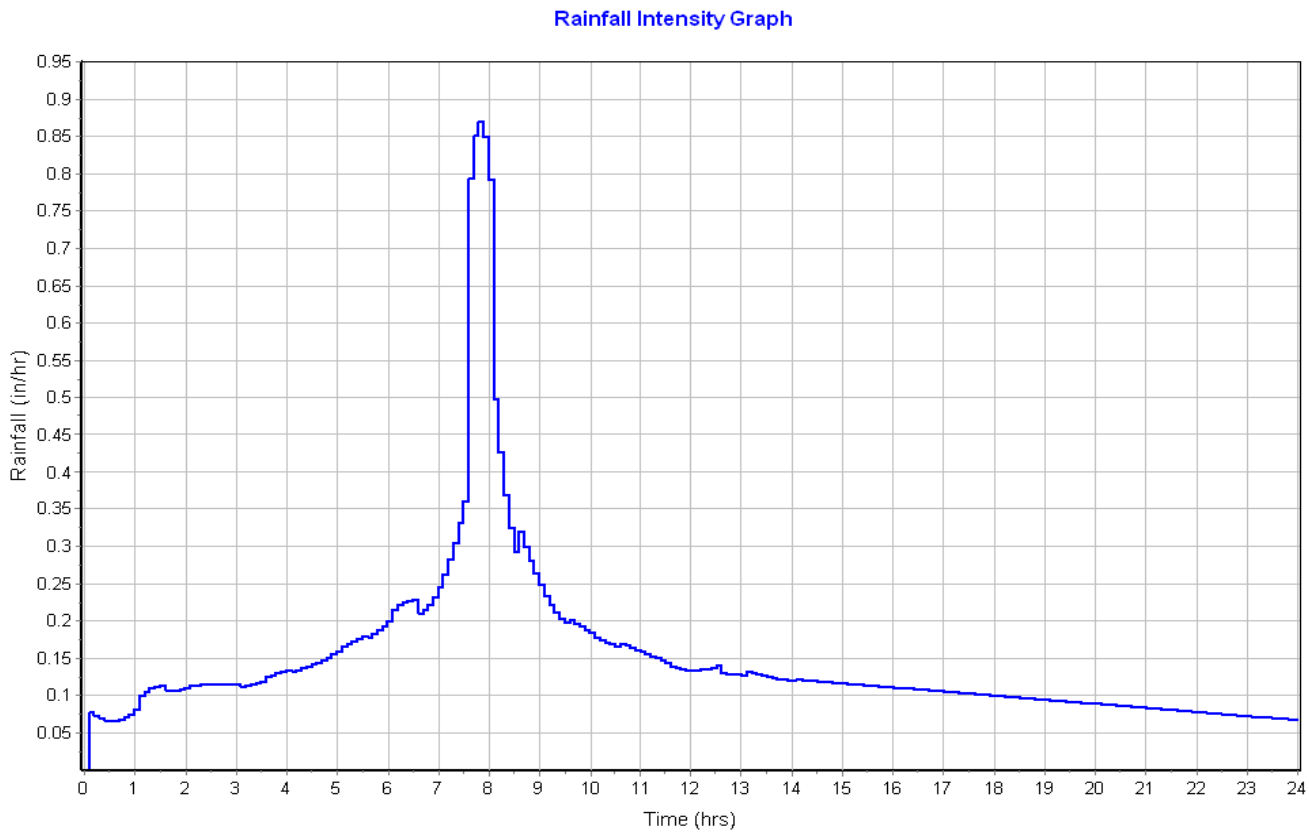
Time of Concentration

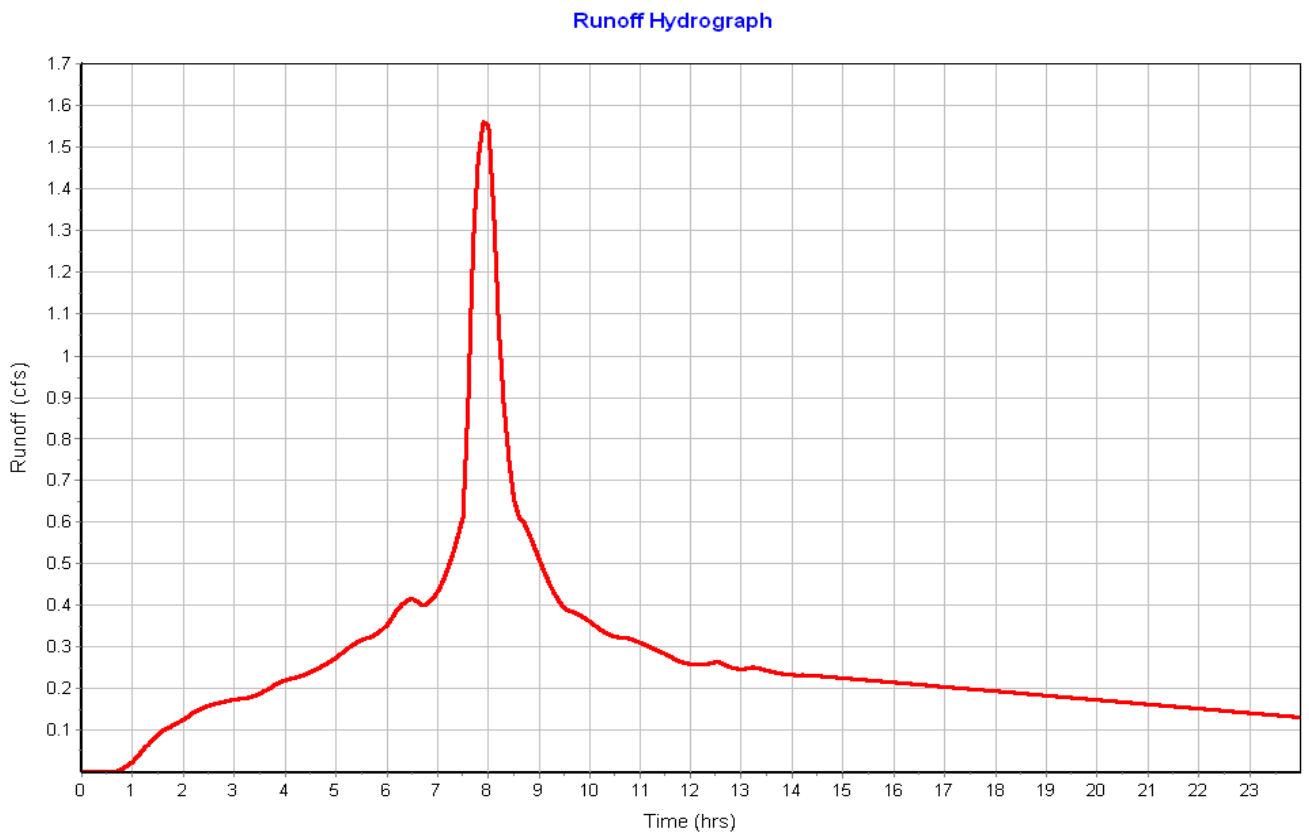
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 1.56
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Rail Shed Roof - East





Subbasin : Rail Unloading Shed - West

Input Data

Area (ac) 1.57
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.57		98

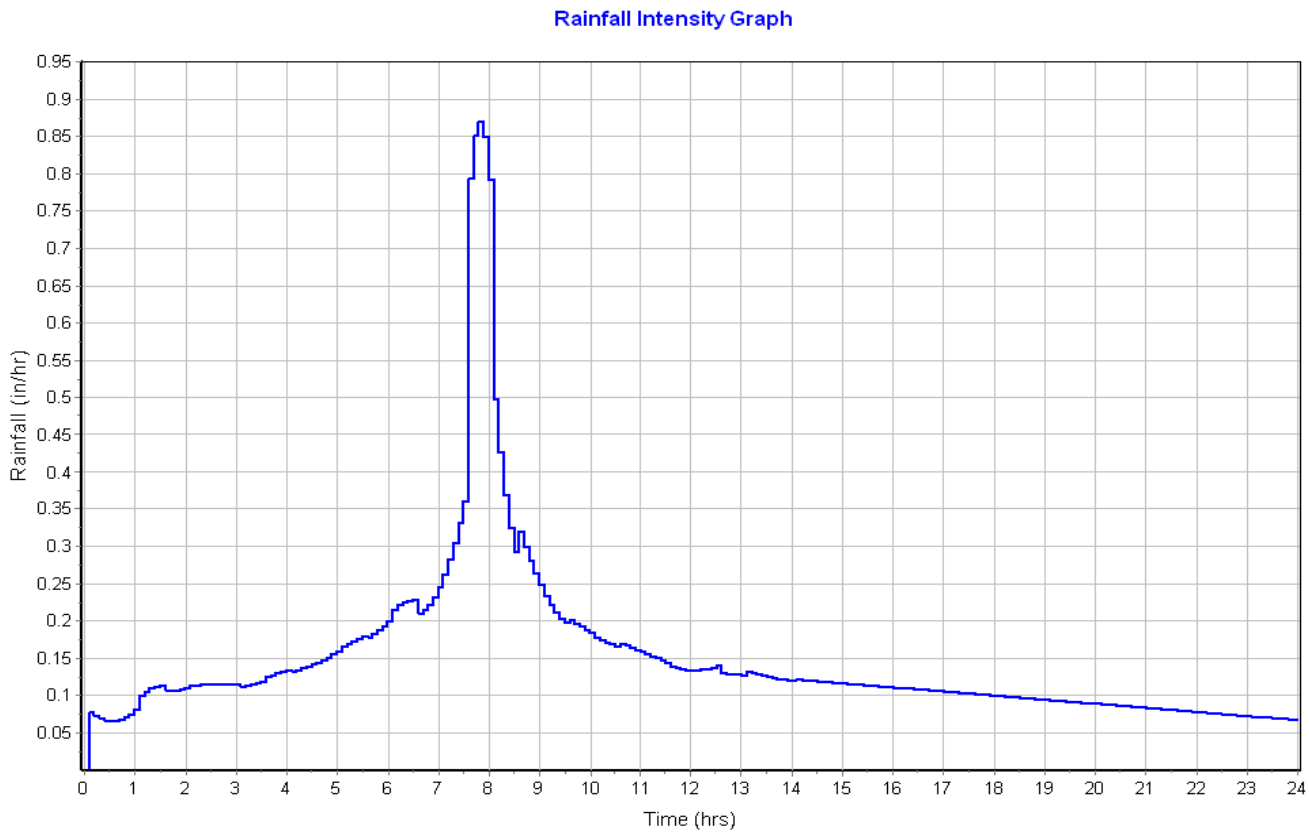
Time of Concentration

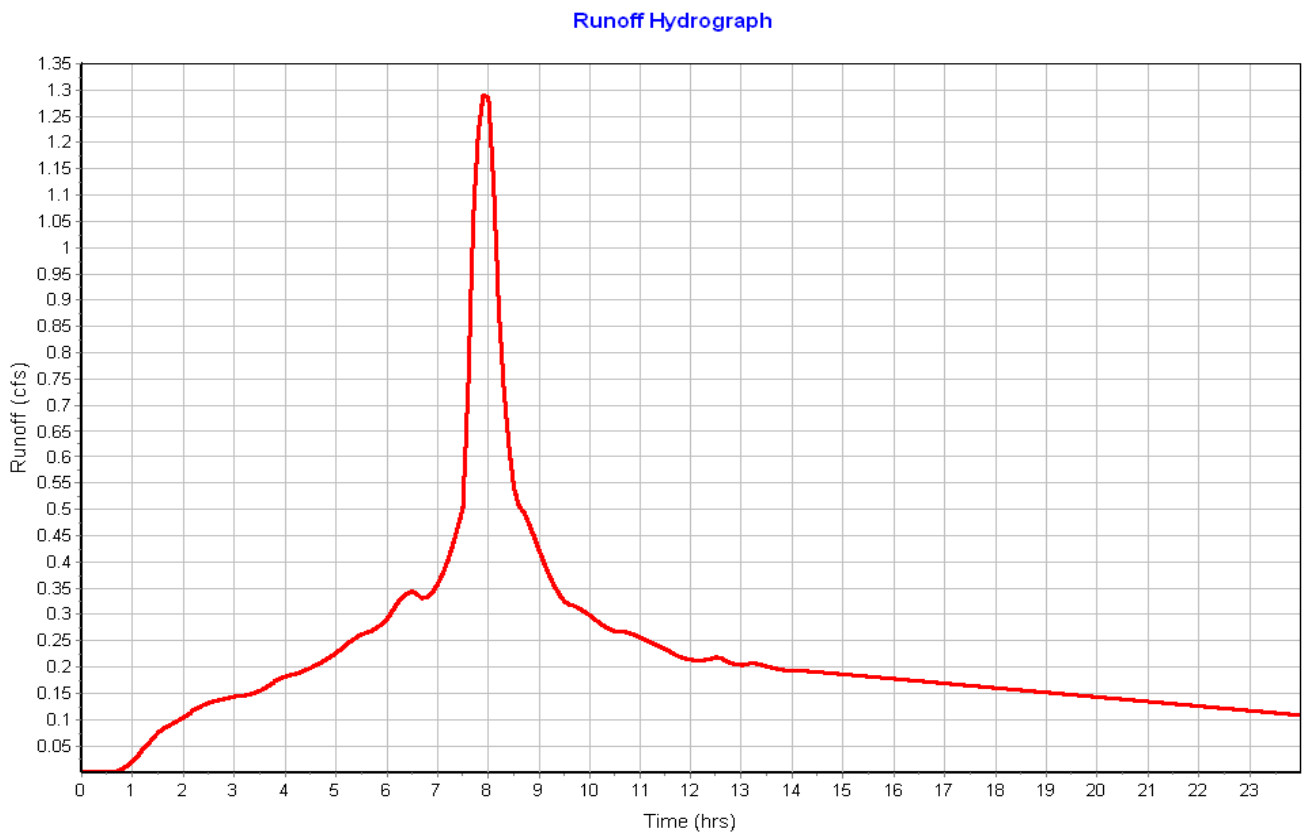
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 1.29
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Rail Unloading Shed - West





Subbasin : Tank Roofs

Input Data

Area (ac) 4.22
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	4.22		98

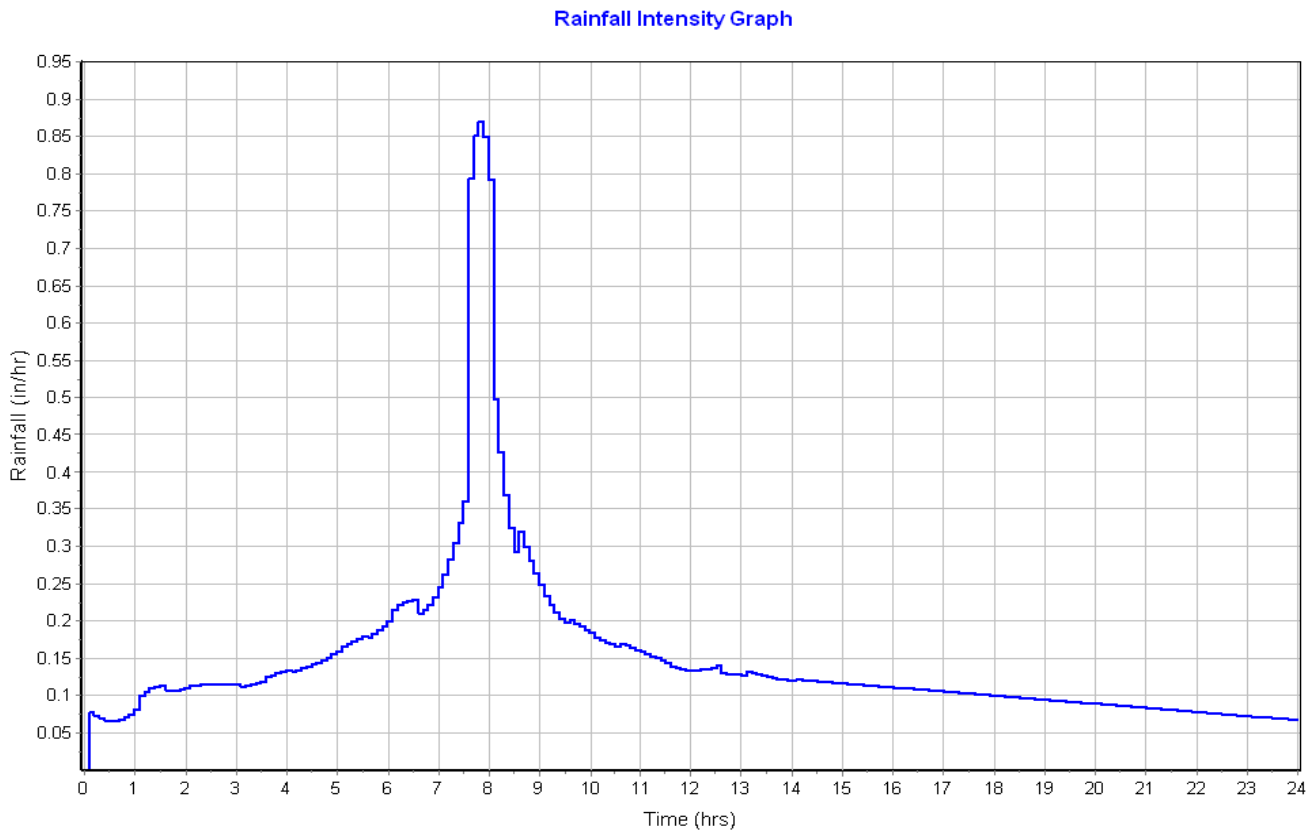
Time of Concentration

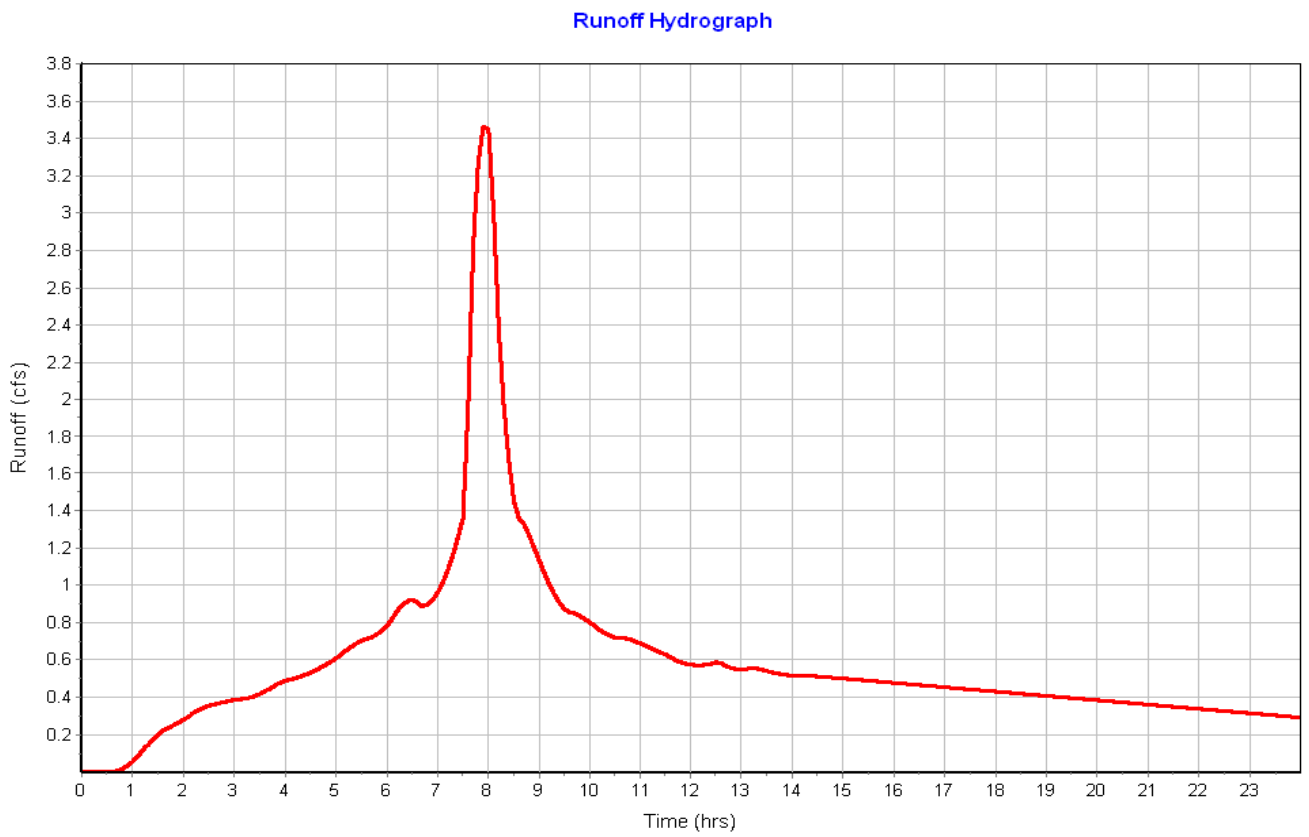
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 3.47
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Tank Roofs





Subbasin : Vanexo Cap - East

Input Data

Area (ac) 4.76
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	4.76		98

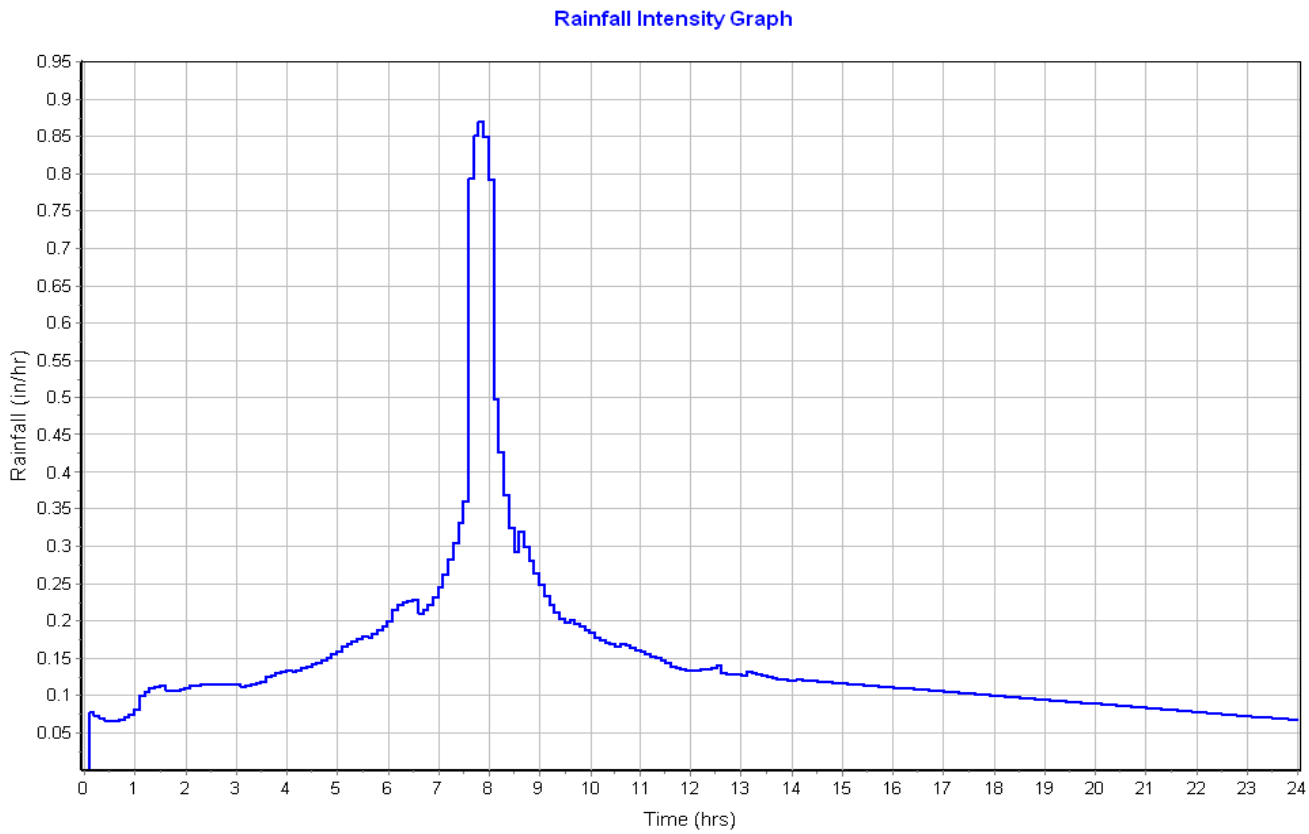
Time of Concentration

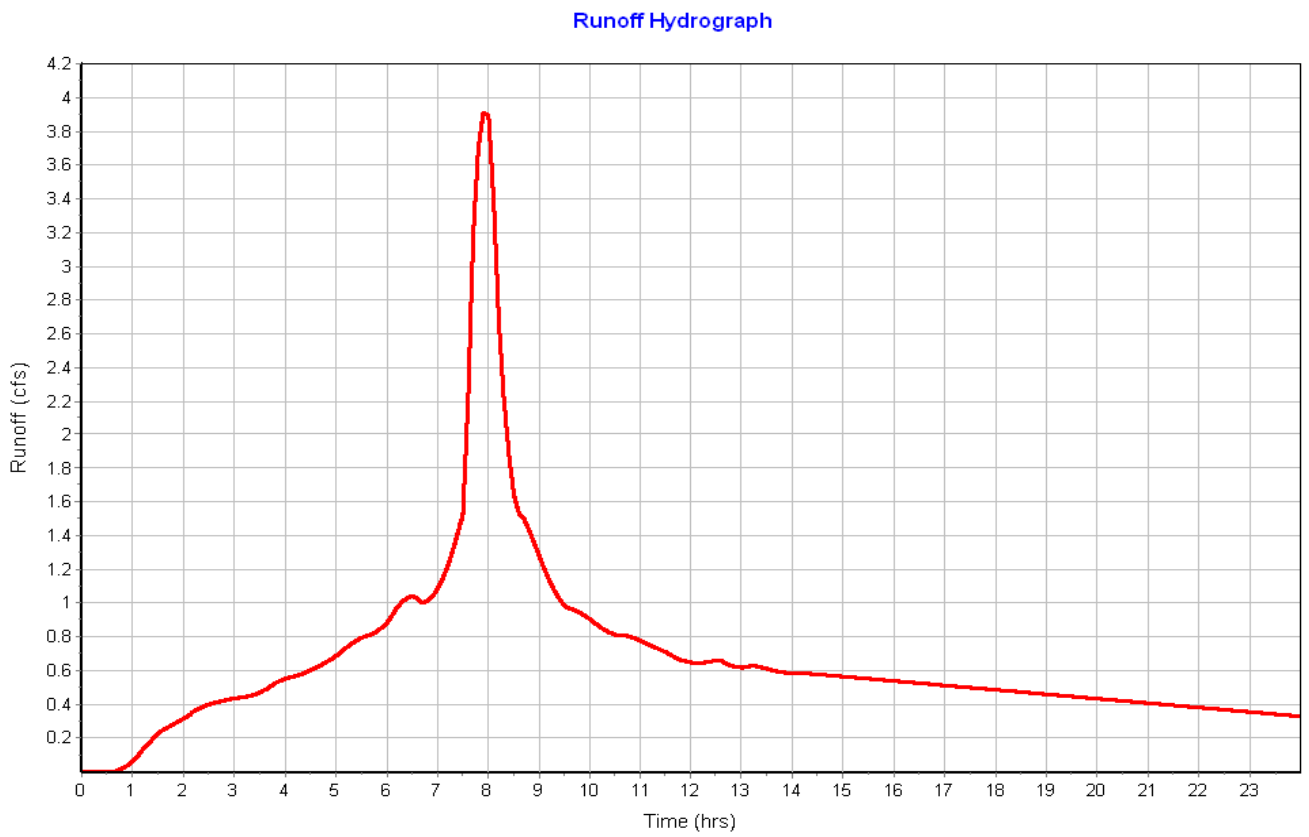
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 3.91
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Vanexo Cap - East





Subbasin : Vanexo Cap - West

Input Data

Area (ac) 2.62
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID ..... 25 Year Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	2.62		98

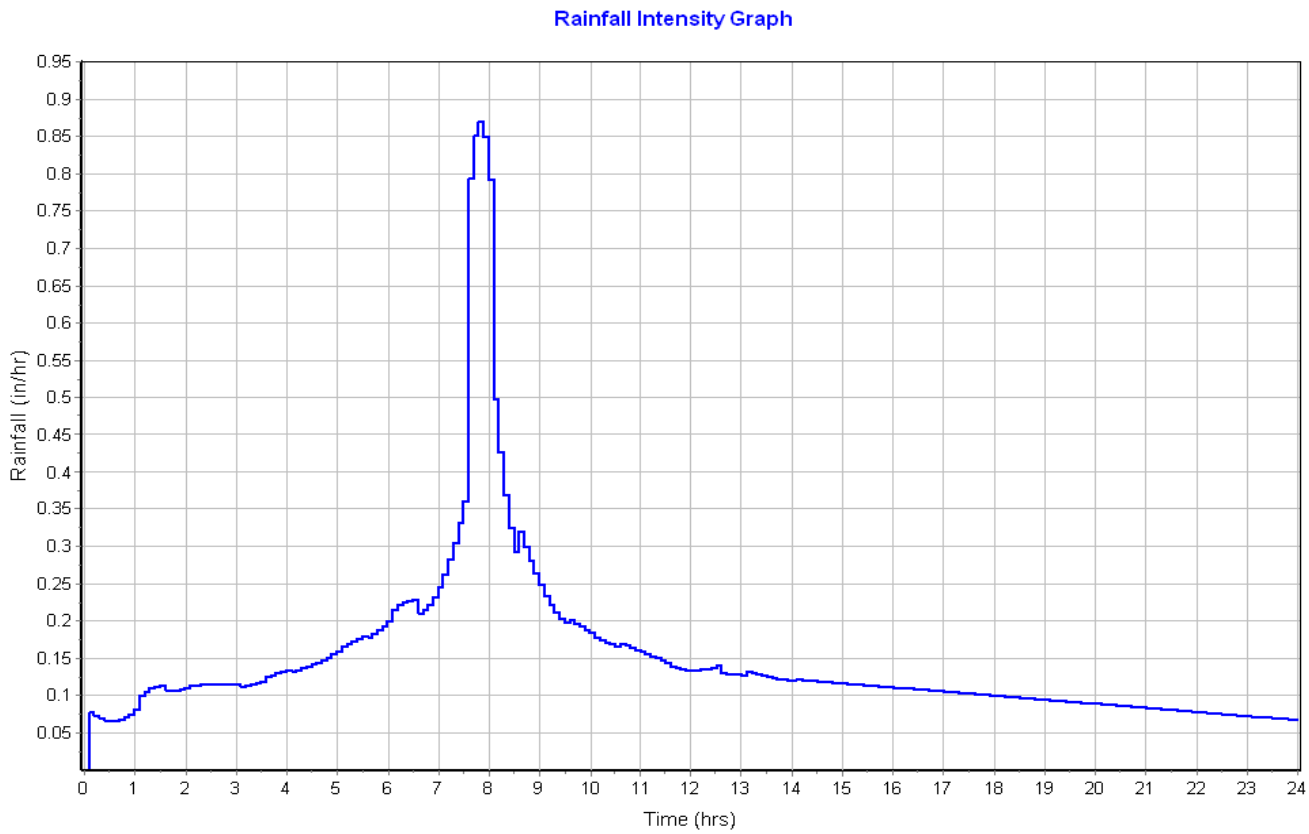
Time of Concentration

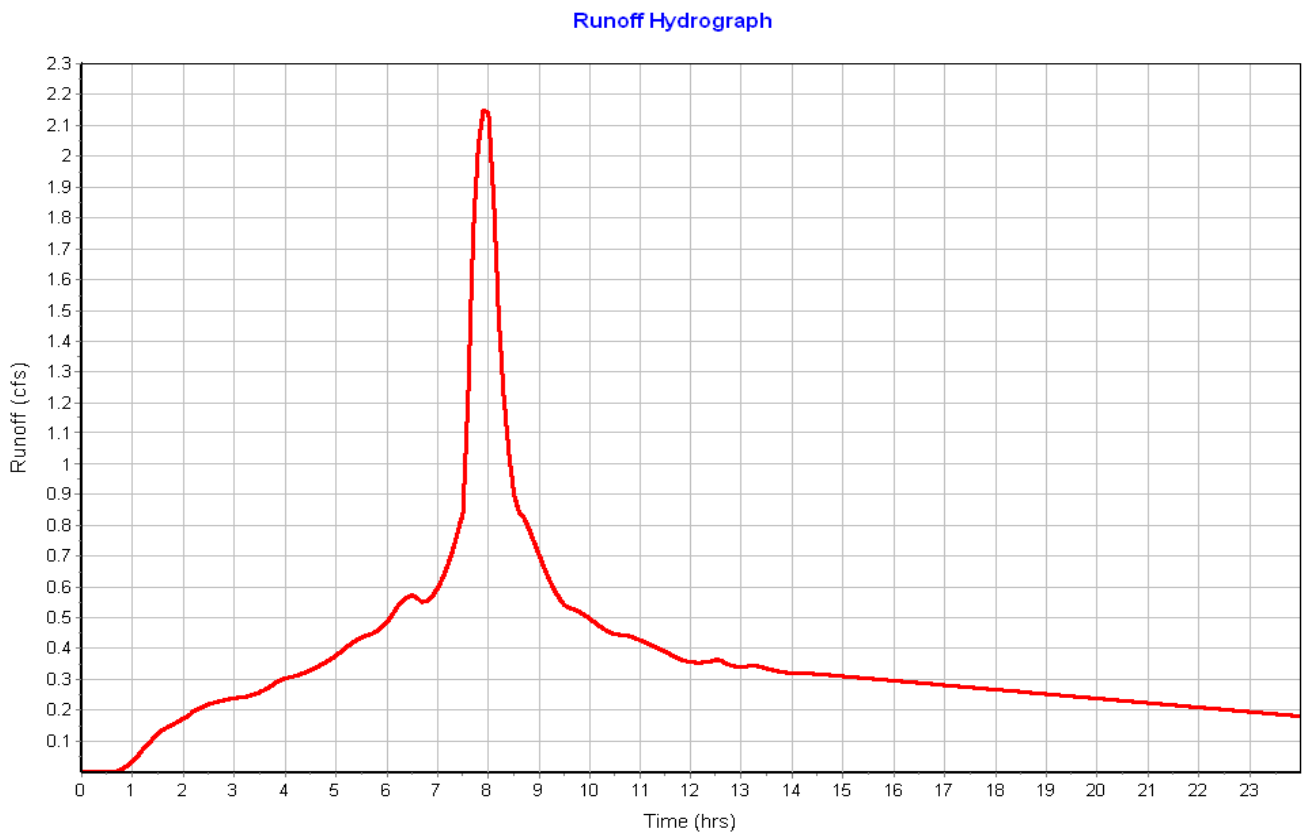
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 3.59
Total Runoff (in) 3.36
Peak Runoff (cfs) 2.15
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Vanexo Cap - West





Junction Input

SN	Element ID	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Ground/Rim (Max) Offset (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Surcharge Elevation (ft)	Surcharge Depth (ft)	Ponded Area (ft²)	Minimum Pipe Cover (ft)
1	0200-CB-001	28.07	32.50	4.43	0.00	-28.07	0.00	-32.50	0.00	0.00
2	0200-CB-002	27.37	32.78	5.41	0.00	-27.37	32.78	0.00	131000.00	0.00
3	0200-CB-003	24.20	31.58	7.38	0.00	-24.20	0.00	-31.58	100.00	0.00
4	0200-CB-004	26.27	31.58	5.31	0.00	-26.27	31.58	0.00	10.00	0.00
5	0200-CB-005	25.59	31.58	5.99	0.00	-25.59	0.00	-31.58	0.00	0.00
6	0200-CB-006	25.86	31.58	5.72	0.00	-25.86	0.00	-31.58	0.00	0.00
7	0200-CB-007	26.88	31.58	4.70	0.00	-26.88	0.00	-31.58	0.00	0.00
8	0200-CB-008	27.50	31.58	4.08	0.00	-27.50	31.58	0.00	10.00	0.00
9	0200-CB-009	26.36	31.58	5.22	0.00	-26.36	6.00	-25.58	0.00	0.00
10	0200-CB-010	27.07	31.58	4.51	0.00	-27.07	0.00	-31.58	0.00	0.00
11	0200-CB-011	27.50	30.74	3.24	0.00	-27.50	30.74	0.00	10.00	0.00
12	0200-SDMH-001	26.62	33.34	6.72	0.00	-26.62	0.00	-33.34	0.00	0.00
13	0200-SDMH-002	25.92	34.31	8.39	0.00	-25.92	0.00	-34.31	0.00	0.00
14	0200-SDMH-003	25.18	32.55	7.37	0.00	-25.18	0.00	-32.55	0.00	0.00
15	0200-SDMH-004	24.46	30.40	5.94	0.00	-24.46	0.00	-30.40	100.00	0.00
16	0200-SDMH-005	24.10	31.77	7.67	0.00	-24.10	0.00	-31.77	100.00	0.00
17	0200-SDMH-006	21.50	30.39	8.89	0.00	-21.50	0.00	-30.39	100.00	0.00
18	0200-SDMH-009	28.05	31.77	3.72	0.00	-28.05	0.00	-31.77	0.00	0.00
19	0200-SDMH-010	21.72	31.75	10.03	0.00	-21.72	6.00	-25.75	0.00	0.00
20	0200-SDMH-011	21.39	30.52	9.13	0.00	-21.39	0.00	-30.52	0.00	0.00
21	0200-SDMH-012	21.03	30.50	9.47	0.00	-21.03	0.00	-30.50	0.00	0.00
22	0200-SDMH-013	21.08	30.70	9.62	0.00	-21.08	0.00	-30.70	0.00	0.00
23	0200-SDMH-018	22.86	31.75	8.89	0.00	-22.86	0.00	-31.75	0.00	0.00
24	0200-SDMH-019	23.67	31.81	8.14	0.00	-23.67	0.00	-31.81	0.00	0.00
25	0200-SDMH-020	24.20	31.30	7.10	0.00	-24.20	0.00	-31.30	0.00	0.00
26	0200-SDMH-021	23.73	31.83	8.10	0.00	-23.73	0.00	-31.83	0.00	0.00
27	0200-SDMH-022	27.50	31.81	4.31	0.00	-27.50	0.00	-31.81	0.00	0.00
28	0300 STM-2	18.90	25.96	7.06	0.00	-18.90	0.00	-25.96	0.00	0.00
29	0300-CB-001	23.00	26.61	3.61	0.00	-23.00	0.00	-26.61	10.00	0.00
30	0300-CB-002	24.20	26.88	2.68	0.00	-24.20	26.88	0.00	10.00	0.00
31	0300-CB-003	24.88	27.88	3.00	0.00	-24.88	27.88	0.00	10.00	0.00
32	0300-CB-004	23.50	24.04	0.54	0.00	-23.50	0.00	-24.04	72000.00	0.00
33	0300-CB-005	24.70	25.24	0.54	0.00	-24.70	25.24	0.00	78000.00	0.00
34	0300-CB-006	24.62	25.16	0.54	0.00	-24.62	25.16	0.00	74000.00	0.00
35	0300-CB-007	24.61	25.14	0.53	0.00	-24.61	25.14	0.00	90000.00	0.00
36	0300-CB-008	24.98	25.51	0.53	0.00	-24.98	25.51	0.00	130680.00	0.00
37	0300-CB-009	24.63	25.17	0.54	0.00	-24.63	0.00	-25.17	152000.00	0.00
38	0300-OWS-001	22.12	27.61	5.49	0.00	-22.12	0.00	-27.61	0.00	0.00
39	0300-SDMH-001	19.74	26.79	7.05	0.00	-19.74	6.00	-20.79	0.00	0.00
40	0300-SDMH-002	23.80	27.19	3.39	0.00	-23.80	0.00	-27.19	0.00	0.00
41	0300-SDMH-003	24.53	27.86	3.33	0.00	-24.53	6.00	-21.86	0.00	0.00
42	0300-SDMH-004	22.00	26.87	4.87	0.00	-22.00	0.00	-26.87	0.00	0.00
43	0300-SDMH-005	22.50	26.12	3.62	0.00	-22.50	0.00	-26.12	0.00	0.00
44	0300-SDMH-006	22.69	25.72	3.03	0.00	-22.69	0.00	-25.72	0.00	0.00
45	0300-SDMH-007	22.74	25.92	3.18	0.00	-22.74	0.00	-25.92	0.00	0.00
46	0300-SDMH-008	22.91	26.09	3.18	0.00	-22.91	0.00	-26.09	0.00	0.00
47	0300-SDMH-009	23.47	26.04	2.57	0.00	-23.47	0.00	-26.04	0.00	0.00
48	0600-CB-001	26.97	29.47	2.50	0.00	-26.97	29.47	0.00	10.00	0.00
49	0600-CB-002	26.72	30.05	3.33	0.00	-26.72	0.00	-30.05	0.00	0.00
50	0600-CB-0300	27.05	31.40	4.35	0.00	-27.05	31.40	0.00	10.00	0.00
51	0600-SDMH-001	26.62	29.35	2.73	0.00	-26.62	0.00	-29.35	0.00	0.00
52	EXIST SDMH	19.65	27.18	7.53	19.65	0.00	0.00	-27.18	0.00	0.00
53	Jun-27	24.40	26.04	1.64	0.00	-24.40	0.00	-26.04	0.00	0.00
54	Jun-46	23.95	27.64	3.69	0.00	-23.95	10000.00	9972.36	0.00	0.00
55	Jun-47	23.14	26.63	3.49	0.00	-23.14	10000.00	9973.37	0.00	0.00
56	Jun-50	19.77	30.00	10.23	0.00	-19.77	0.00	-30.00	0.00	0.00
57	Jun-51	21.70	30.00	8.30	0.00	-21.70	0.00	-30.00	0.00	0.00

Junction Results

SN	Element ID	Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Max HGL Elevation Attained (ft)	Max HGL Depth Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Average HGL Elevation Attained (ft)	Average HGL Depth Attained (ft)	Time of Max HGL Occurrence (days hh:mm)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	0200-CB-001	0.52	0.52	28.53	0.46	0.00	3.97	28.28	0.21	0 07:56	0 00:00	0.00	0.00
2	0200-CB-002	0.15	0.15	27.63	0.26	0.00	5.15	27.50	0.13	0 07:55	0 00:00	0.00	0.00
3	0200-CB-003	0.13	0.10	24.64	0.44	0.00	6.94	24.52	0.32	0 08:00	0 00:00	0.00	0.00
4	0200-CB-004	0.03	0.03	26.35	0.08	0.00	5.23	26.31	0.04	0 08:02	0 00:00	0.00	0.00
5	0200-CB-005	0.41	0.07	25.71	0.12	0.00	5.87	25.65	0.06	0 08:02	0 00:00	0.00	0.00
6	0200-CB-006	0.13	0.03	26.09	0.23	0.00	5.49	25.98	0.12	0 08:01	0 00:00	0.00	0.00
7	0200-CB-007	0.10	0.05	27.08	0.20	0.00	4.50	26.99	0.11	0 08:01	0 00:00	0.00	0.00
8	0200-CB-008	0.05	0.05	27.64	0.14	0.00	3.94	27.57	0.07	0 08:00	0 00:00	0.00	0.00
9	0200-CB-009	0.22	0.14	26.66	0.30	0.00	4.92	26.51	0.15	0 08:03	0 00:00	0.00	0.00
10	0200-CB-010	0.09	0.05	27.27	0.20	0.00	4.31	27.17	0.10	0 08:04	0 00:00	0.00	0.00
11	0200-CB-011	0.05	0.05	27.65	0.15	0.00	3.09	27.58	0.08	0 08:01	0 00:00	0.00	0.00
12	0200-SDMH-001	0.67	0.00	27.11	0.49	0.00	6.23	26.86	0.24	0 07:59	0 00:00	0.00	0.00
13	0200-SDMH-002	0.66	0.00	26.41	0.49	0.00	7.90	26.16	0.24	0 08:00	0 00:00	0.00	0.00
14	0200-SDMH-003	0.97	0.00	25.73	0.55	0.00	6.82	25.43	0.25	0 08:01	0 00:00	0.00	0.00
15	0200-SDMH-004	0.97	0.00	25.41	0.95	0.00	4.99	25.09	0.63	0 08:05	0 00:00	0.00	0.00
16	0200-SDMH-005	1.06	0.00	24.30	0.20	0.00	7.47	24.19	0.09	0 08:05	0 00:00	0.00	0.00
17	0200-SDMH-006	2.32	0.00	22.03	0.53	0.00	8.36	21.71	0.21	0 08:00	0 00:00	0.00	0.00
18	0200-SDMH-009	1.29	1.29	28.36	0.31	0.00	3.41	28.19	0.14	0 07:54	0 00:00	0.00	0.00
19	0200-SDMH-010	2.15	2.15	22.49	0.77	0.00	9.26	22.05	0.33	0 07:57	0 00:00	0.00	0.00
20	0200-SDMH-011	2.15	0.00	22.25	0.86	0.00	8.27	21.78	0.39	0 07:58	0 00:00	0.00	0.00
21	0200-SDMH-012	2.55	0.00	21.70	0.67	0.00	8.80	21.34	0.31	0 08:01	0 00:00	0.00	0.00
22	0200-SDMH-013	0.41	0.00	21.71	0.63	0.00	8.99	21.35	0.27	0 08:01	0 00:00	0.00	0.00
23	0200-SDMH-018	5.46	0.00	24.32	1.46	0.00	7.43	23.58	0.72	0 07:58	0 00:00	0.00	0.00
24	0200-SDMH-019	3.91	0.00	24.76	1.09	0.00	7.05	24.18	0.51	0 07:58	0 00:00	0.00	0.00
25	0200-SDMH-020	0.12	0.00	24.76	0.56	0.00	6.54	24.25	0.05	0 08:00	0 00:00	0.00	0.00
26	0200-SDMH-021	3.91	3.91	24.87	1.14	0.00	6.96	24.23	0.50	0 07:57	0 00:00	0.00	0.00
27	0200-SDMH-022	1.56	1.56	27.94	0.44	0.00	3.87	27.69	0.19	0 07:55	0 00:00	0.00	0.00
28	0300 STM-2	1.74	0.00	25.96	7.06	0.00	0.00	25.81	6.91	0 02:16	0 07:54	6.97	1303.00
29	0300-CB-001	4.25	0.34	23.50	0.50	0.00	3.11	23.27	0.27	0 07:59	0 00:00	0.00	0.00
30	0300-CB-002	0.76	0.38	24.77	0.57	0.00	2.11	24.45	0.25	0 07:56	0 00:00	0.00	0.00
31	0300-CB-003	0.38	0.38	25.27	0.39	0.00	2.61	25.07	0.19	0 07:54	0 00:00	0.00	0.00
32	0300-CB-004	1.27	0.82	24.14	0.64	0.10	0.00	23.98	0.48	0 10:52	0 07:54	2.05	737.00
33	0300-CB-005	1.01	1.01	25.25	0.55	0.01	0.00	24.91	0.21	0 08:16	0 07:54	0.22	97.00
34	0300-CB-006	1.06	1.06	25.18	0.56	0.02	0.00	24.87	0.25	0 08:29	0 07:54	0.37	164.00
35	0300-CB-007	1.13	1.13	25.16	0.55	0.02	0.00	24.92	0.31	0 08:35	0 07:54	0.44	208.00
36	0300-CB-008	1.02	1.02	25.39	0.41	0.00	1.09	25.16	0.18	0 07:54	0 00:00	0.00	0.00
37	0300-CB-009	1.48	1.48	25.19	0.56	0.02	0.00	25.11	0.48	0 09:22	0 07:54	0.85	611.00
38	0300-OWS-001	2.05	0.00	23.04	0.92	0.00	4.57	22.82	0.70	0 07:58	0 00:00	0.00	0.00
39	0300-SDMH-001	4.02	0.00	20.81	1.07	0.00	5.98	20.46	0.72	0 07:59	0 00:00	0.00	0.00
40	0300-SDMH-002	3.94	0.00	24.55	0.75	0.00	2.64	24.19	0.39	0 07:58	0 00:00	0.00	0.00
41	0300-SDMH-003	0.38	0.00	24.86	0.33	0.00	3.00	24.69	0.16	0 07:57	0 00:00	0.00	0.00
42	0300-SDMH-004	2.07	0.00	24.58	2.58	0.00	2.29	23.59	1.59	0 07:59	0 00:00	0.00	0.00
43	0300-SDMH-005	2.07	0.00	24.68	2.18	0.00	1.44	23.65	1.15	0 07:53	0 00:00	0.00	0.00
44	0300-SDMH-006	2.50	0.00	24.76	2.07	0.00	0.96	23.73	1.04	0 07:56	0 00:00	0.00	0.00
45	0300-SDMH-007	2.50	0.00	24.82	2.08	0.00	1.10	23.77	1.03	0 07:54	0 00:00	0.00	0.00
46	0300-SDMH-008	2.02	0.00	24.85	1.94	0.00	1.24	23.82	0.91	0 07:56	0 00:00	0.00	0.00
47	0300-SDMH-009	1.37	0.00	24.93	1.46	0.00	1.11	24.02	0.55	0 07:56	0 00:00	0.00	0.00
48	0600-CB-001	0.16	0.16	27.19	0.22	0.00	2.28	27.09	0.12	0 07:56	0 00:00	0.00	0.00
49	0600-CB-002	0.15	0.04	27.05	0.33	0.00	3.00	26.91	0.19	0 07:58	0 00:00	0.00	0.00
50	0600-CB-0300	0.11	0.11	27.28	0.23	0.00	4.12	27.17	0.12	0 07:56	0 00:00	0.00	0.00
51	0600-SDMH-001	0.30	0.00	26.98	0.36	0.00	2.37	26.79	0.17	0 08:00	0 00:00	0.00	0.00
52	EXIST SDMH	7.48	3.46	20.53	0.88	0.00	6.65	20.18	0.53	0 08:00	0 00:00	0.00	0.00
53	Jun-27	0.01	0.00	24.76	0.36	0.00	1.28	24.42	0.02	0 08:00	0 00:00	0.00	0.00
54	Jun-46	3.53	0.00	29.58	5.63	1.94	0.00	24.68	0.73	0 07:58	0 00:00	0.00	0.00
55	Jun-47	4.18	0.00	25.16	2.02	0.00	1.47	24.14	1.00	0 06:49	0 00:00	0.00	0.00
56	Jun-50	1.74	0.87	26.50	6.73	0.00	3.50	25.86	6.09	0 07:56	0 00:00	0.00	0.00
57	Jun-51	0.87	0.87	26.82	5.12	0.00	3.18	25.92	4.22	0 07:54	0 00:00	0.00	0.00

Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (ft)	Pipe Width (ft)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate
1	03	111.80	26.97	0.00	26.72	0.10	0.25	0.2200	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
2	04	201.11	26.62	0.00	26.18	1.00	0.44	0.2200	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
3	05	157.26	25.92	0.00	25.68	0.50	0.24	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
4	06	293.00	26.62	0.00	26.12	0.20	0.50	0.1700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
5	07	24.65	27.37	0.00	27.32	0.70	0.05	0.2000	CIRCULAR	0.670	0.670	0.0150	0.5000	0.5000	0.0000	0.00	No
6	08	34.01	27.05	0.00	26.98	0.26	0.07	0.2100	CIRCULAR	0.670	0.670	0.0150	0.5000	0.5000	0.0000	0.00	No
7	09	26.85	26.78	0.06	26.72	0.10	0.06	0.2200	CIRCULAR	0.670	0.670	0.0150	0.5000	0.5000	0.0000	0.00	No
8	10	301.17	28.07	0.00	27.32	0.70	0.75	0.2500	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
9	12	346.68	25.18	0.00	24.84	0.38	0.34	0.1000	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
10	13	328.80	24.79	0.33	24.46	0.36	0.33	0.1000	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
11	14	56.91	24.49	0.29	24.20	0.10	0.29	0.5100	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
12	17	170.96	21.72	0.00	21.44	0.05	0.28	0.1600	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
13	20	159.13	25.86	0.00	25.59	0.00	0.27	0.1700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
14	21	216.85	26.88	0.00	26.36	0.50	0.52	0.2400	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
15	22	159.02	27.50	0.00	27.08	0.20	0.42	0.2600	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
16	23	300.00	26.36	0.00	25.85	0.26	0.51	0.1700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
17	24	300.00	27.07	0.00	26.56	0.20	0.51	0.1700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
18	25	137.04	27.50	0.00	27.27	0.20	0.23	0.1700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
19	26	37.09	24.40	0.00	24.30	0.10	0.10	0.2700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
20	27	277.00	24.20	0.00	23.78	0.11	0.42	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
21	28	15.07	23.73	0.00	23.71	0.04	0.02	0.1300	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
22	29	127.25	23.67	0.00	23.53	0.67	0.14	0.1100	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
23	30	164.24	27.50	0.00	24.53	1.67	2.97	1.8100	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
24	31	165.62	23.03	0.17	22.86	0.00	0.17	0.1000	CIRCULAR	2.500	2.500	0.0150	0.5000	0.5000	0.0000	0.00	No
25	32	370.18	21.39	0.00	21.03	0.00	0.36	0.1000	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
26	33	41.91	21.08	0.00	21.03	0.00	0.05	0.1200	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
27	34	59.75	25.09	-0.50	21.13	0.05	3.96	6.6300	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
28	36	37.14	24.00	-0.10	21.50	0.00	2.50	6.7300	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
29	37	128.94	28.05	0.00	22.25	0.75	5.80	4.5000	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
30	38	316.25	26.27	0.00	24.69	0.49	1.58	0.5000	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
31	39	73.01	24.98	0.00	24.52	1.05	0.46	0.6300	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
32	40	41.38	24.63	0.00	24.50	1.03	0.13	0.3100	CIRCULAR	0.500	0.500	0.0150	0.5000	0.5000	0.0000	0.00	No
33	54	43.05	23.80	0.00	23.20	0.20	0.60	1.3900	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
34	55	89.70	23.00	0.00	18.35	8.35	4.65	5.1800	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
35	56	64.99	19.74	0.00	19.65	0.00	0.09	0.1400	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
36	58	23.65	22.12	0.00	22.07	7.07	0.05	0.2100	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
37	59	45.61	23.95	0.00	23.95	0.15	0.00	0.0000	Circular Force Main	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	Yes
38	60	16.69	21.03	0.00	20.98	0.00	0.05	0.3000	CIRCULAR	3.000	3.000	0.0150	0.5000	0.5000	0.0000	0.00	No
39	63	17.95	23.14	0.00	23.14	3.40	0.00	0.0000	Circular Force Main	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	Yes
40	64	4.47	19.65	0.00	19.60	0.00	0.05	1.1200	CIRCULAR	4.000	4.000	0.0150	0.5000	0.5000	0.0000	0.00	No
41	65	142.65	22.40	-0.10	22.19	0.19	0.21	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
42	66	0.10	21.50	0.00	21.40	0.00	0.10	100.0000	CIRCULAR	3.000	3.000	0.0150	0.5000	0.5000	0.0000	0.00	No
43	67	385.63	21.70	0.00	20.79	1.02	0.91	0.2400	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
44	68	133.68	19.57	-0.20	18.90	0.00	0.67	0.5000	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
45	178	65.12	24.53	0.00	24.40	0.20	0.13	0.2000	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
46	179	75.09	24.88	0.00	24.73	0.20	0.15	0.2000	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
47	199	97.58	24.20	0.00	24.00	0.20	0.20	0.2000	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
48	204	175.87	22.09	0.09	22.00	0.00	0.09	0.0500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
49	205	126.22	22.69	0.00	22.50	0.00	0.19	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
50	206	34.53	22.74	0.00	22.69	0.00	0.05	0.1400	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
51	207	113.77	22.91	0.00	22.74	0.00	0.17	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
52	211	66.96	23.50	0.00	23.20	0.51	0.30	0.4500	CIRCULAR	0.500	0.500	0.0150	0.5000	0.5000	0.0000	0.00	No
53	213	39.21	24.70	0.00	23.48	0.74	1.22	3.1100	CIRCULAR	0.500	0.500	0.0150	0.5000	0.5000	0.0000	0.00	No
54	215	57.30	24.62	0.00	23.47	0.56	1.15	2.0100	CIRCULAR	0.500	0.500	0.0150	0.5000	0.5000	0.0000	0.00	No
55	217	60.46	24.61	0.00	24.07	1.16	0.54	0.8900	CIRCULAR	0.500	0.500	0.0150	0.5000	0.5000	0.0000	0.00	No
56	223	369.87	23.47	0.00	22.91	0.00	0.56	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No

No. of Barrels
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Pipe Results

SN	Element ID	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Travel Time (min)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Froude Number	Reported Condition
1	03	0.16	0 07:56	1.46	0.11	1.11	1.68	0.24	0.24	0.00		Calculated
2	04	0.30	0 08:00	1.44	0.21	1.59	2.11	0.29	0.29	0.00		Calculated
3	05	0.66	0 08:00	3.56	0.19	1.78	1.47	0.39	0.26	0.00		Calculated
4	06	0.66	0 07:59	3.76	0.18	1.76	2.77	0.40	0.27	0.00		Calculated
5	07	0.15	0 07:55	0.47	0.31	1.48	0.28	0.22	0.33	0.00		Calculated
6	08	0.11	0 07:56	0.48	0.24	1.34	0.42	0.19	0.29	0.00		Calculated
7	09	0.15	0 07:55	0.50	0.30	1.20	0.37	0.26	0.40	0.00		Calculated
8	10	0.52	0 07:56	1.54	0.34	1.91	2.63	0.38	0.38	0.00		Calculated
9	12	0.97	0 08:02	6.14	0.16	1.37	4.22	0.56	0.28	0.00		Calculated
10	13	0.95	0 08:05	6.21	0.15	1.65	3.32	0.48	0.24	0.00		Calculated
11	14	0.13	0 08:00	6.50	0.02	1.51	0.63	0.14	0.09	0.00		Calculated
12	17	2.15	0 07:55	7.93	0.27	1.87	1.52	0.79	0.40	0.00		Calculated
13	20	0.13	0 08:01	3.75	0.03	1.09	2.43	0.18	0.12	0.00		Calculated
14	21	0.10	0 08:01	1.51	0.06	1.16	3.12	0.16	0.16	0.00		Calculated
15	22	0.05	0 08:00	1.59	0.03	0.95	2.79	0.11	0.11	0.00		Calculated
16	23	0.22	0 08:03	3.75	0.06	1.23	4.07	0.23	0.16	0.00		Calculated
17	24	0.09	0 08:04	3.75	0.02	0.92	5.43	0.15	0.10	0.00		Calculated
18	25	0.05	0 08:01	3.73	0.01	0.77	2.97	0.11	0.08	0.00		Calculated
19	26	0.01	0 07:40	4.73	0.00	0.24	2.58	0.41	0.27	0.00		Calculated
20	27	0.12	0 07:40	3.54	0.03	0.21	21.98	0.77	0.51	0.00		Calculated
21	28	3.91	0 07:54	7.14	0.55	2.25	0.11	1.09	0.55	0.00		Calculated
22	29	3.90	0 07:57	6.50	0.60	2.71	0.78	0.94	0.47	0.00		Calculated
23	30	1.56	0 07:55	4.15	0.38	4.78	0.57	0.43	0.43	0.00		Calculated
24	31	5.46	0 07:58	11.39	0.48	2.21	1.25	1.25	0.50	0.00		Calculated
25	32	2.15	0 07:59	6.11	0.35	1.93	3.20	0.77	0.38	0.00		Calculated
26	33	0.42	0 08:03	6.77	0.06	0.48	1.46	0.65	0.33	0.00		Calculated
27	34	0.41	0 08:02	53.57	0.01	1.38	0.72	0.35	0.18	0.00		Calculated
28	36	1.06	0 08:05	51.87	0.02	2.92	0.21	0.36	0.18	0.00		Calculated
29	37	1.29	0 07:54	6.55	0.20	6.33	0.34	0.31	0.31	0.00		Calculated
30	38	0.03	0 08:02	6.43	0.01	1.01	5.22	0.07	0.05	0.00		Calculated
31	39	1.02	0 07:54	7.23	0.14	2.74	0.44	0.41	0.27	0.00		Calculated
32	40	0.37	0 09:22	0.27	1.37	2.19	0.31	0.47	0.93	0.00		> CAPACITY
33	54	3.92	0 07:59	10.75	0.36	4.99	0.14	0.68	0.46	0.00		Calculated
34	55	4.21	0 07:59	20.73	0.20	8.68	0.17	0.48	0.32	0.00		Calculated
35	56	4.03	0 07:59	7.30	0.55	3.14	0.34	0.97	0.49	0.00		Calculated
36	58	2.05	0 07:58	1.42	1.44	3.18	0.12	0.76	0.76	0.00		> CAPACITY
37	59	3.20	0 09:25	0.17	19.15	4.37	0.17	0.89	0.90	0.00		> CAPACITY
38	60	2.55	0 08:01	31.64	0.08	2.39	0.12	0.62	0.21	0.00		Calculated
39	63	4.02	0 07:59	0.28	14.53	5.30	0.06	0.92	0.92	0.00		> CAPACITY
40	64	7.48	0 08:00	131.66	0.06	4.47	0.02	0.76	0.19	0.00		Calculated
41	65	2.07	0 07:43	4.24	0.49	1.26	1.89	1.50	1.00	215.00		SURCHARGED
42	66	2.32	0 08:00	578.05	0.00	5.43	0.00	0.33	0.11	0.00		Calculated
43	67	0.87	0 07:54	1.50	0.58	1.11	5.79	1.00	1.00	1304.00		SURCHARGED
44	68	1.74	0 07:54	2.49	0.70	2.22	1.00	1.00	1.00	1345.00		SURCHARGED
45	178	0.38	0 07:59	4.07	0.09	1.30	0.83	0.35	0.23	0.00		Calculated
46	179	0.38	0 07:54	1.38	0.28	1.75	0.72	0.32	0.32	0.00		Calculated
47	199	0.83	0 07:58	1.40	0.59	2.14	0.76	0.55	0.55	0.00		Calculated
48	204	2.08	0 07:43	2.06	1.01	1.17	2.51	1.50	1.00	390.00		SURCHARGED
49	205	2.07	0 07:43	3.53	0.59	1.32	1.59	1.50	1.00	145.00		SURCHARGED
50	206	2.50	0 07:48	3.46	0.72	1.42	0.41	1.50	1.00	137.00		SURCHARGED
51	207	2.02	0 07:56	3.52	0.57	1.14	1.66	1.50	1.00	122.00		SURCHARGED
52	211	0.45	0 07:56	0.33	1.37	2.28	0.49	0.50	1.00	341.00		SURCHARGED
53	213	0.65	0 07:37	0.86	0.76	3.61	0.18	0.50	1.00	118.00		SURCHARGED
54	215	0.57	0 10:20	0.69	0.83	3.11	0.31	0.50	1.00	184.00		SURCHARGED
55	217	0.49	0 09:35	0.46	1.06	2.70	0.37	0.50	1.00	57.00		SURCHARGED
56	223	1.36	0 07:55	3.54	0.38	0.94	6.56	1.48	0.99	0.00		Calculated

Storage Nodes

Storage Node : 0300-CS-001

Input Data

Invert Elevation (ft) 22.00
Max (Rim) Elevation (ft) 32.00
Max (Rim) Offset (ft) 10.00
Initial Water Elevation (ft) 0.00
Initial Water Depth (ft) ..... -22.00
Ponded Area (ft²) 0.00
Evaporation Loss 0.00

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (ft)	Rectangular Orifice Height (ft)	Rectangular Orifice Width (ft)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	0300-CS-001 Orr	Side	CIRCULAR	No	0.67			22.46	0.61

Output Summary Results

Peak Inflow (cfs) 2.08
Peak Lateral Inflow (cfs) 0.00
Peak Outflow (cfs) 2.05
Peak Exfiltration Flow Rate (cfm) 0.00
Max HGL Elevation Attained (ft) 24.43
Max HGL Depth Attained (ft) 2.43
Average HGL Elevation Attained (ft) 23.54
Average HGL Depth Attained (ft) 1.54
Time of Max HGL Occurrence (days hh:mm) 0 07:58
Total Exfiltration Volume (1000-ft³) 0.000
Total Flooded Volume (ac-in) 0
Total Time Flooded (min) 0
Total Retention Time (sec) 0.00

Storage Node : 0300-PS-001 WW

Input Data

Invert Elevation (ft)	10.00
Max (Rim) Elevation (ft)	26.63
Max (Rim) Offset (ft)	16.63
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-10.00
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Output Summary Results

Peak Inflow (cfs)	4.21
Peak Lateral Inflow (cfs)	0.00
Peak Outflow (cfs)	4.18
Peak Exfiltration Flow Rate (cfm)	0.00
Max HGL Elevation Attained (ft)	18.08
Max HGL Depth Attained (ft)	8.08
Average HGL Elevation Attained (ft)	15.43
Average HGL Depth Attained (ft)	5.43
Time of Max HGL Occurrence (days hh:mm)	0 07:59
Total Exfiltration Volume (1000-ft³)	0.000
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0.00

Storage Node : 0300-PS-002 WW

Input Data

Invert Elevation (ft)	15.00
Max (Rim) Elevation (ft)	27.64
Max (Rim) Offset (ft)	12.64
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-15.00
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Output Summary Results

Peak Inflow (cfs)	2.05
Peak Lateral Inflow (cfs)	0.00
Peak Outflow (cfs)	3.53
Peak Exfiltration Flow Rate (cfm)	0.00
Max HGL Elevation Attained (ft)	22.06
Max HGL Depth Attained (ft)	7.06
Average HGL Elevation Attained (ft)	19.09
Average HGL Depth Attained (ft)	4.09
Time of Max HGL Occurrence (days hh:mm)	0 17:09
Total Exfiltration Volume (1000-ft³)	0.000
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0.00

Project Description

File Name	POV Savage-Tesoro SSA Model_100-Year_022516.SPF
Description	
	Tesoro Savage PBR Facility
	Port of Vancouver, WA
	100-Year, 24-Hour Storm Conveyance Model

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Santa Barbara UH
Time of Concentration (TOC) Method	Kirpich
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	NO

Analysis Options

Start Analysis On	Mar 26, 2014	00:00:00
End Analysis On	Mar 27, 2014	00:00:00
Start Reporting On	Mar 26, 2014	00:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	1 00:01:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	1 00:05:00	days hh:mm:ss
Reporting Time Step	1 00:05:00	days hh:mm:ss
Routing Time Step	1	seconds

Number of Elements

	Qty
Rain Gages	2
Subbasins	30
Nodes	64
Junctions	57
Outfalls	4
Flow Diversions	0
Inlets	0
Storage Nodes	3
Links	59
Channels	0
Pipes	56
Pumps	2
Orifices	1
Weirs	0
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1		Time Series	100-Year Storm	Intensity	inches	Washington	Clark	100	4.30	SCS Type IA 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Impervious Area (%)	Impervious Area Curve Number	Pervious Area Curve Number	Average Slope (%)	Flow Length (ft)	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	0200-1	0.62	100.00	98.00	76.00	1.0000	500.00	4.29	4.05	2.51	0.63	0 00:05:00
2	0200-10	0.15	0.00	98.00	76.00	0.5000	500.00	4.29	1.96	0.29	0.07	0 00:05:00
3	0200-11	0.16	0.00	98.00	76.00	0.5000	500.00	4.29	1.96	0.31	0.07	0 00:05:00
4	0200-2	0.18	100.00	98.00	76.00	0.5000	500.00	4.29	4.05	0.73	0.18	0 00:07:10
5	0200-3	0.32	0.00	98.00	76.00	0.5000	500.00	4.29	1.96	0.62	0.14	0 00:05:00
6	0200-4	0.11	0.00	98.00	76.00	0.5000	500.00	4.29	1.96	0.22	0.05	0 00:05:00
7	0200-5	0.23	0.00	98.00	76.00	0.5000	500.00	4.29	1.96	0.46	0.10	0 00:05:00
8	0200-6	0.10	0.00	98.00	76.00	0.5000	500.00	4.29	1.96	0.21	0.05	0 00:05:00
9	0200-7	0.13	24.00	98.00	76.00	0.5000	500.00	4.29	2.47	0.31	0.07	0 00:05:00
10	0200-8	0.13	10.00	98.00	76.00	0.5000	500.00	4.29	2.17	0.28	0.07	0 00:05:00
11	0200-9	0.45	0.00	98.00	76.00	0.5000	500.00	4.29	1.96	0.89	0.20	0 00:05:00
12	0300-1	0.48	75.00	98.00	76.00	0.5000	500.00	4.29	3.53	1.70	0.42	0 00:05:00
13	0300-2	0.55	73.00	98.00	76.00	2.0000	500.00	4.29	3.49	1.92	0.47	0 00:05:00
14	0300-3	0.55	73.00	98.00	76.00	2.0000	500.00	4.29	3.49	1.92	0.47	0 00:05:00
15	0300-4	0.97	100.00	98.00	76.00	2.0000	500.00	4.29	4.05	3.94	0.99	0 00:05:00
16	0300-5	1.20	100.00	98.00	76.00	2.0000	500.00	4.29	4.05	4.87	1.22	0 00:05:00
17	0300-6	1.29	100.00	98.00	76.00	0.5000	500.00	4.29	4.05	5.23	1.27	0 00:07:10
18	0300-7	1.37	100.00	98.00	76.00	0.5000	500.00	4.29	4.05	5.56	1.35	0 00:07:10
19	0300-8	1.21	100.00	98.00	76.00	2.0000	500.00	4.29	4.05	4.89	1.22	0 00:05:00
20	0300-9	1.75	100.00	98.00	76.00	2.0000	500.00	4.29	4.05	7.09	1.77	0 00:05:00
21	0600-1	0.19	100.00	98.00	76.00	0.5000	500.00	4.29	4.05	0.77	0.19	0 00:07:10
22	0600-2	0.05	80.00	98.00	76.00	2.0000	500.00	4.29	3.64	0.18	0.05	0 00:05:00
23	0600-3	0.20	50.00	98.00	76.00	1.0000	500.00	4.29	3.01	0.60	0.14	0 00:05:30
24	Future Tank 1	1.06	100.00	98.00	76.00	0.5000	500.00	4.29	4.05	4.29	1.05	0 00:07:10
25	Future Tank 2	1.06	100.00	98.00	76.00	0.5000	500.00	4.29	4.05	4.29	1.05	0 00:07:10
26	Rail Shed Roof - East	1.90	100.00	98.00	76.00	0.5000	500.00	4.29	4.05	7.70	1.87	0 00:07:10
27	Rail Unloading Shed - West	1.57	100.00	98.00	76.00	0.5000	500.00	4.29	4.05	6.37	1.55	0 00:07:10
28	Tank Roofs	4.22	100.00	98.00	76.00	0.5000	500.00	4.29	4.05	17.10	4.16	0 00:07:10
29	Vanexo Cap - East	4.76	100.00	98.00	76.00	0.5000	500.00	4.29	4.05	19.30	4.70	0 00:07:10
30	Vanexo Cap - West	2.62	100.00	98.00	76.00	0.5000	500.00	4.29	4.05	10.61	2.58	0 00:07:10

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	0200-CB-001	Junction	28.07	32.50	0.00	0.00	0.00	0.63	28.58	0.00	3.92	0 00:00	0.00	0.00
2	0200-CB-002	Junction	27.37	32.78	0.00	32.78	131000.00	0.18	27.66	0.00	5.12	0 00:00	0.00	0.00
3	0200-CB-003	Junction	24.20	31.58	0.00	0.00	100.00	0.19	24.68	0.00	6.90	0 00:00	0.00	0.00
4	0200-CB-004	Junction	26.27	31.58	0.00	31.58	10.00	0.05	26.37	0.00	5.21	0 00:00	0.00	0.00
5	0200-CB-005	Junction	25.59	31.58	0.00	0.00	0.00	0.61	25.74	0.00	5.84	0 00:00	0.00	0.00
6	0200-CB-006	Junction	25.86	31.58	0.00	0.00	0.00	0.18	26.13	0.00	5.45	0 00:00	0.00	0.00
7	0200-CB-007	Junction	26.88	31.58	0.00	0.00	0.00	0.14	27.12	0.00	4.46	0 00:00	0.00	0.00
8	0200-CB-008	Junction	27.50	31.58	0.00	31.58	10.00	0.06	27.66	0.00	3.92	0 00:00	0.00	0.00
9	0200-CB-009	Junction	26.36	31.58	0.00	6.00	0.00	0.34	26.72	0.00	4.86	0 00:00	0.00	0.00
10	0200-CB-010	Junction	27.07	31.58	0.00	0.00	0.00	0.14	27.30	0.00	4.28	0 00:00	0.00	0.00
11	0200-CB-011	Junction	27.50	30.74	0.00	30.74	10.00	0.07	27.68	0.00	3.06	0 00:00	0.00	0.00
12	0200-SDMH-001	Junction	26.62	33.34	0.00	0.00	0.00	0.80	27.16	0.00	6.18	0 00:00	0.00	0.00
13	0200-SDMH-002	Junction	25.92	34.31	0.00	0.00	0.00	0.80	26.45	0.00	7.86	0 00:00	0.00	0.00
14	0200-SDMH-003	Junction	25.18	32.55	0.00	0.00	0.00	1.17	25.79	0.00	6.76	0 00:00	0.00	0.00
15	0200-SDMH-004	Junction	24.46	30.40	0.00	0.00	100.00	1.17	25.46	0.00	4.94	0 00:00	0.00	0.00
16	0200-SDMH-005	Junction	24.10	31.77	0.00	0.00	100.00	1.33	24.32	0.00	7.45	0 00:00	0.00	0.00
17	0200-SDMH-006	Junction	21.50	30.39	0.00	0.00	100.00	2.85	22.09	0.00	8.30	0 00:00	0.00	0.00
18	0200-SDMH-009	Junction	28.05	31.77	0.00	0.00	0.00	1.55	28.39	0.00	3.38	0 00:00	0.00	0.00
19	0200-SDMH-010	Junction	21.72	31.75	0.00	6.00	0.00	2.58	22.58	0.00	9.17	0 00:00	0.00	0.00
20	0200-SDMH-011	Junction	21.39	30.52	0.00	0.00	0.00	2.58	22.34	0.00	8.18	0 00:00	0.00	0.00
21	0200-SDMH-012	Junction	21.03	30.50	0.00	0.00	0.00	3.18	21.79	0.00	8.71	0 00:00	0.00	0.00
22	0200-SDMH-013	Junction	21.08	30.70	0.00	0.00	0.00	0.61	21.80	0.00	8.90	0 00:00	0.00	0.00
23	0200-SDMH-018	Junction	22.86	31.75	0.00	0.00	0.00	6.55	24.47	0.00	7.28	0 00:00	0.00	0.00
24	0200-SDMH-019	Junction	23.67	31.81	0.00	0.00	0.00	4.70	24.88	0.00	6.93	0 00:00	0.00	0.00
25	0200-SDMH-020	Junction	24.20	31.30	0.00	0.00	0.00	0.16	24.88	0.00	6.42	0 00:00	0.00	0.00
26	0200-SDMH-021	Junction	23.73	31.83	0.00	0.00	0.00	4.70	25.00	0.00	6.83	0 00:00	0.00	0.00
27	0200-SDMH-022	Junction	27.50	31.81	0.00	0.00	0.00	1.87	27.99	0.00	3.82	0 00:00	0.00	0.00
28	0300 STM-2	Junction	18.90	25.96	0.00	0.00	0.00	2.09	25.96	0.00	0.00	0 07:54	8.45	1320.00
29	0300-CB-001	Junction	23.00	26.61	0.00	0.00	10.00	4.47	23.51	0.00	3.10	0 00:00	0.00	0.00
30	0300-CB-002	Junction	24.20	26.88	0.00	26.88	10.00	0.94	24.84	0.00	2.04	0 00:00	0.00	0.00
31	0300-CB-003	Junction	24.88	27.88	0.00	27.88	10.00	0.47	25.31	0.00	2.57	0 00:00	0.00	0.00
32	0300-CB-004	Junction	23.50	24.04	0.00	0.00	72000.00	1.45	24.19	0.15	0.00	0 07:54	3.06	1080.00
33	0300-CB-005	Junction	24.70	25.24	0.00	25.24	78000.00	1.22	25.26	0.02	0.00	0 07:54	0.37	145.00
34	0300-CB-006	Junction	24.62	25.16	0.00	25.16	74000.00	1.27	25.19	0.03	0.00	0 07:54	0.57	243.00
35	0300-CB-007	Junction	24.61	25.14	0.00	25.14	90000.00	1.35	25.17	0.03	0.00	0 07:54	0.67	309.00
36	0300-CB-008	Junction	24.98	25.51	0.00	25.51	130680.00	1.22	25.42	0.00	1.06	0 00:00	0.00	0.00
37	0300-CB-009	Junction	24.63	25.17	0.00	0.00	152000.00	1.77	25.20	0.03	0.00	0 07:54	1.31	914.00
38	0300-OWS-001	Junction	22.12	27.61	0.00	0.00	0.00	2.07	23.05	0.00	4.56	0 00:00	0.00	0.00
39	0300-SDMH-001	Junction	19.74	26.79	0.00	6.00	0.00	4.10	20.83	0.00	5.96	0 00:00	0.00	0.00
40	0300-SDMH-002	Junction	23.80	27.19	0.00	0.00	0.00	4.12	24.56	0.00	2.63	0 00:00	0.00	0.00
41	0300-SDMH-003	Junction	24.53	27.86	0.00	6.00	0.00	0.47	24.92	0.00	2.94	0 00:00	0.00	0.00
42	0300-SDMH-004	Junction	22.00	26.87	0.00	0.00	0.00	2.10	24.63	0.00	2.24	0 00:00	0.00	0.00
43	0300-SDMH-005	Junction	22.50	26.12	0.00	0.00	0.00	2.10	24.73	0.00	1.39	0 00:00	0.00	0.00
44	0300-SDMH-006	Junction	22.69	25.72	0.00	0.00	0.00	2.54	24.81	0.00	0.91	0 00:00	0.00	0.00
45	0300-SDMH-007	Junction	22.74	25.92	0.00	0.00	0.00	2.54	24.87	0.00	1.05	0 00:00	0.00	0.00
46	0300-SDMH-008	Junction	22.91	26.09	0.00	0.00	0.00	2.09	24.91	0.00	1.18	0 00:00	0.00	0.00
47	0300-SDMH-009	Junction	23.47	26.04	0.00	0.00	0.00	1.50	25.02	0.00	1.02	0 00:00	0.00	0.00
48	0600-CB-001	Junction	26.97	29.47	0.00	29.47	10.00	0.19	27.21	0.00	2.26	0 00:00	0.00	0.00
49	0600-CB-002	Junction	26.72	30.05	0.00	0.00	0.00	0.19	27.09	0.00	2.96	0 00:00	0.00	0.00
50	0600-CB-0300	Junction	27.05	31.40	0.00	31.40	10.00	0.14	27.31	0.00	4.09	0 00:00	0.00	0.00
51	0600-SDMH-001	Junction	26.62	29.35	0.00	0.00	0.00	0.37	27.02	0.00	2.33	0 00:00	0.00	0.00
52	EXIST SDMH	Junction	19.65	27.18	19.65	0.00	0.00	8.21	20.57	0.00	6.61	0 00:00	0.00	0.00
53	Jun-27	Junction	24.40	26.04	0.00	0.00	0.00	0.02	24.88	0.00	1.16	0 00:00	0.00	0.00
54	Jun-46	Junction	23.95	27.64	0.00	10000.00	0.00	3.53	29.72	2.08	0.00	0 00:00	0.00	0.00
55	Jun-47	Junction	23.14	26.63	0.00	10000.00	0.00	4.18	25.16	0.00	1.47	0 00:00	0.00	0.00
56	Jun-50	Junction	19.77	30.00	0.00	0.00	0.00	2.09	26.71	0.00	3.29	0 00:00	0.00	0.00
57	Jun-51	Junction	21.70	30.00	0.00	0.00	0.00	1.05	27.18	0.00	2.82	0 00:00	0.00	0.00
58	0200 STM-1	Outfall	21.40					2.85	21.55					
59	0200 STM-2	Outfall	20.98					3.17	21.62					
60	0200 STM-3	Outfall	22.86					6.55	24.22					
61	0300 STM-1	Outfall	19.60					8.20	20.28					
62	0300-CS-001	Storage Node	22.00	32.00	0.00		0.00	2.10	24.47				0.00	0.00
63	0300-PS-001 WW	Storage Node	10.00	26.63	0.00		0.00	4.44	18.38				0.00	0.00
64	0300-PS-002 WW	Storage Node	15.00	27.64	0.00		0.00	2.07	22.06				0.00	0.00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
1	03	Pipe	0600-CB-001	0600-SDMH-001	111.80	26.97	26.72	0.2200	1.000	0.0150	0.19	1.46	0.13	1.13	0.27	0.27	0.00	Calculated
2	04	Pipe	0600-SDMH-001	0200-SDMH-003	201.11	26.62	26.18	0.2200	1.000	0.0150	0.37	1.44	0.26	1.69	0.32	0.32	0.00	Calculated
3	05	Pipe	0200-SDMH-002	0200-SDMH-003	157.26	25.92	25.68	0.1500	1.500	0.0150	0.80	3.56	0.22	1.89	0.43	0.29	0.00	Calculated
4	06	Pipe	0200-SDMH-001	0200-SDMH-002	293.00	26.62	26.12	0.1700	1.500	0.0150	0.80	3.76	0.21	1.87	0.44	0.29	0.00	Calculated
5	07	Pipe	0200-CB-002	0200-SDMH-001	24.65	27.37	27.32	0.2000	0.667	0.0150	0.18	0.47	0.38	1.57	0.24	0.36	0.00	Calculated
6	08	Pipe	0600-CB-0300	0600-CB-002	34.01	27.05	26.98	0.2100	0.667	0.0150	0.14	0.48	0.30	1.44	0.22	0.33	0.00	Calculated
7	09	Pipe	0600-CB-002	0600-SDMH-001	26.85	26.78	26.72	0.2200	0.667	0.0150	0.19	0.50	0.38	1.26	0.30	0.46	0.00	Calculated
8	10	Pipe	0200-CB-001	0200-SDMH-001	301.17	28.07	27.32	0.2500	1.000	0.0150	0.62	1.54	0.40	2.00	0.42	0.42	0.00	Calculated
9	12	Pipe	0200-SDMH-003	0200-SDMH-004	346.68	25.18	24.84	0.1000	2.000	0.0150	1.17	6.14	0.19	1.44	0.61	0.31	0.00	Calculated
10	13	Pipe	0200-SDMH-004	0200-SDMH-005	328.80	24.79	24.46	0.1000	2.000	0.0150	1.15	6.21	0.18	1.77	0.52	0.26	0.00	Calculated
11	14	Pipe	0200-CB-003	0200-SDMH-005	56.91	24.49	24.20	0.5100	1.500	0.0150	0.19	6.50	0.03	1.68	0.17	0.11	0.00	Calculated
12	17	Pipe	0200-SDMH-010	0200-SDMH-011	170.96	21.72	21.44	0.1600	2.000	0.0150	2.58	7.93	0.32	1.96	0.88	0.44	0.00	Calculated
13	20	Pipe	0200-CB-006	0200-CB-005	159.13	25.86	25.59	0.1700	1.500	0.0150	0.18	3.75	0.05	1.22	0.21	0.14	0.00	Calculated
14	21	Pipe	0200-CB-007	0200-CB-006	216.85	26.88	26.36	0.2400	1.000	0.0150	0.14	1.51	0.09	1.28	0.19	0.19	0.00	Calculated
15	22	Pipe	0200-CB-008	0200-CB-007	159.02	27.50	27.08	0.2600	1.000	0.0150	0.06	1.59	0.04	1.06	0.13	0.13	0.00	Calculated
16	23	Pipe	0200-CB-009	0200-CB-005	300.00	26.36	25.85	0.1700	1.500	0.0150	0.33	3.75	0.09	1.41	0.28	0.19	0.00	Calculated
17	24	Pipe	0200-CB-010	0200-CB-009	300.00	27.07	26.56	0.1700	1.500	0.0150	0.14	3.75	0.04	1.04	0.19	0.13	0.00	Calculated
18	25	Pipe	0200-CB-011	0200-CB-010	137.04	27.50	27.27	0.1700	1.500	0.0150	0.07	3.73	0.02	0.88	0.14	0.09	0.00	Calculated
19	26	Pipe	Jun-27	0200-SDMH-020	37.09	24.40	24.30	0.2700	1.500	0.0150	0.02	4.73	0.00	0.24	0.53	0.35	0.00	Calculated
20	27	Pipe	0200-SDMH-020	0200-SDMH-019	277.00	24.20	23.78	0.1500	1.500	0.0150	0.16	3.54	0.04	0.21	0.89	0.59	0.00	Calculated
21	28	Pipe	0200-SDMH-021	0200-SDMH-019	15.07	23.73	23.71	0.1300	2.000	0.0150	4.70	7.14	0.66	2.36	1.22	0.61	0.00	Calculated
22	29	Pipe	0200-SDMH-019	0200-SDMH-018	127.25	23.67	23.53	0.1100	2.000	0.0150	4.68	6.50	0.72	2.72	1.08	0.54	0.00	Calculated
23	30	Pipe	0200-SDMH-022	0200-SDMH-018	164.24	27.50	24.53	1.8100	1.000	0.0150	1.87	4.15	0.45	5.00	0.48	0.48	0.00	Calculated
24	31	Pipe	0200-SDMH-018	0200 STM-3	165.62	23.03	22.86	0.1000	2.500	0.0150	6.55	11.39	0.58	2.32	1.40	0.56	0.00	Calculated
25	32	Pipe	0200-SDMH-011	0200-SDMH-012	370.18	21.39	21.03	0.1000	2.000	0.0150	2.58	6.11	0.42	2.03	0.85	0.43	0.00	Calculated
26	33	Pipe	0200-SDMH-013	0200-SDMH-012	41.91	21.08	21.03	0.1200	2.000	0.0150	0.61	6.77	0.09	0.59	0.74	0.37	0.00	Calculated
27	34	Pipe	0200-CB-005	0200-SDMH-013	59.75	25.09	21.13	6.6300	2.000	0.0150	0.61	53.57	0.01	1.41	0.41	0.20	0.00	Calculated
28	36	Pipe	0200-SDMH-005	0200-SDMH-006	37.14	24.00	21.50	6.7300	2.000	0.0150	1.33	51.87	0.03	3.07	0.40	0.20	0.00	Calculated
29	37	Pipe	0200-SDMH-009	0200-SDMH-006	128.94	28.05	22.25	4.5000	1.000	0.0150	1.55	6.55	0.24	6.64	0.34	0.34	0.00	Calculated
30	38	Pipe	0200-CB-004	0200-CB-003	316.25	26.27	24.69	0.5000	1.500	0.0150	0.05	6.43	0.01	1.17	0.09	0.06	0.00	Calculated
31	39	Pipe	0300-CB-008	0300-SDMH-009	73.01	24.98	24.52	0.6300	1.500	0.0150	1.22	7.23	0.17	2.80	0.47	0.31	0.00	Calculated
32	40	Pipe	0300-CB-009	0300-SDMH-009	41.38	24.63	24.50	0.3100	0.500	0.0150	0.38	0.27	1.39	2.22	0.50	1.00	13.00	SURCHARGED
33	54	Pipe	0300-SDMH-002	0300-CB-001	43.05	23.80	23.20	1.3900	1.500	0.0150	4.06	10.75	0.38	5.03	0.70	0.47	0.00	Calculated
34	55	Pipe	0300-CB-001	0300-PS-001 WW	89.70	23.00	18.35	5.1800	1.500	0.0150	4.44	20.73	0.21	8.80	0.49	0.33	0.00	Calculated
35	56	Pipe	0300-SDMH-001	EXIST SDMH	64.99	19.74	19.65	0.1400	2.000	0.0150	4.10	7.30	0.56	3.13	1.01	0.50	0.00	Calculated
36	58	Pipe	0300-OWS-001	0300-PS-002 WW	23.65	22.12	22.07	0.2100	1.000	0.0150	2.07	1.42	1.46	3.19	0.77	0.77	0.00	> CAPACITY
37	59	Pipe	Jun-46	0300-SDMH-002	45.61	23.95	23.95	0.0000	1.000	0.0150	3.20	0.17	19.17	4.38	0.89	0.90	0.00	> CAPACITY
38	60	Pipe	0200-SDMH-012	0200 STM-2	16.69	21.03	20.98	0.3000	3.000	0.0150	3.17	31.64	0.10	2.54	0.70	0.23	0.00	Calculated
39	63	Pipe	Jun-47	0300-SDMH-001	17.95	23.14	23.14	0.0000	1.000	0.0150	4.10	0.28	14.83	5.40	0.93	0.93	0.00	> CAPACITY
40	64	Pipe	EXIST SDMH	0300 STM-1	4.47	19.65	19.60	1.1200	4.000	0.0150	8.20	131.66	0.06	4.57	0.80	0.20	0.00	Calculated
41	65	Pipe	0300-SDMH-005	0300-SDMH-004	142.65	22.40	22.19	0.1500	1.500	0.0150	2.10	4.24	0.49	1.27	1.50	1.00	326.00	SURCHARGED
42	66	Pipe	0200-SDMH-006	0200 STM-1	0.10	21.50	21.40	100.0000	3.000	0.0150	2.85	578.05	0.00	5.67	0.37	0.12	0.00	Calculated
43	67	Pipe	Jun-51	Jun-50	385.63	21.70	20.79	0.2400	1.000	0.0150	1.05	1.50	0.70	1.33	1.00	1.00	1321.00	SURCHARGED
44	68	Pipe	Jun-50	0300 STM-2	133.68	19.57	18.90	0.5000	1.000	0.0150	2.09	2.49	0.84	2.66	1.00	1.00	1355.00	SURCHARGED
45	178	Pipe	0300-SDMH-003	0300-CB-002	65.12	24.53	24.40	0.2000	1.500	0.0150	0.47	4.07	0.12	1.30	0.41	0.27	0.00	Calculated
46	179	Pipe	0300-CB-003	0300-SDMH-003	75.09	24.88	24.73	0.2000	1.000	0.0150	0.47	1.38	0.34	1.86	0.36	0.36	0.00	Calculated
47	199	Pipe	0300-CB-002	0300-SDMH-002	97.58	24.20	24.00	0.2000	1.000	0.0150	0.99	1.40	0.71	2.27	0.59	0.59	0.00	Calculated
48	204	Pipe	0300-SDMH-004	0300-CS-001	175.87	22.09	22.00	0.0500	1.500	0.0150	2.10	2.06	1.02	1.19	1.50	1.00	658.00	SURCHARGED
49	205	Pipe	0300-SDMH-006	0300-SDMH-005	126.22	22.69	22.50	0.1500	1.500	0.0150	2.10	3.53	0.59	1.38	1.50	1.00	272.00	SURCHARGED
50	206	Pipe	0300-SDMH-007	0300-SDMH-006	34.53	22.74	22.69	0.1400	1.500	0.0150	2.54	3.46	0.73	1.44	1.50	1.00	243.00	SURCHARGED
51	207	Pipe	0300-SDMH-008	0300-SDMH-007	113.77	22.91	22.74	0.1500	1.500	0.0150	2.09	3.52	0.59	1.18	1.50	1.00	176.00	SURCHARGED
52	211	Pipe	0300-CB-004	0300-SDMH-006	66.96	23.50	23.20	0.4500	0.500	0.0150	0.46	0.33	1.41	2.34	0.50	1.00	600.00	SURCHARGED
53	213	Pipe	0300-CB-005	0300-SDMH-007	39.21	24.70	23.48	3.1100	0.500	0.0150	0.62	0.86	0.72	3.59	0.50	1.00	166.00	SURCHARGED
54	215	Pipe	0300-CB-006	0300-SDMH-008	57.30	24.62	23.47	2.0100	0.500	0.0150	0.56	0.69	0.81	3.12	0.50	1.00	262.00	SURCHARGED
55	217	Pipe	0300-CB-007	0300-SDMH-008	60.46	24.61	24.07	0.8900	0.500	0.0150	0.49	0.46	1.07	2.70	0.50	1.00	96.00	SURCHARGED
56	223	Pipe	0300-SDMH-009	0300-SDMH-008	369.87	23.47	22.91	0.1500	1.500	0.0150	1.49	3.54	0.42	0.95	1.50	1.00	19.00	SURCHARGED
57	0300-CS-001 Orr	Orifice	0300-CS-001	0300-OWS-001		22.00	22.12		0.670		2.07							
58	0600 PS 001	Pump	0300-PS-001 WW	Jun-47		10.00	23.14				4.18							

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flo Dep
					(ft)	(ft)	(ft)	(%)	(ft)		(cfs)	(cfs)		(ft/sec)	(
59	0600 PS 002	Pump	0300-PS-002 WW	Jun-46		15.00	23.95				3.53				

Subbasin Hydrology

Subbasin : 0200-1

Input Data

Area (ac) 0.62
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 1.0000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.62		98

Time of Concentration

TOC Method : Kirpich

Sheet Flow Equation :

Tc = (0.0078 * ((Lf^0.77) * (Sf^-0.385)))

Where :

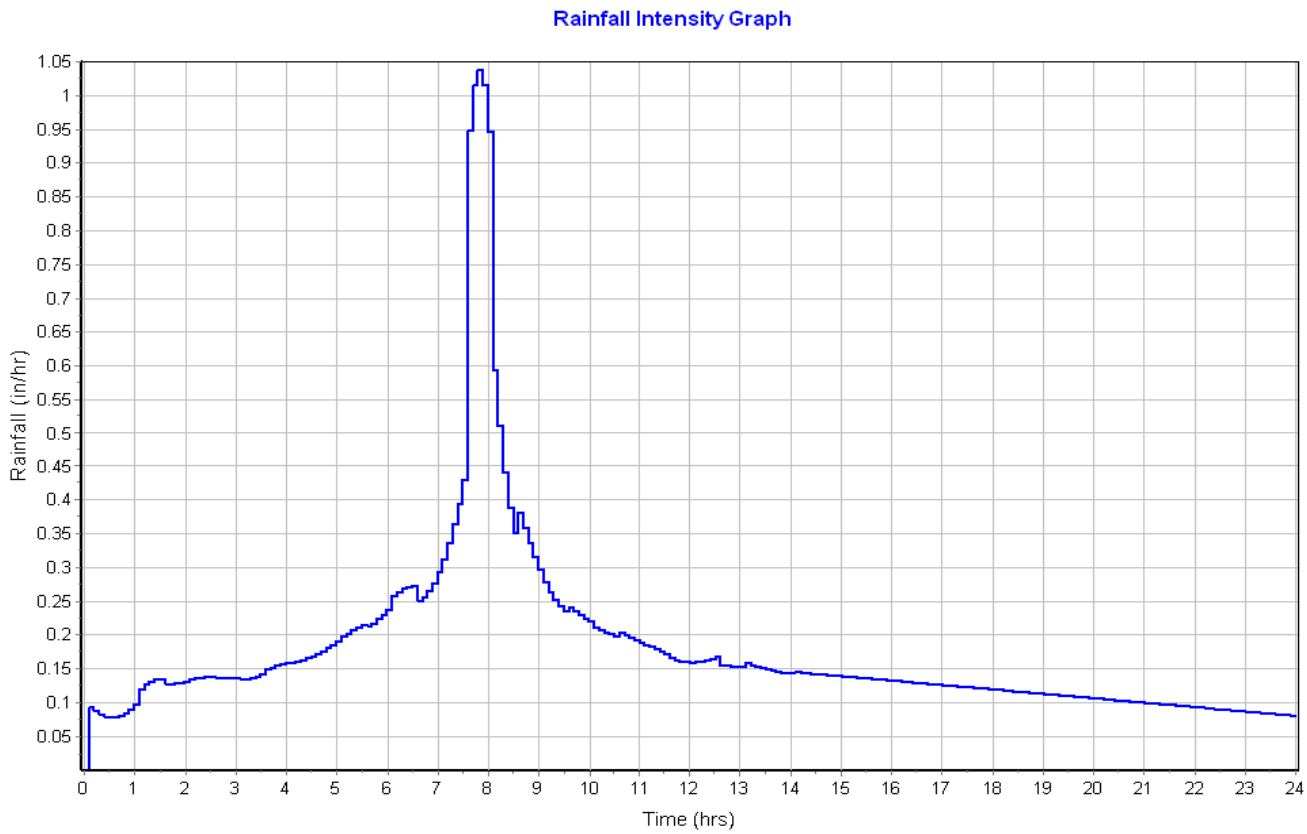
Tc = Time of Concentration (min)
Lf = Flow Length (ft)
Sf = Slope (ft/ft)

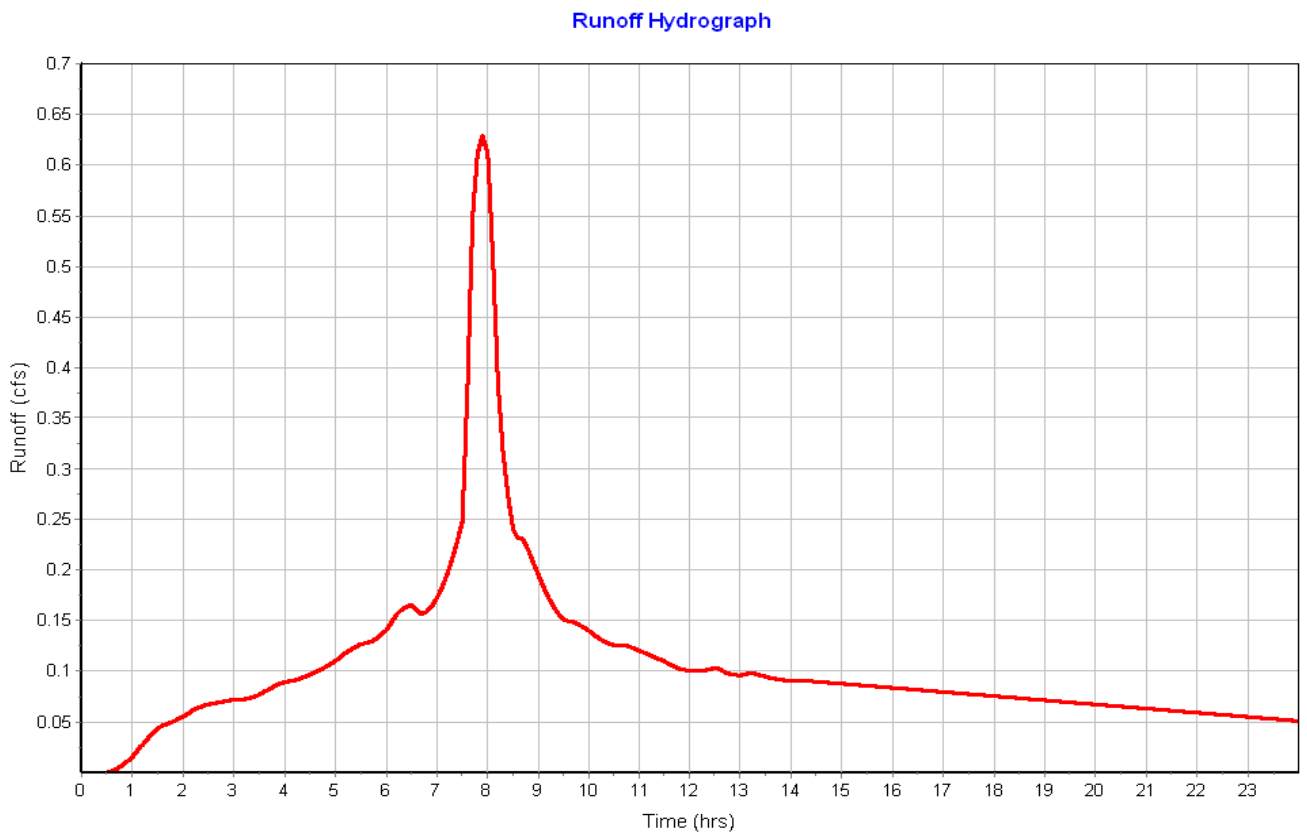
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 0.63
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-1





Subbasin : 0200-10

Input Data

Area (ac) 0.15
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.15		76

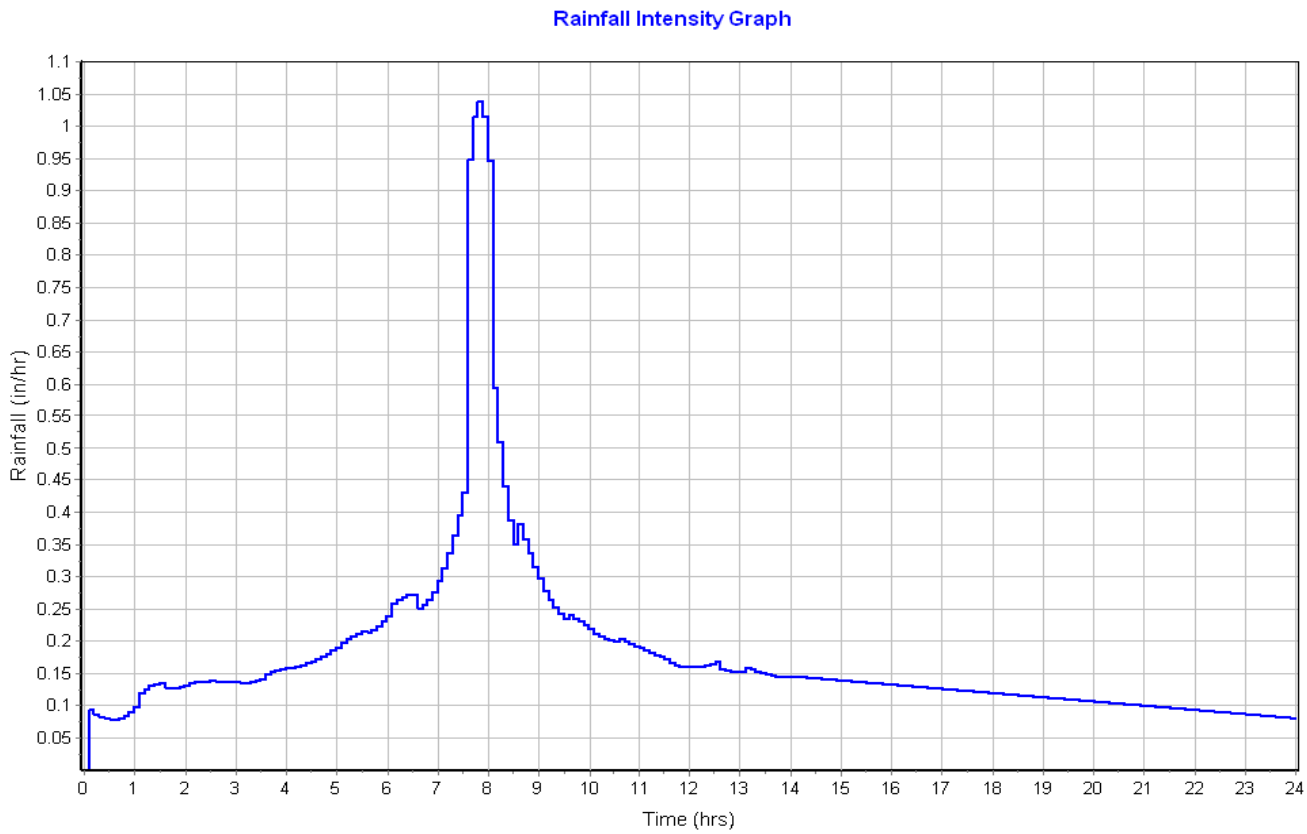
Time of Concentration

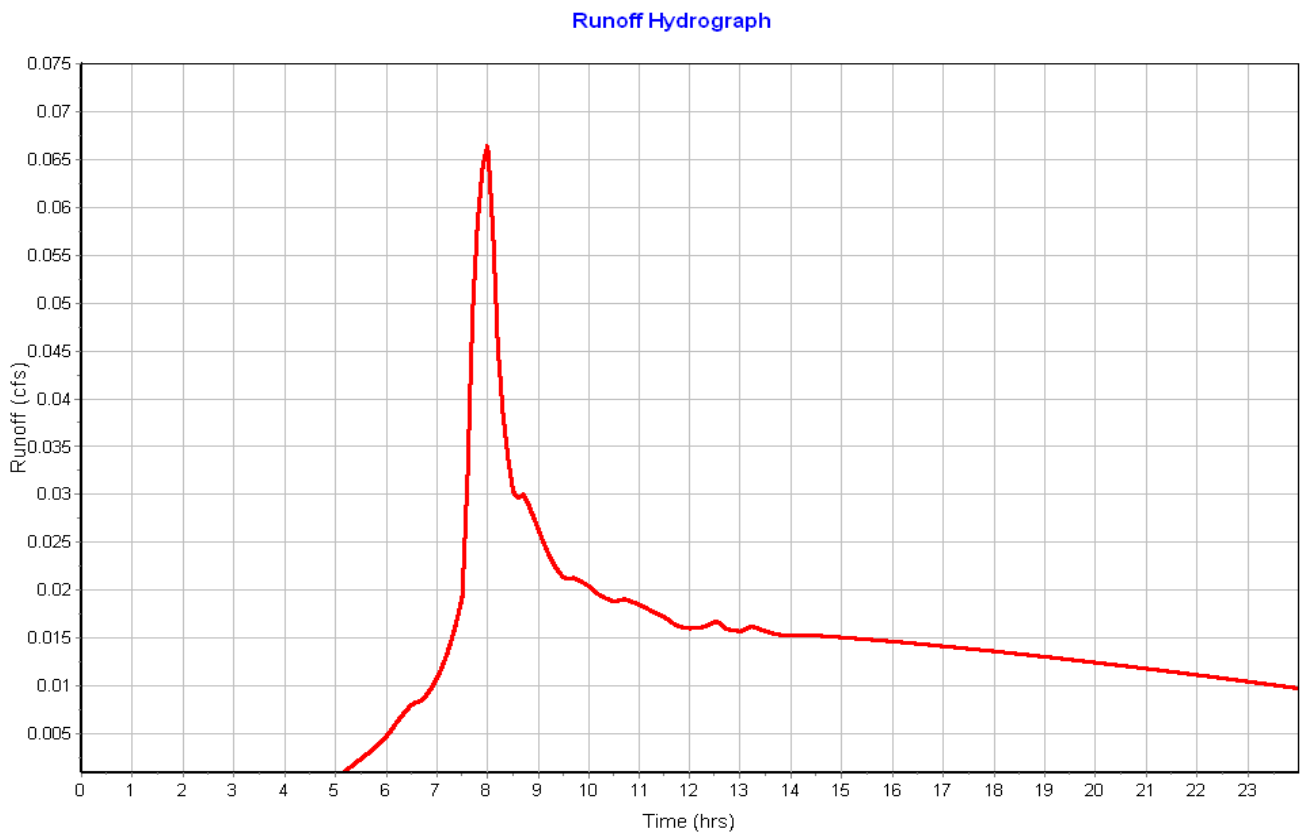
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 1.96
Peak Runoff (cfs) 0.07
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-10





Subbasin : 0200-11

Input Data

Area (ac) 0.16
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.16		76

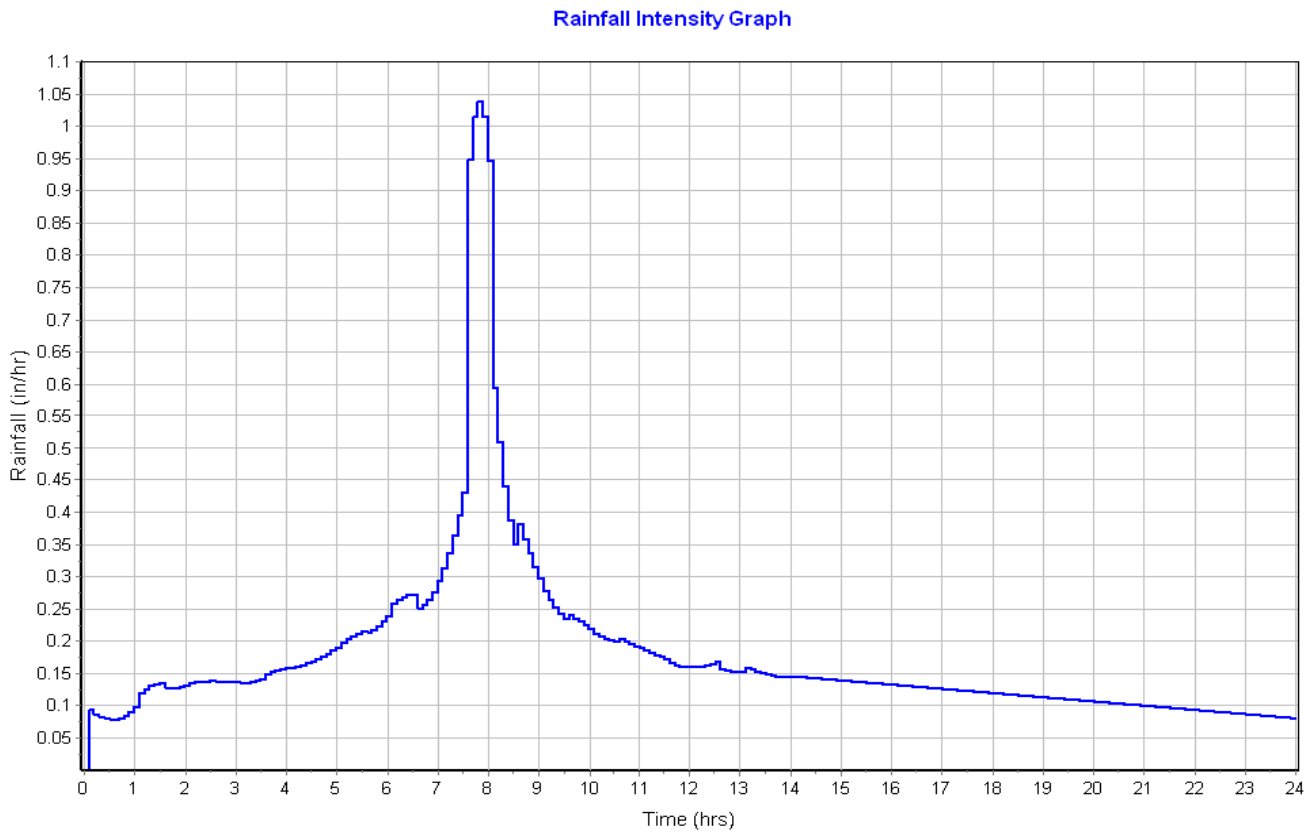
Time of Concentration

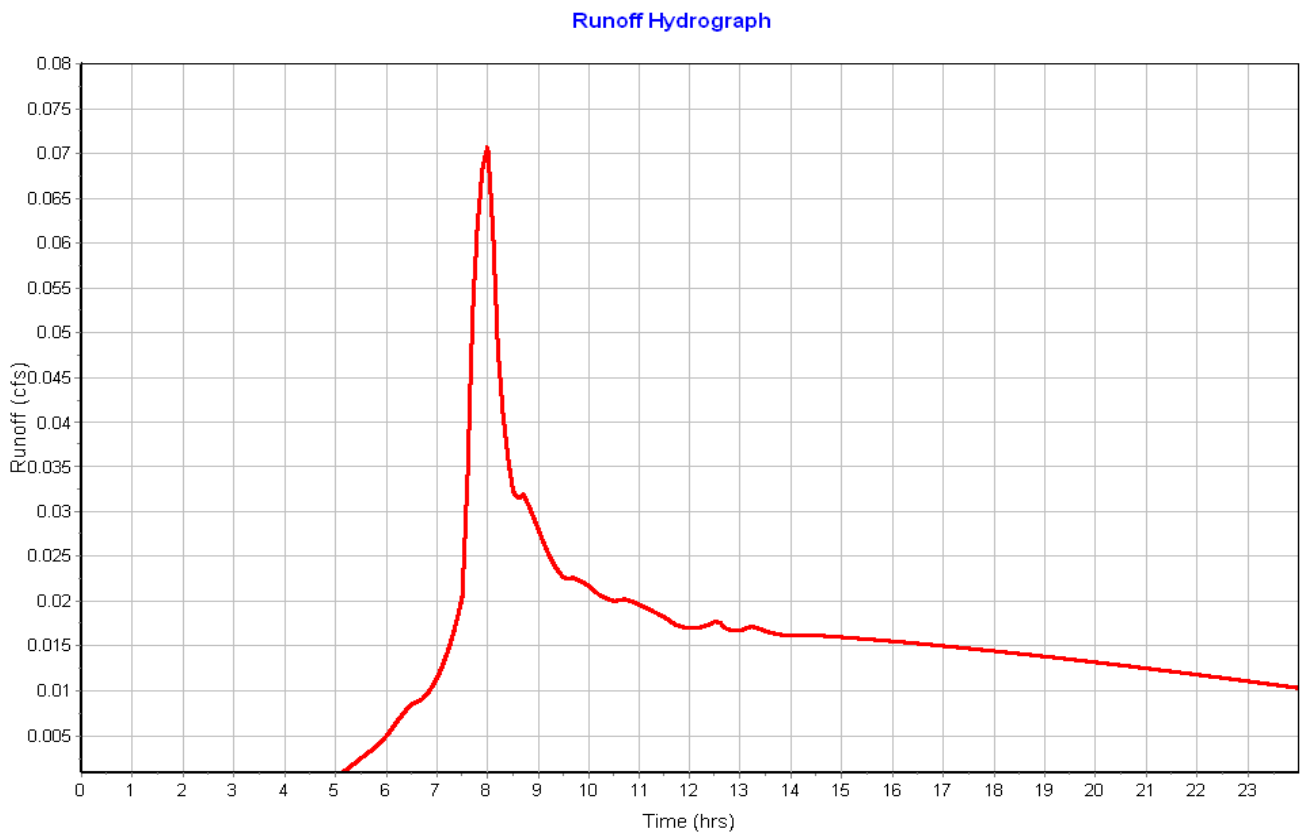
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 1.96
Peak Runoff (cfs) 0.07
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-11





Subbasin : 0200-2

Input Data

Area (ac) 0.18
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.18		98

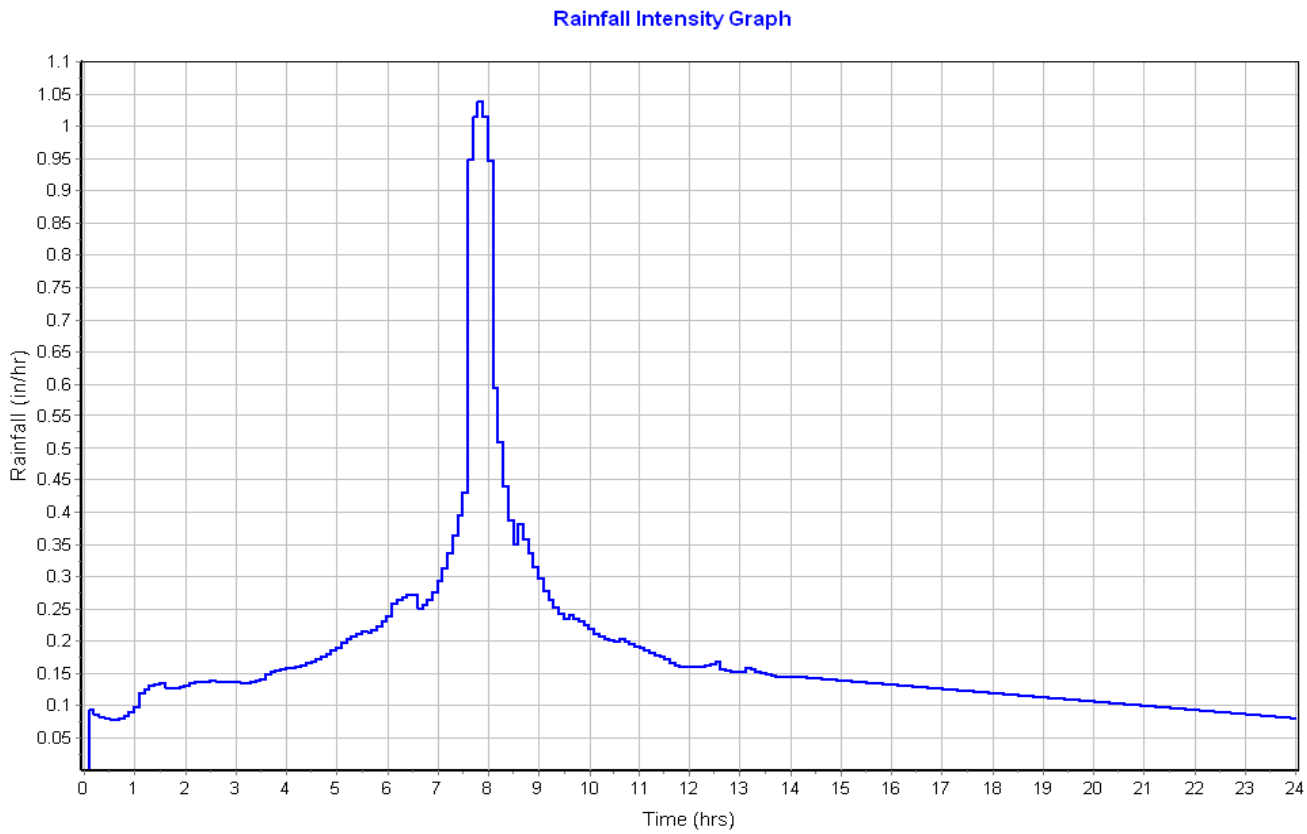
Time of Concentration

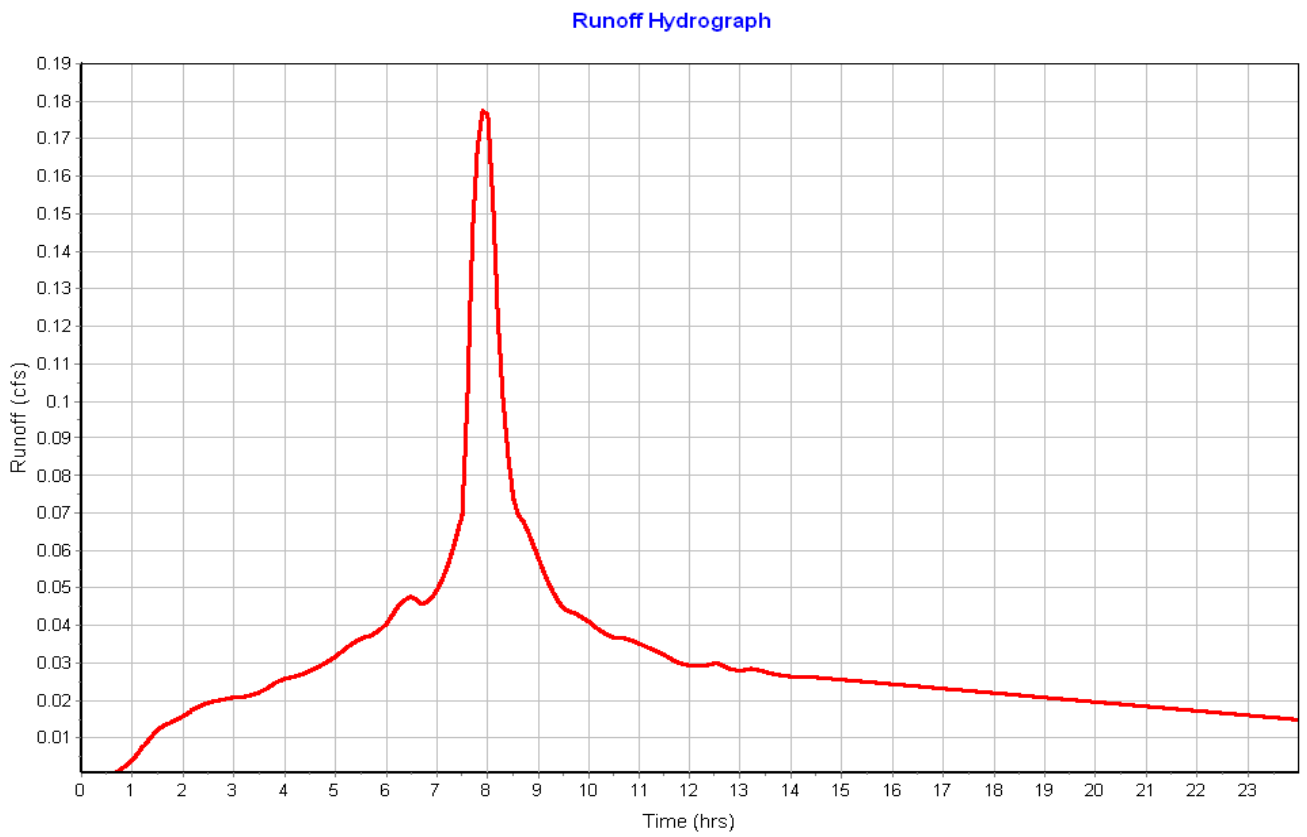
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 0.18
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : 0200-2





Subbasin : 0200-3

Input Data

Area (ac) 0.32
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.32		76

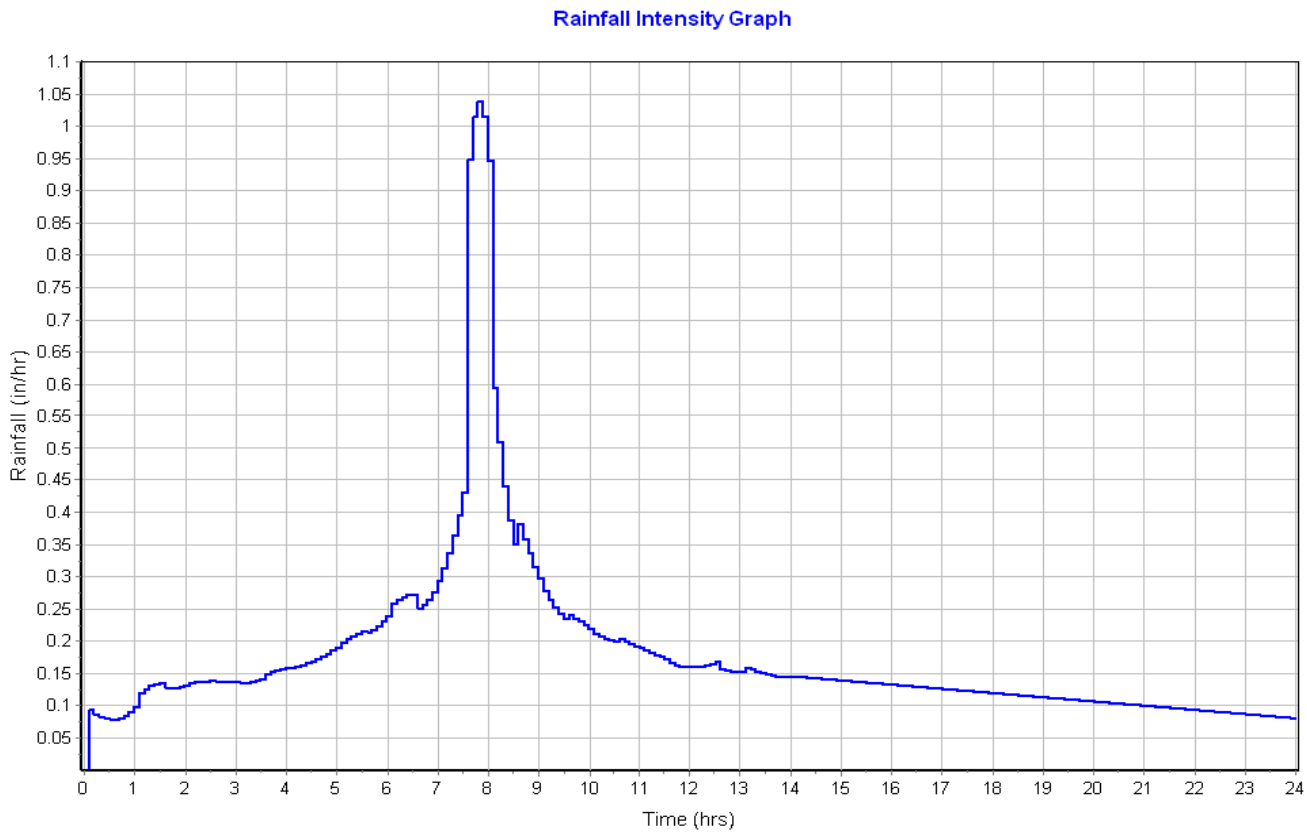
Time of Concentration

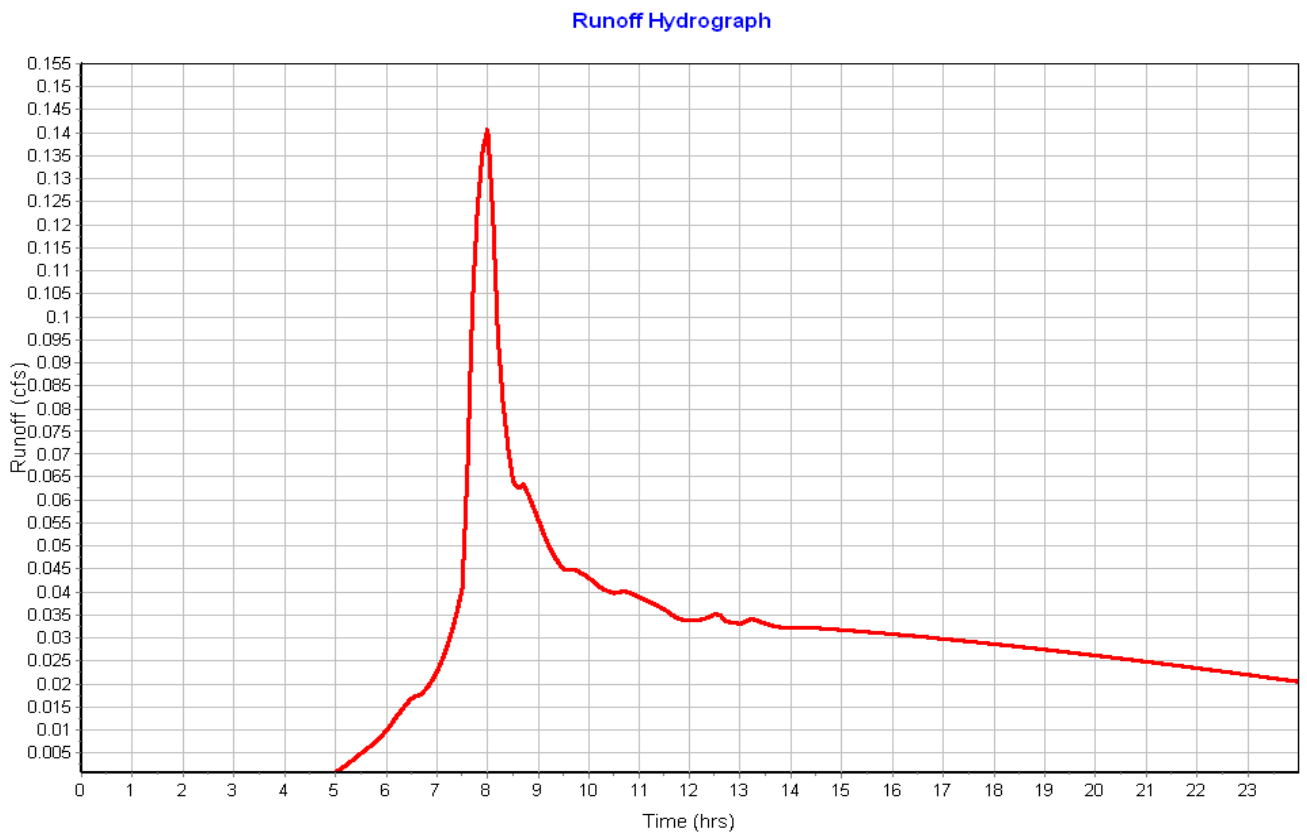
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 1.96
Peak Runoff (cfs) 0.14
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-3





Subbasin : 0200-4

Input Data

Area (ac) 0.11
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.11		76

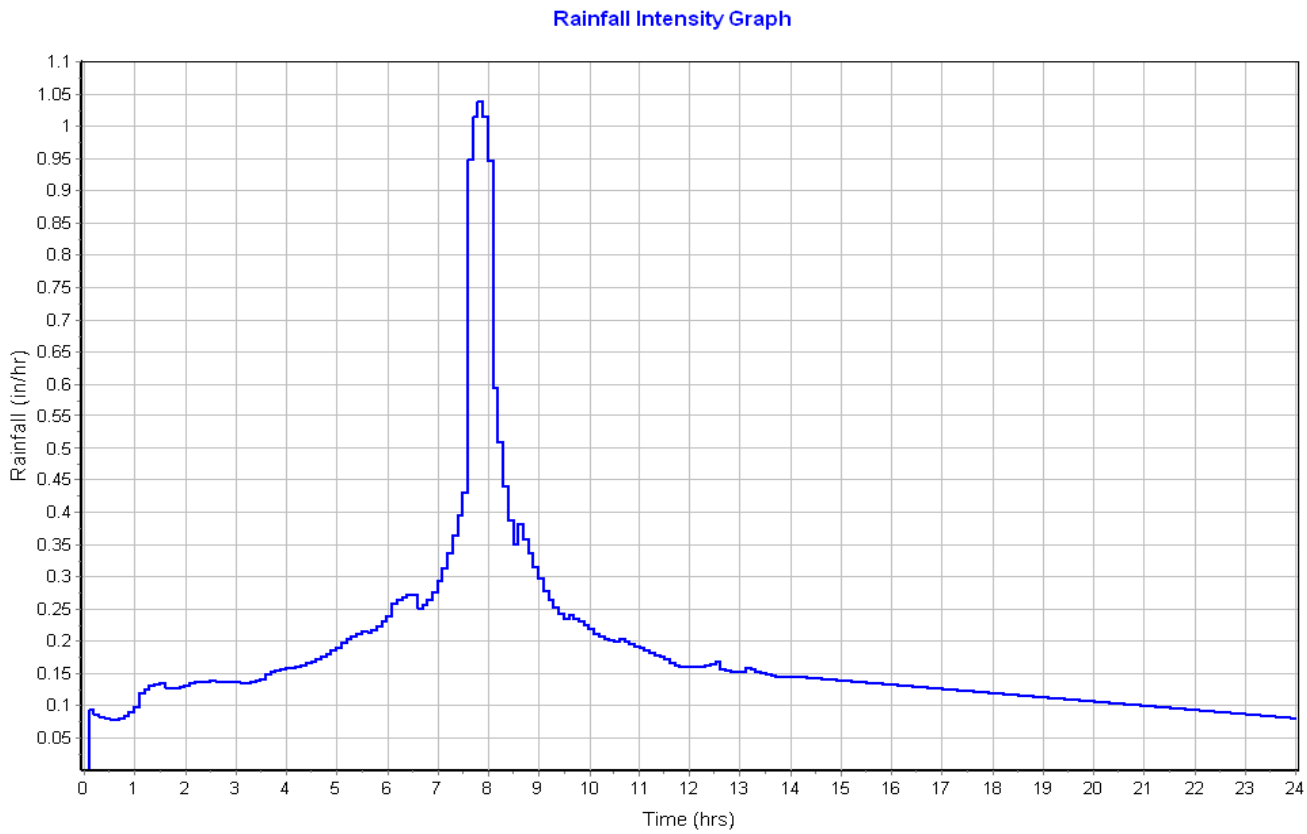
Time of Concentration

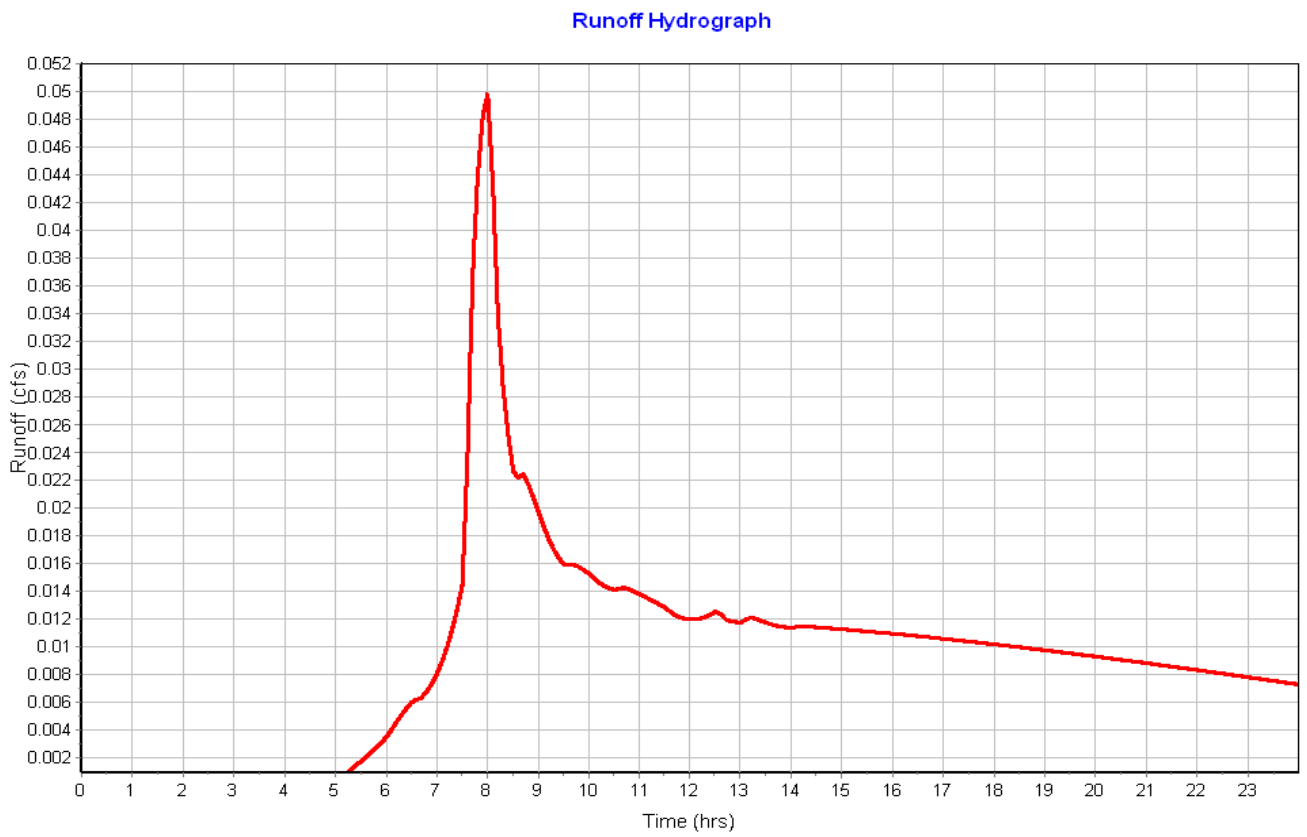
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 1.96
Peak Runoff (cfs) 0.05
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-4





Subbasin : 0200-5

Input Data

Area (ac) 0.23
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.23		76

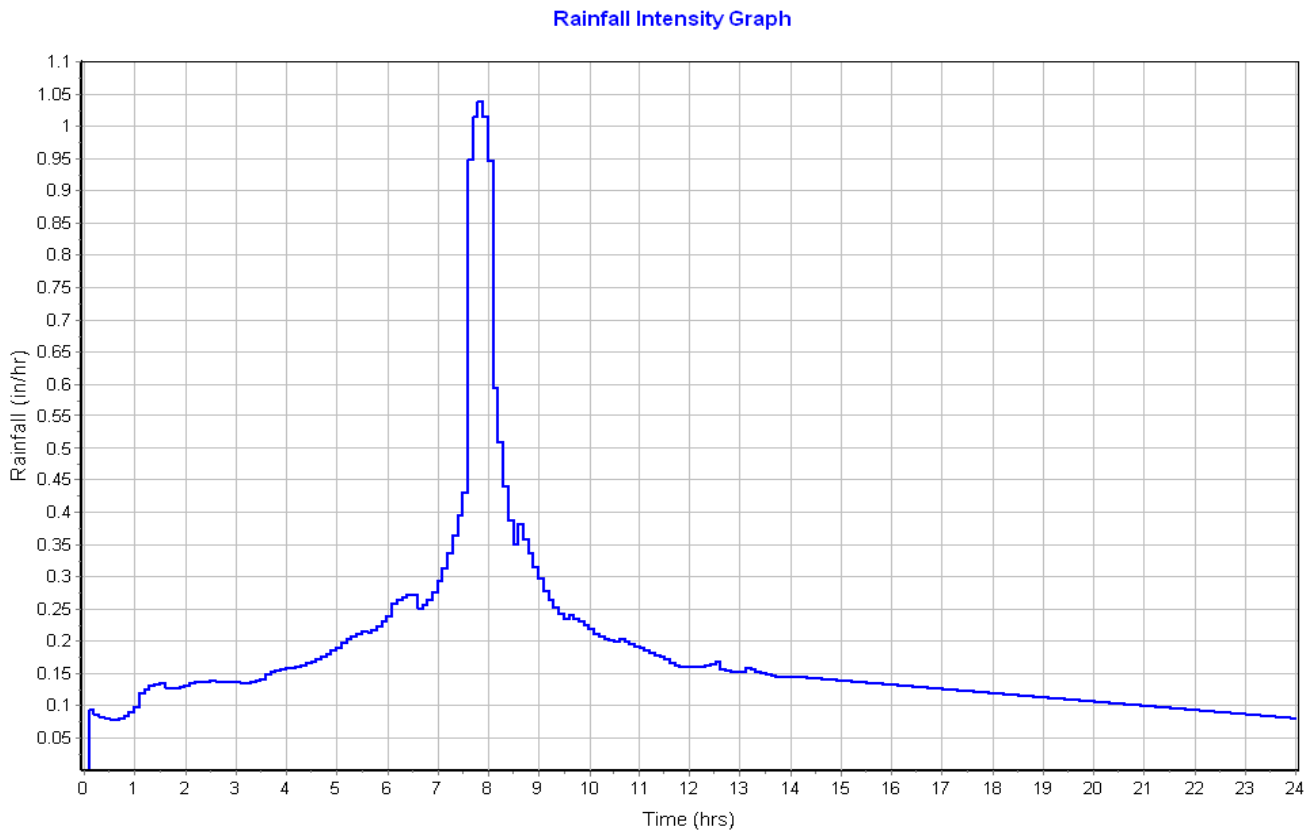
Time of Concentration

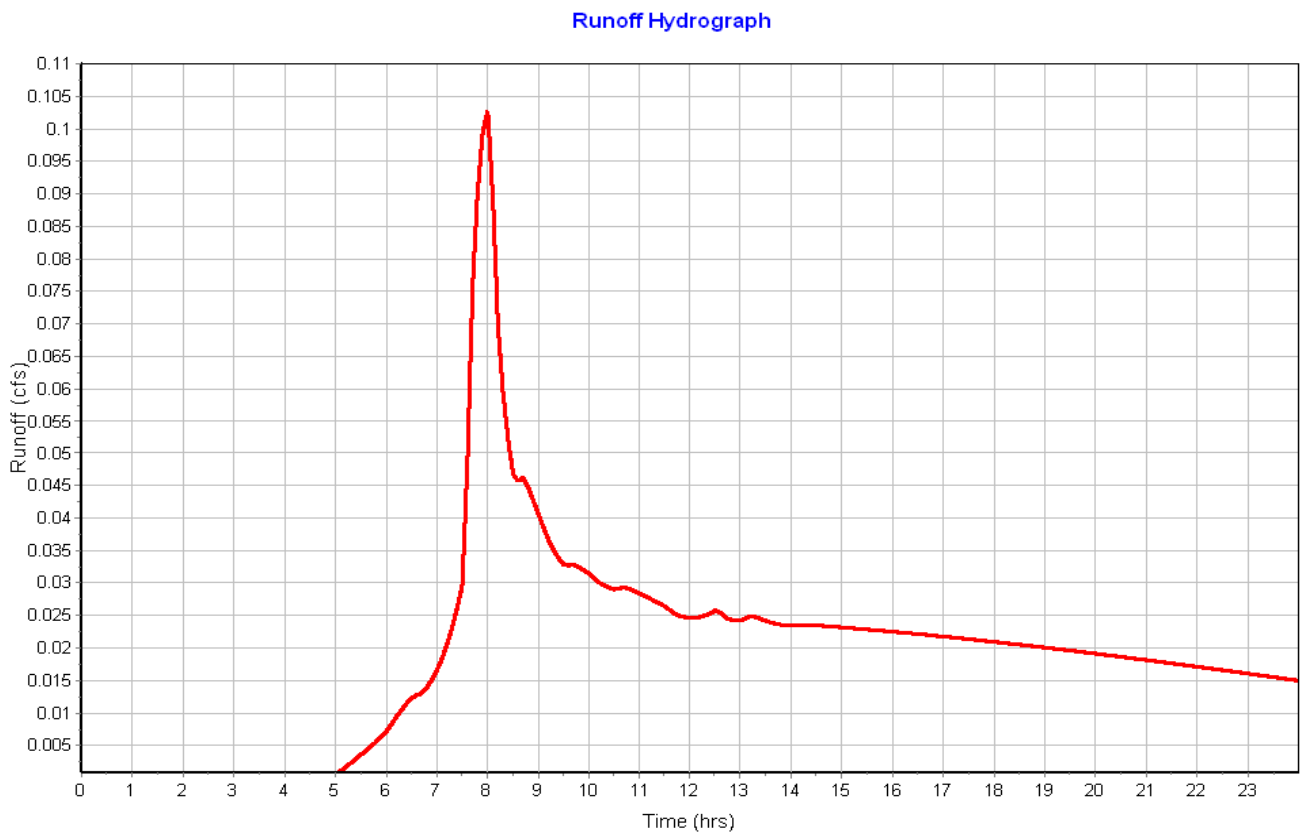
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 1.96
Peak Runoff (cfs) 0.10
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-5





Subbasin : 0200-6

Input Data

Area (ac) 0.10
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.10		76

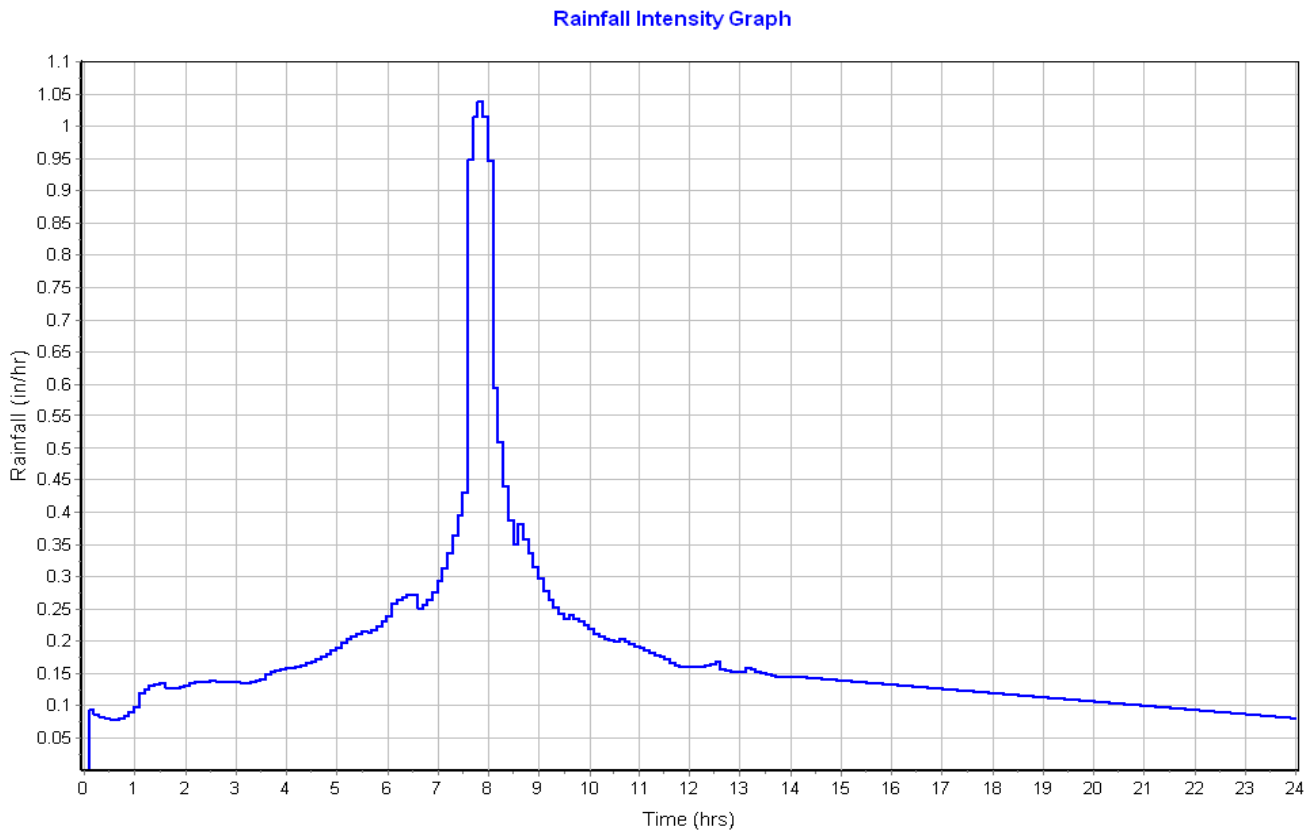
Time of Concentration

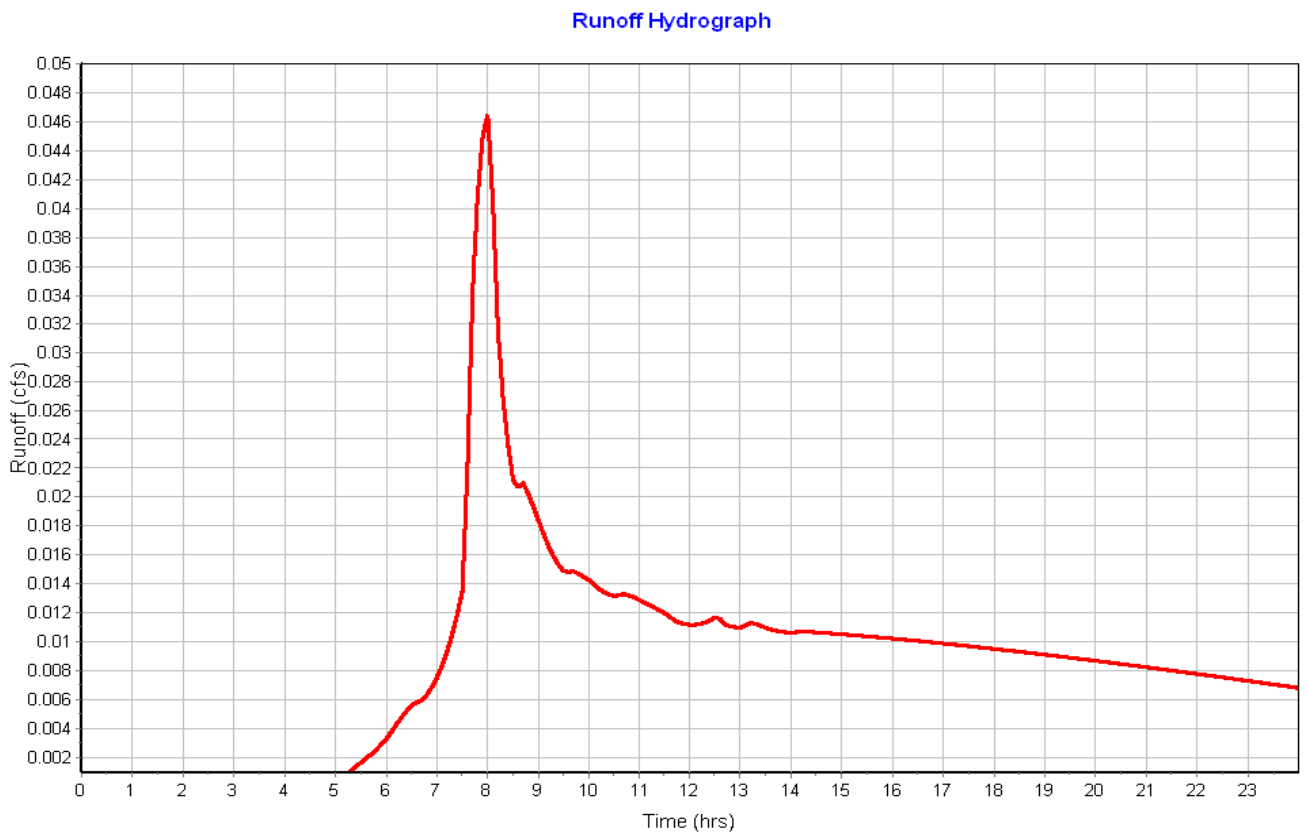
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 1.96
Peak Runoff (cfs) 0.05
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-6





Subbasin : 0200-7

Input Data

Area (ac) 0.13
Impervious Area (%) 24.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.13		81.28

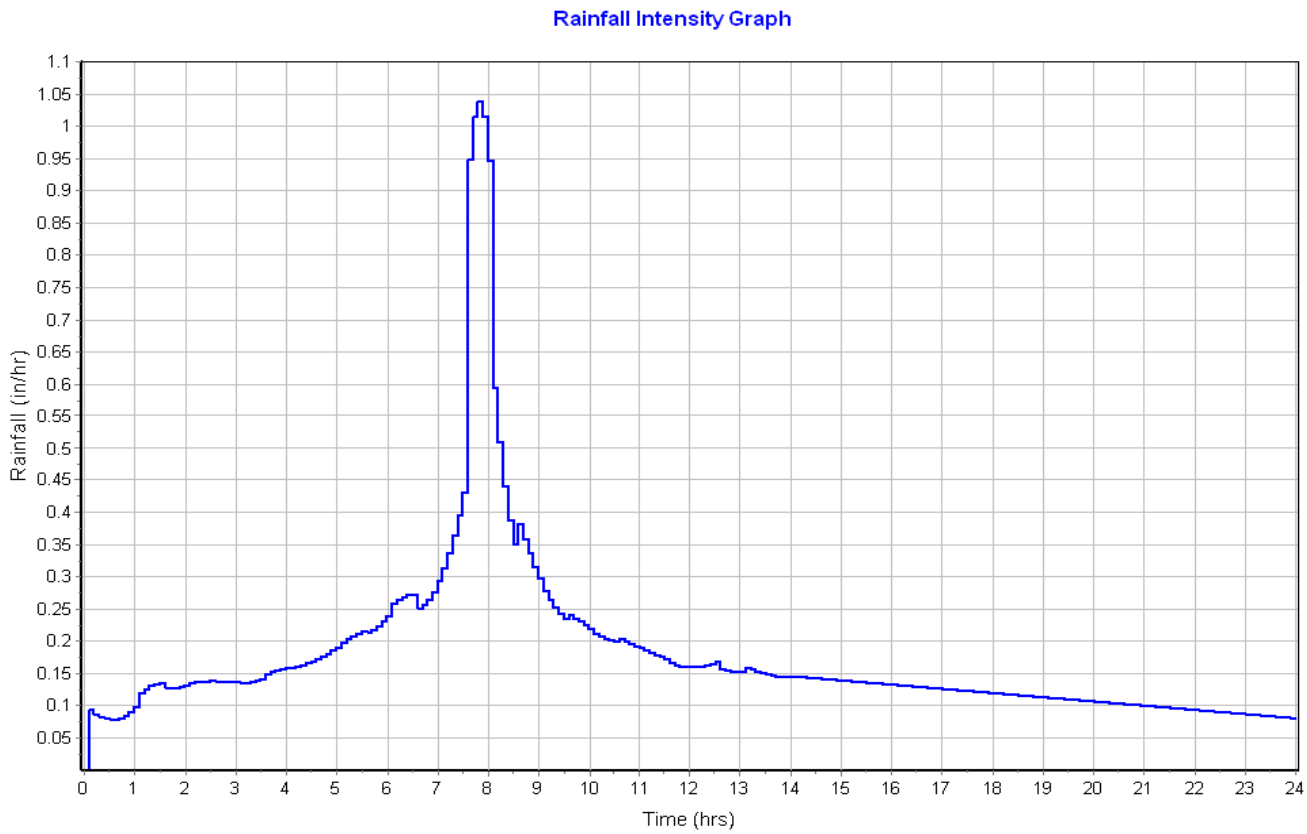
Time of Concentration

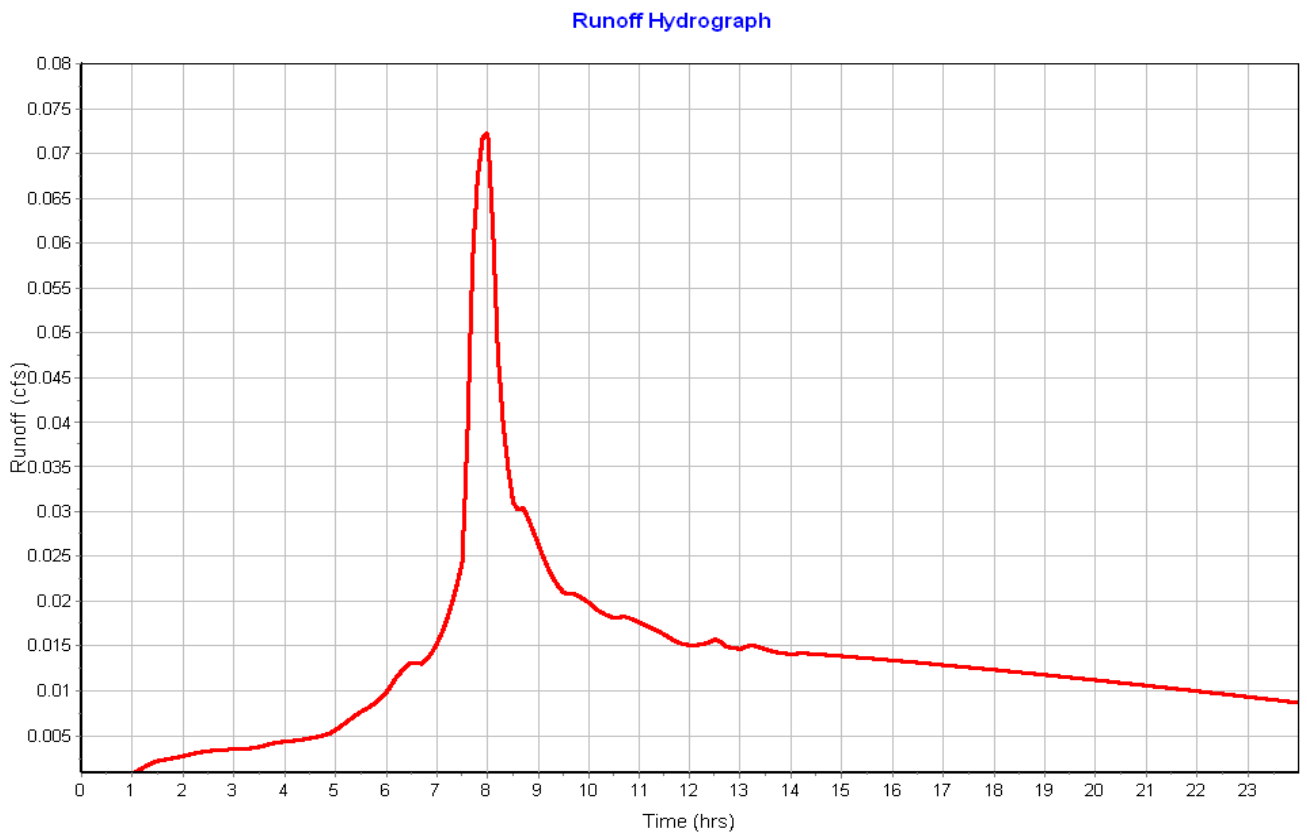
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 2.47
Peak Runoff (cfs) 0.07
Weighted Curve Number 81.28
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-7





Subbasin : 0200-8

Input Data

Area (ac) 0.13
Impervious Area (%) 10.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.13		78.2

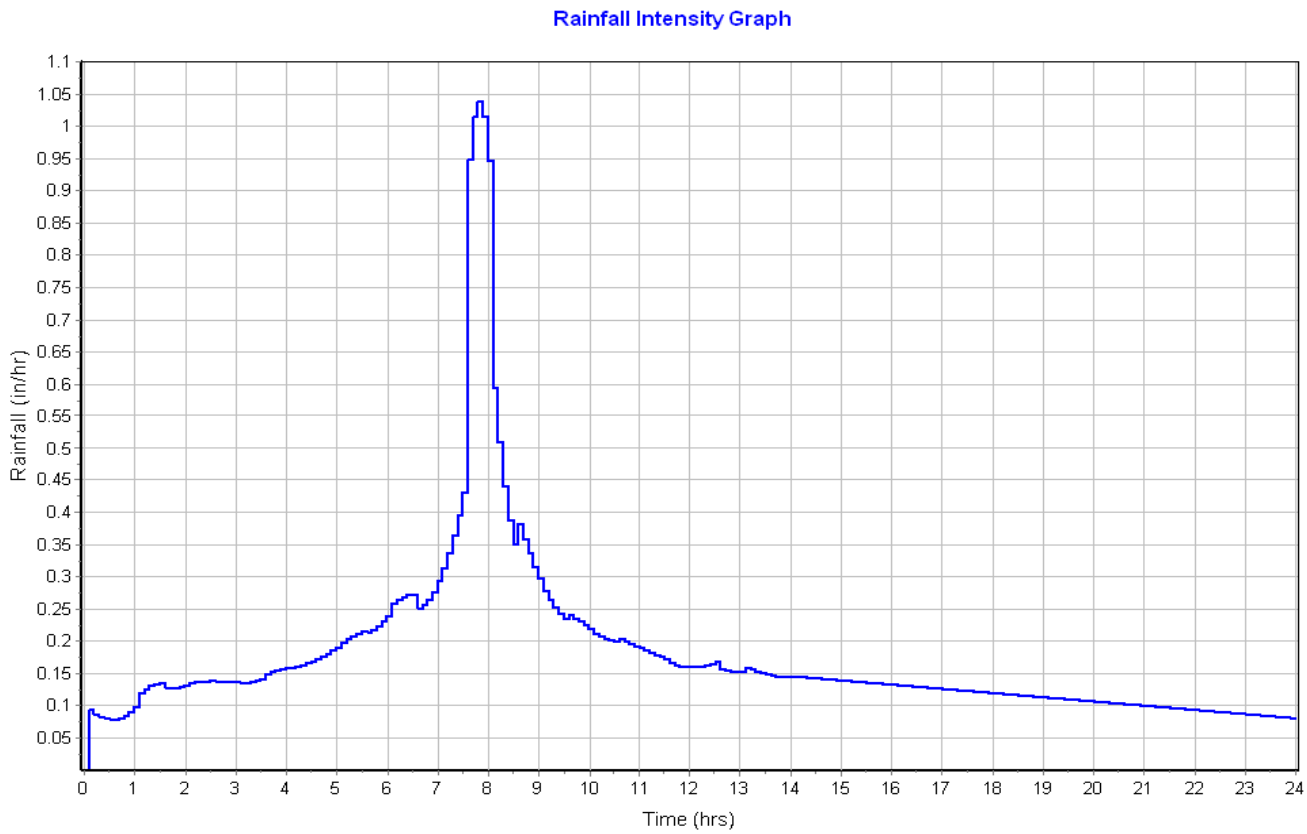
Time of Concentration

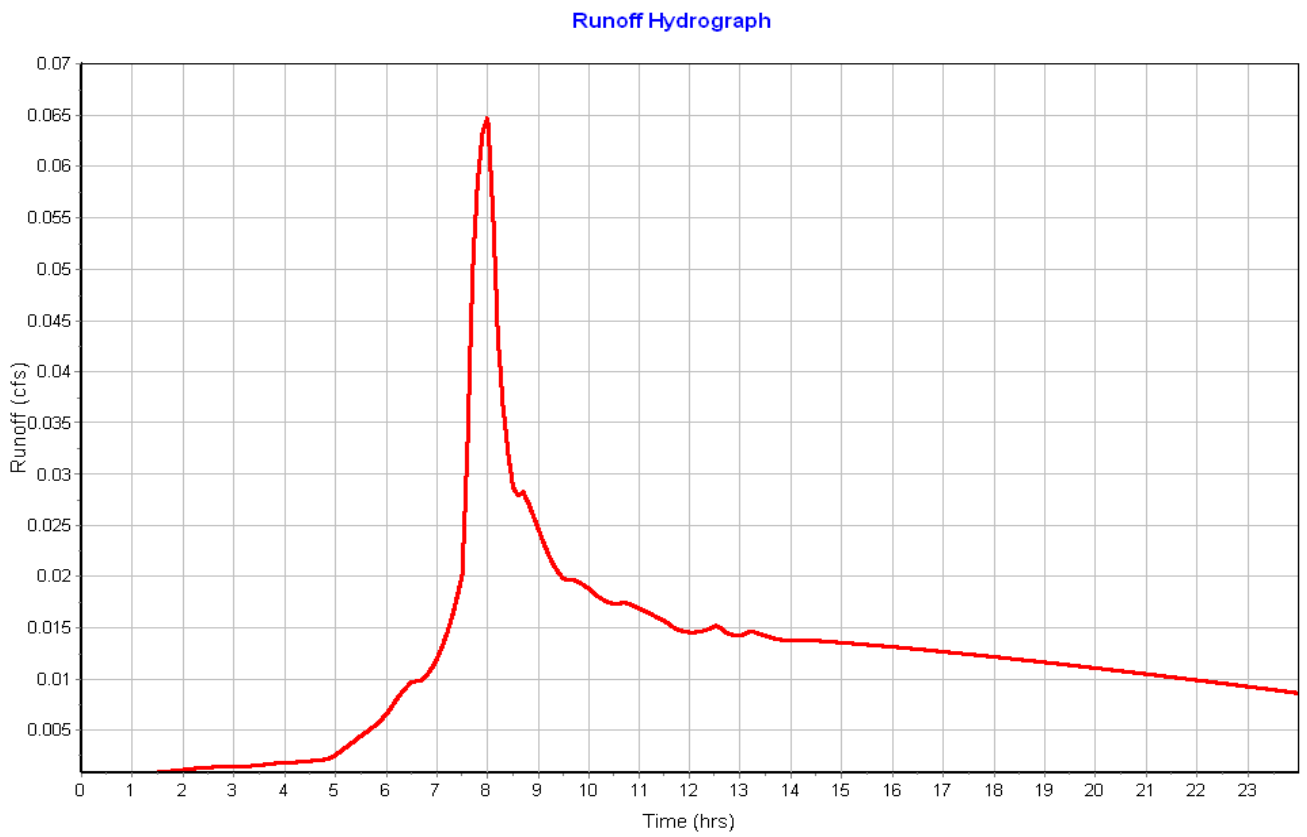
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 2.17
Peak Runoff (cfs) 0.07
Weighted Curve Number 78.20
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-8





Subbasin : 0200-9

Input Data

Area (ac) 0.45
Impervious Area (%) 0.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.45		76

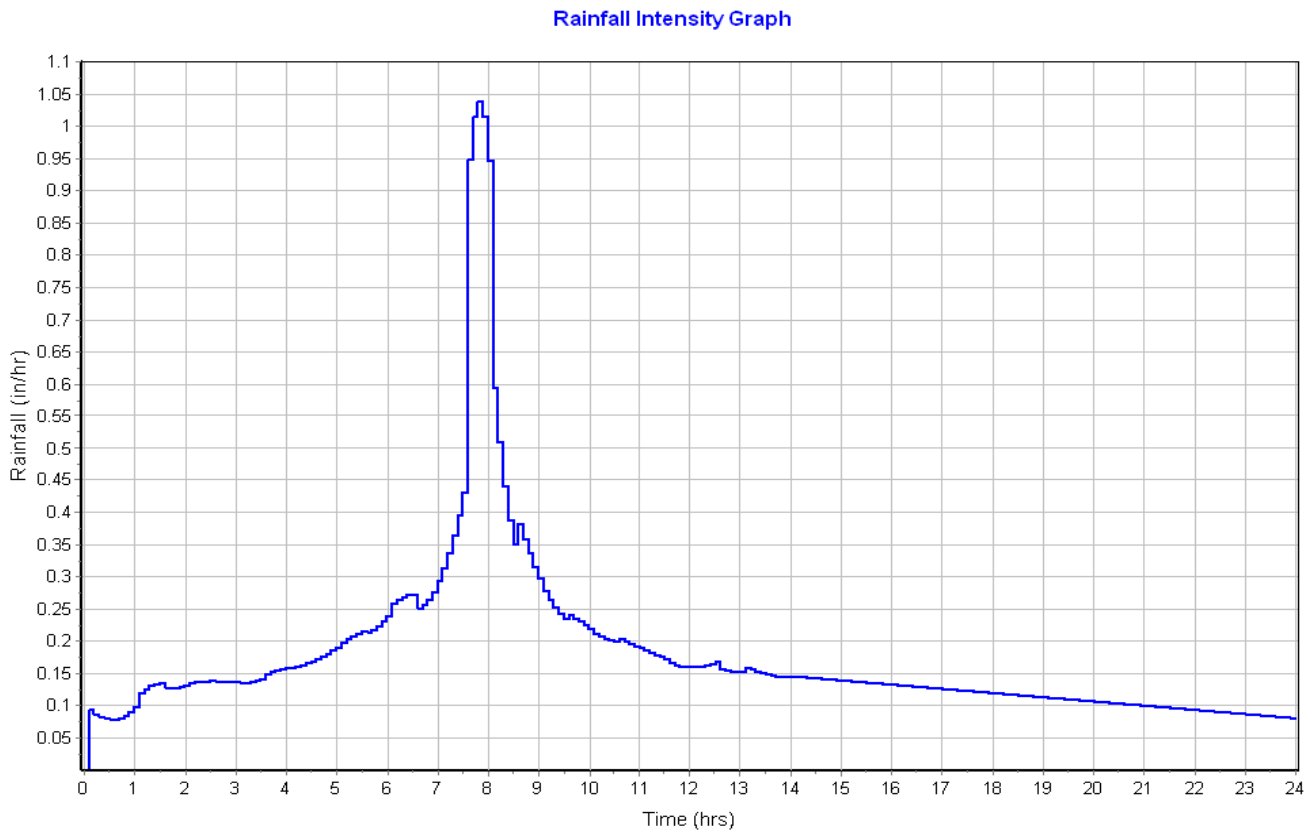
Time of Concentration

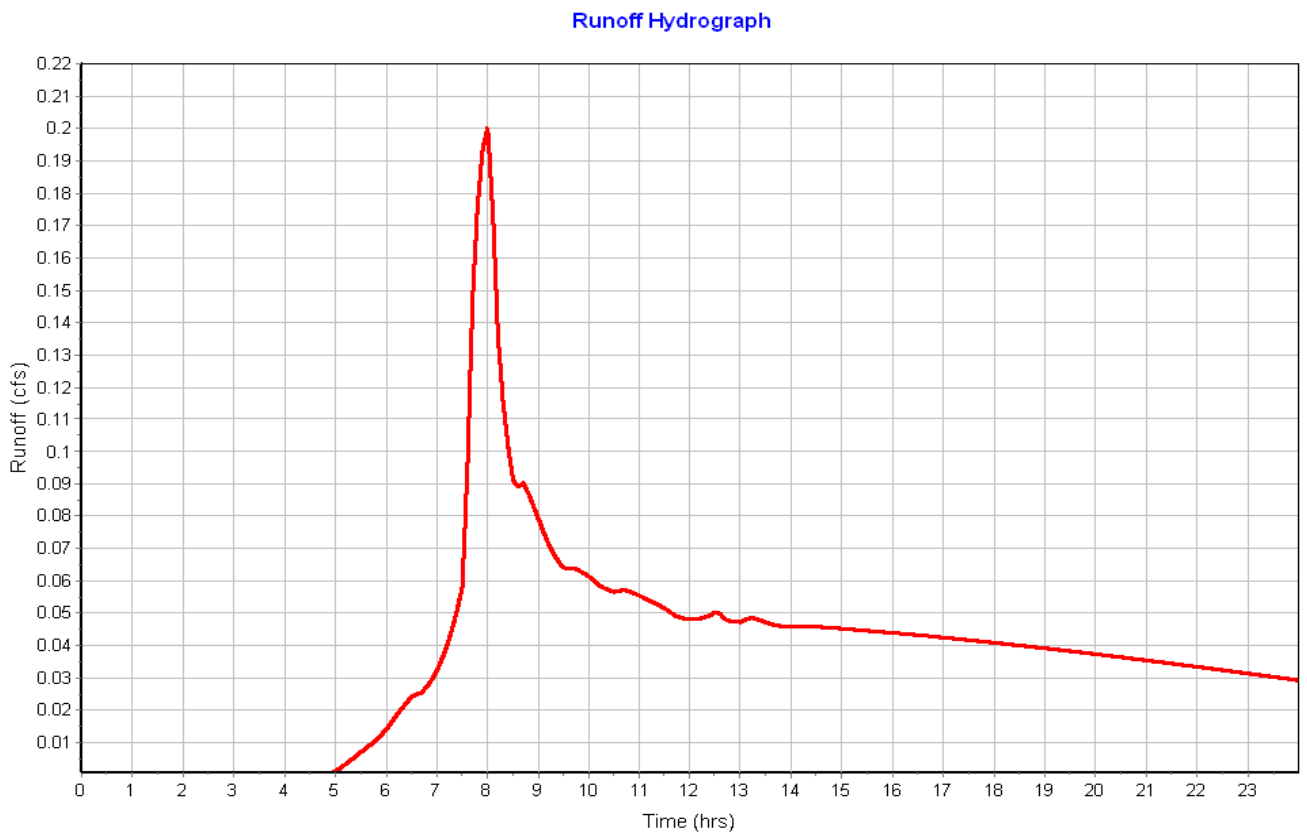
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 1.96
Peak Runoff (cfs) 0.20
Weighted Curve Number 76.00
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0200-9





Subbasin : 0300-1

Input Data

Area (ac) 0.48
Impervious Area (%) 75.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.48		92.5

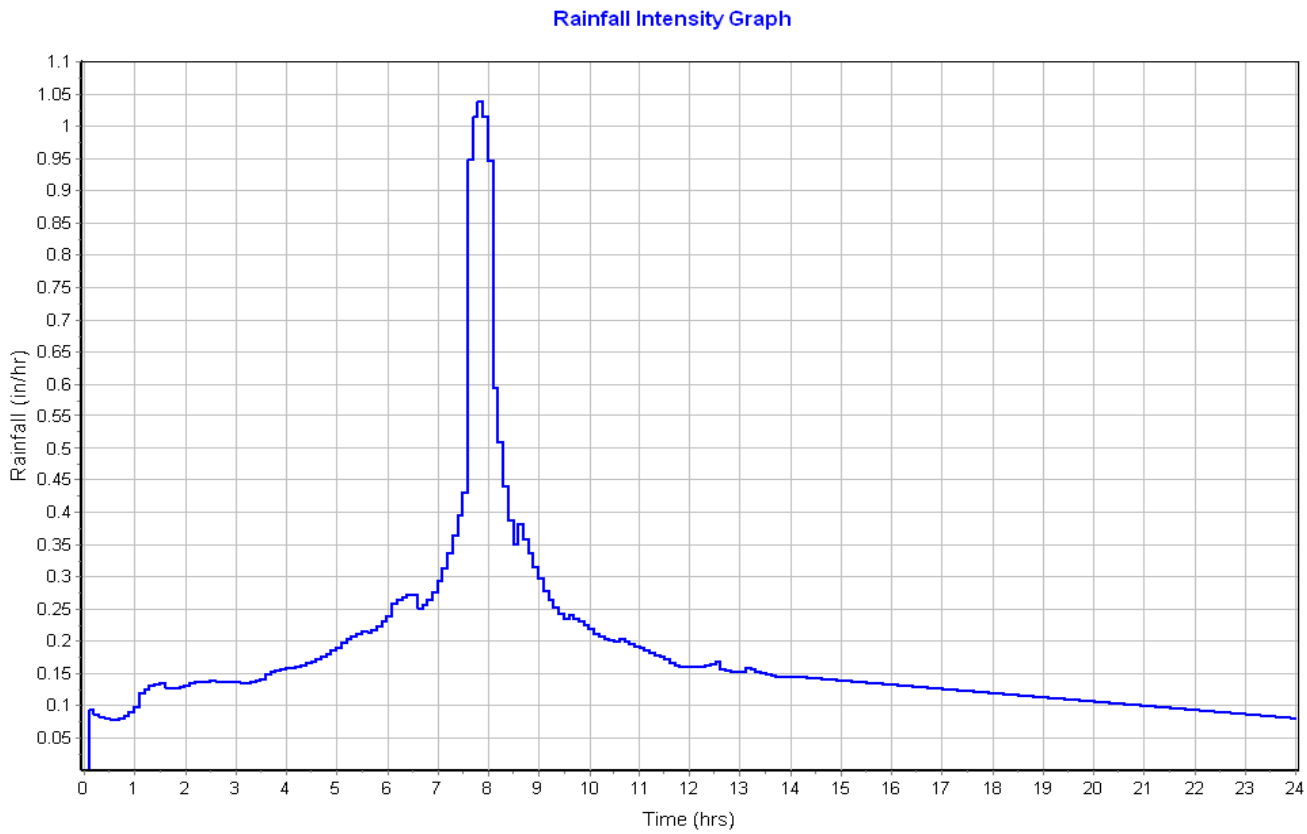
Time of Concentration

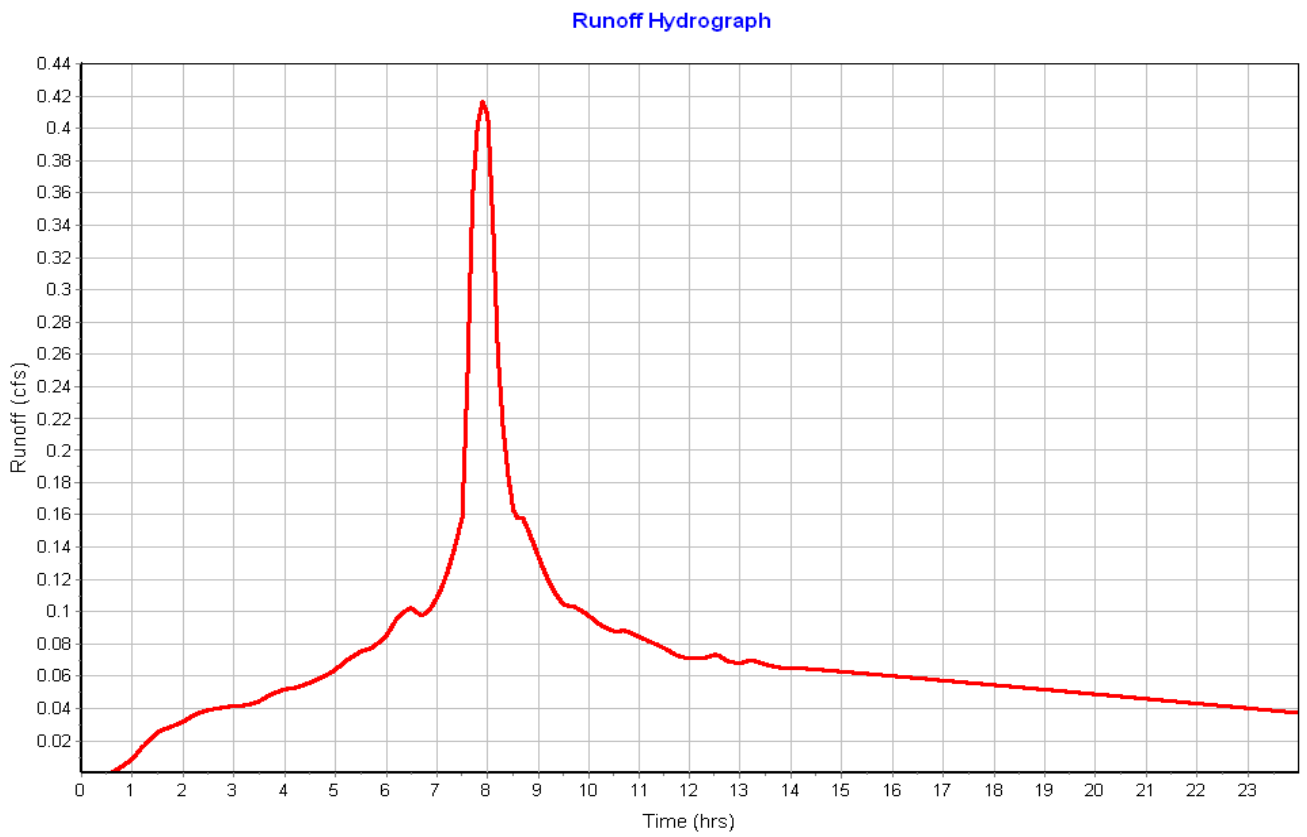
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 3.53
Peak Runoff (cfs) 0.42
Weighted Curve Number 92.50
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0300-1





Subbasin : 0300-2

Input Data

Area (ac) 0.55
Impervious Area (%) 73.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.55		92.06

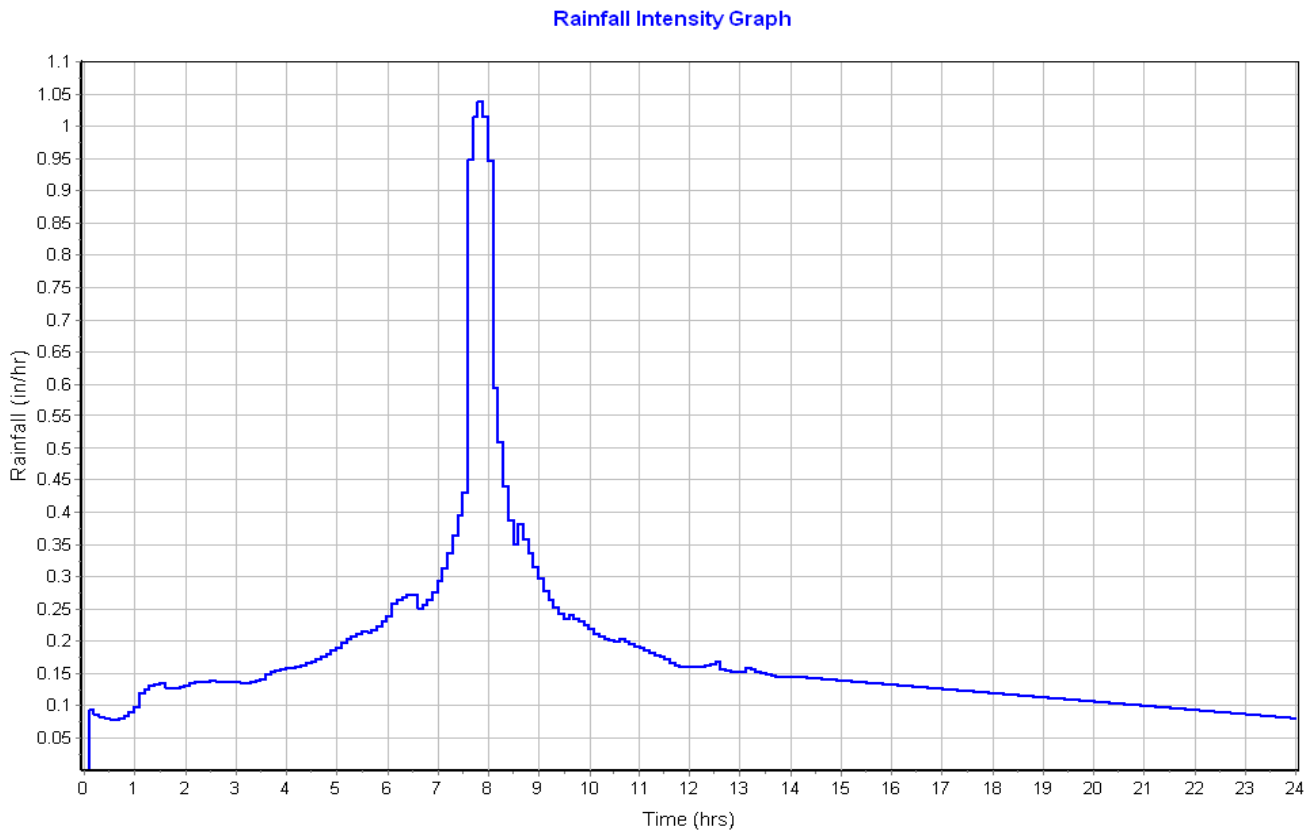
Time of Concentration

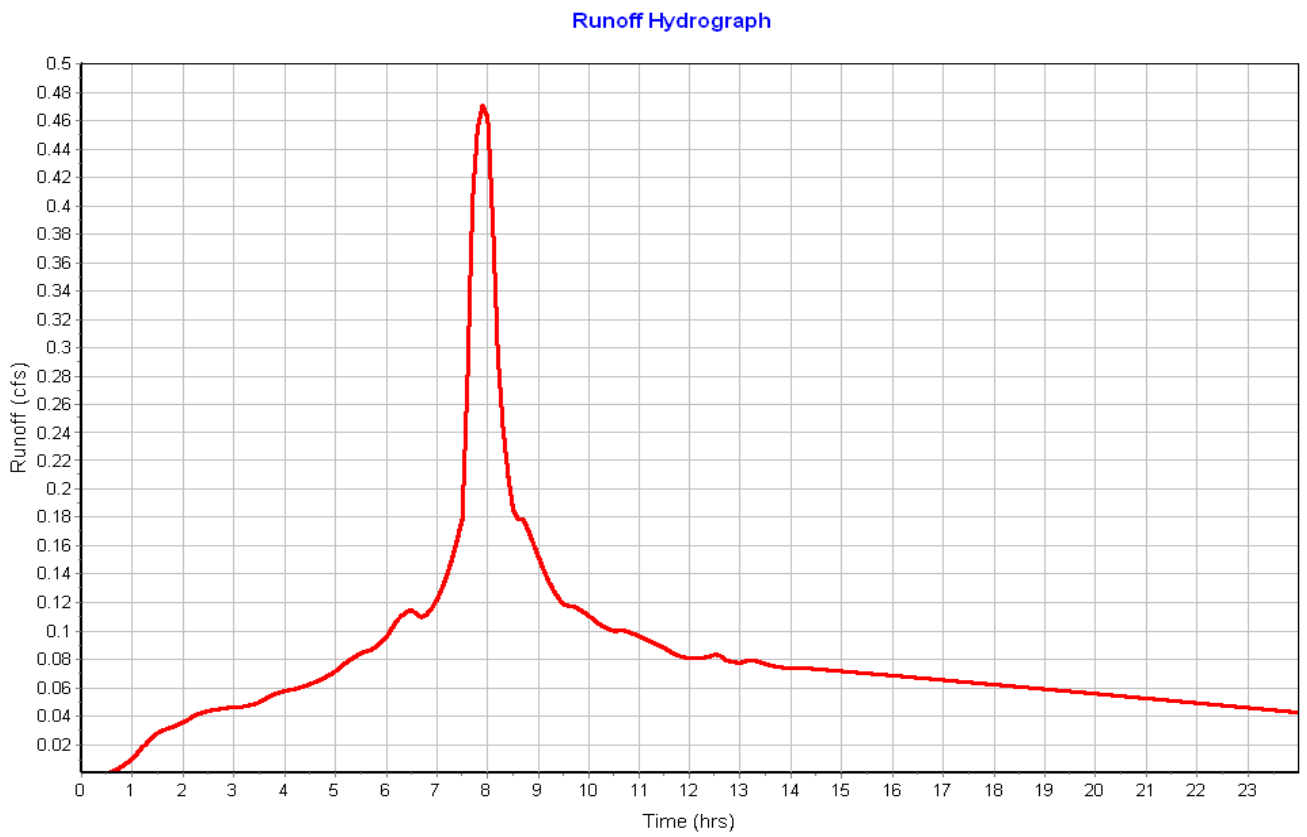
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 3.49
Peak Runoff (cfs) 0.47
Weighted Curve Number 92.06
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0300-2





Subbasin : 0300-3

Input Data

Area (ac) 0.55
Impervious Area (%) 73.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.55		92.06

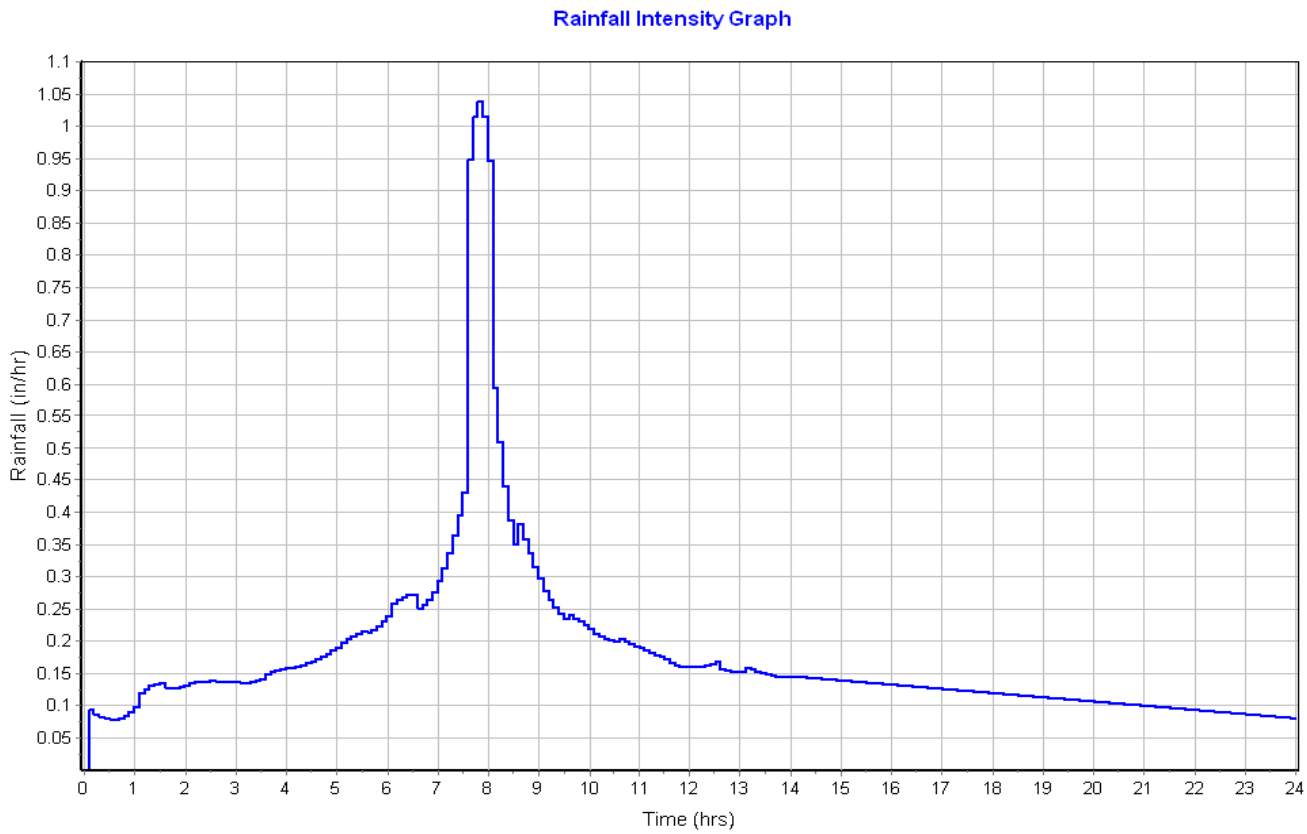
Time of Concentration

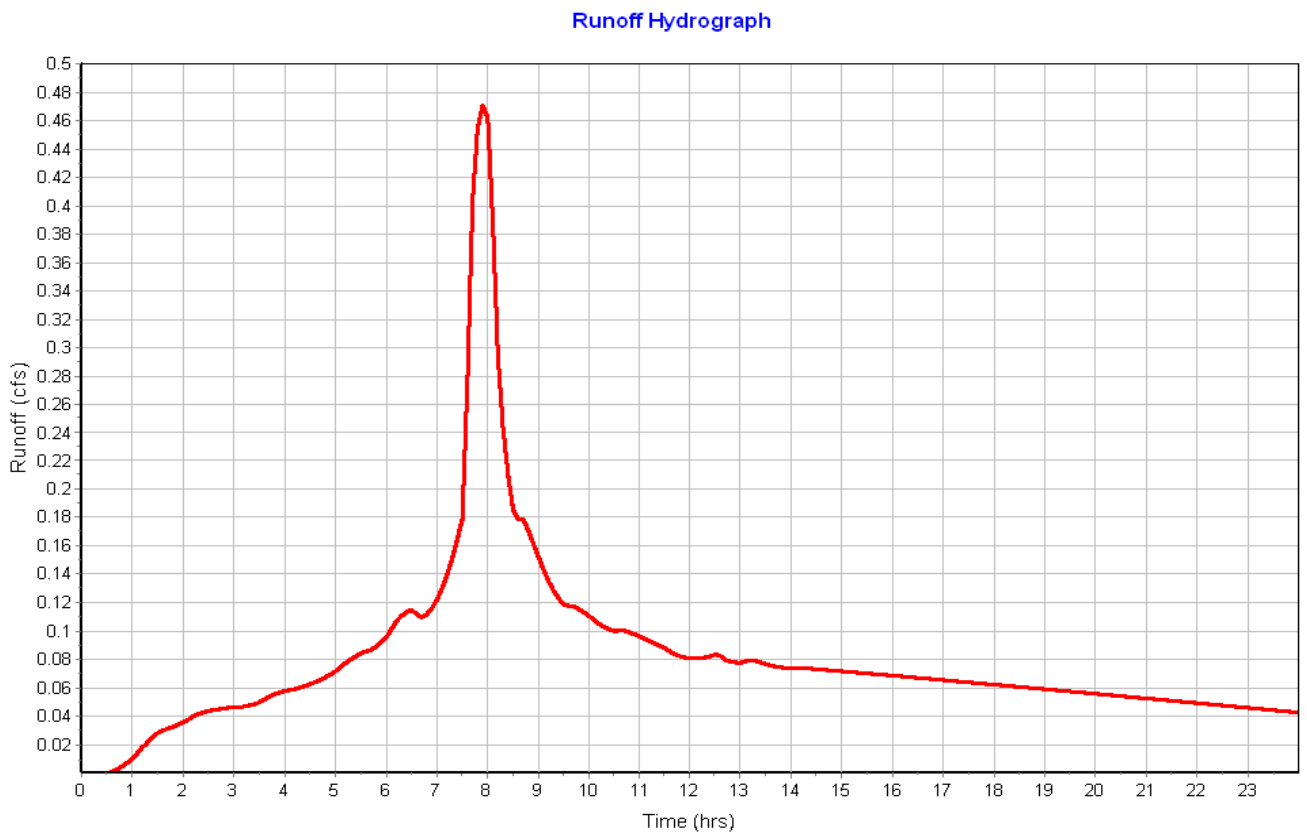
User-Defined TOC override (minutes): 5.0

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 3.49
Peak Runoff (cfs) 0.47
Weighted Curve Number 92.06
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : 0300-3





Subbasin : 0300-4

Input Data

Area (ac) 0.97
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.97		98

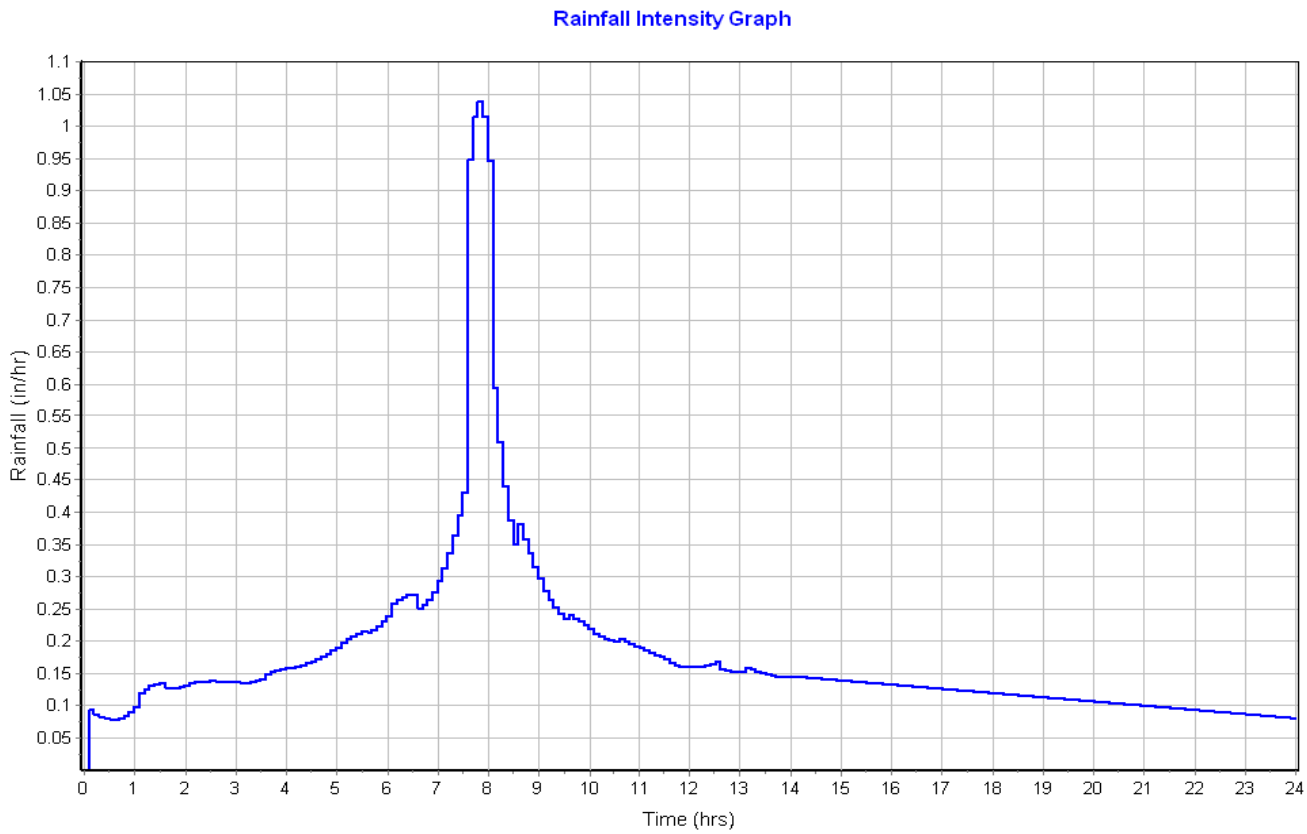
Time of Concentration

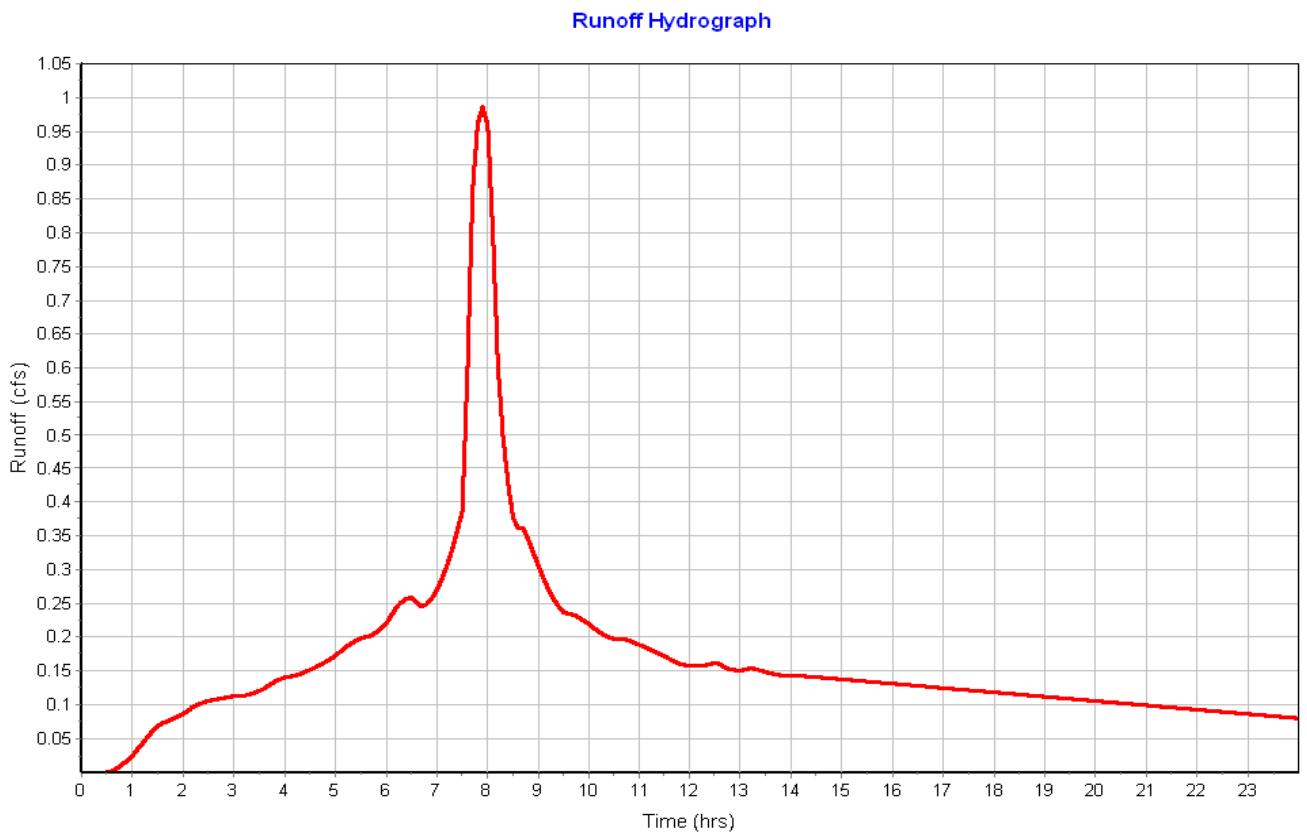
Flow Length (ft) 500.00
Slope (%) 2.0
Computed TOC (min) 4.21

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 0.99
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:04:13

Subbasin : 0300-4





Subbasin : 0300-5

Input Data

Area (ac) 1.20
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.20		98

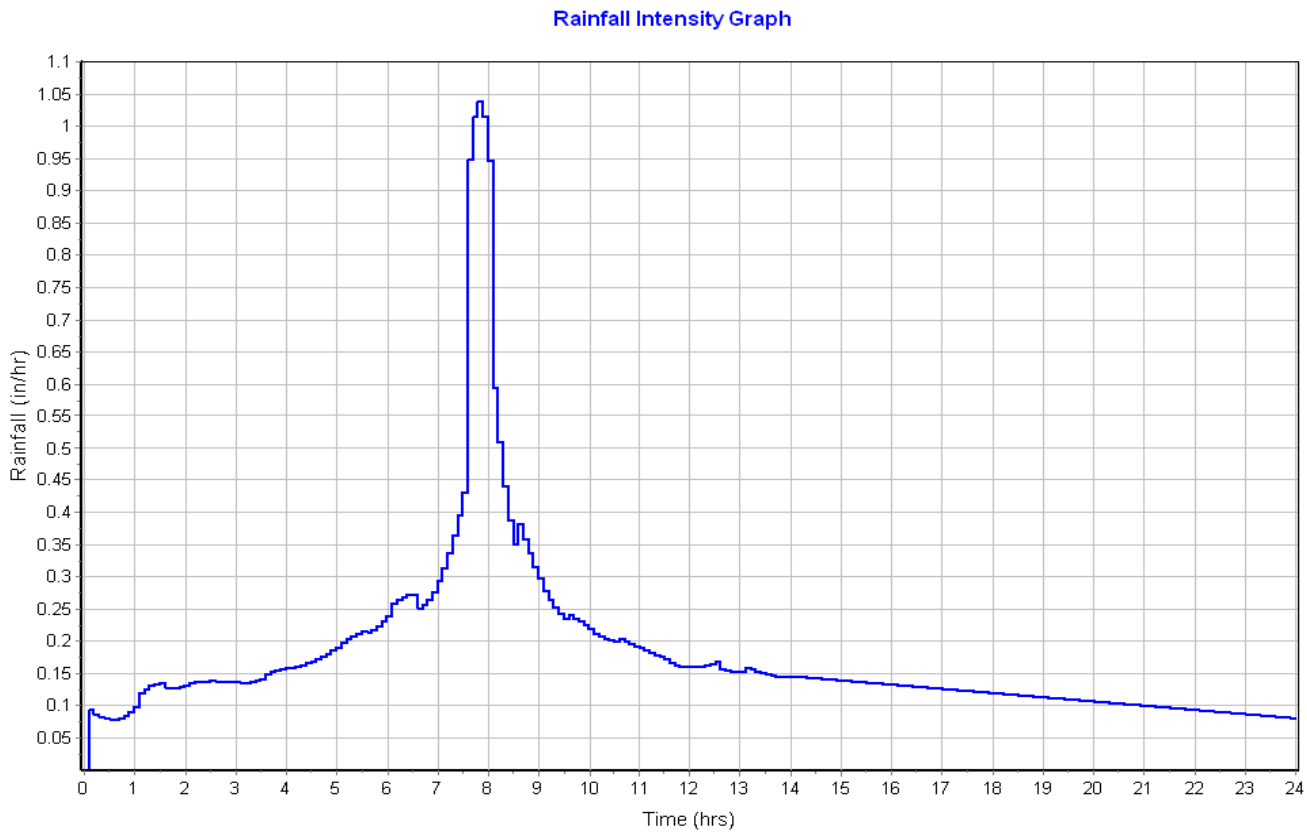
Time of Concentration

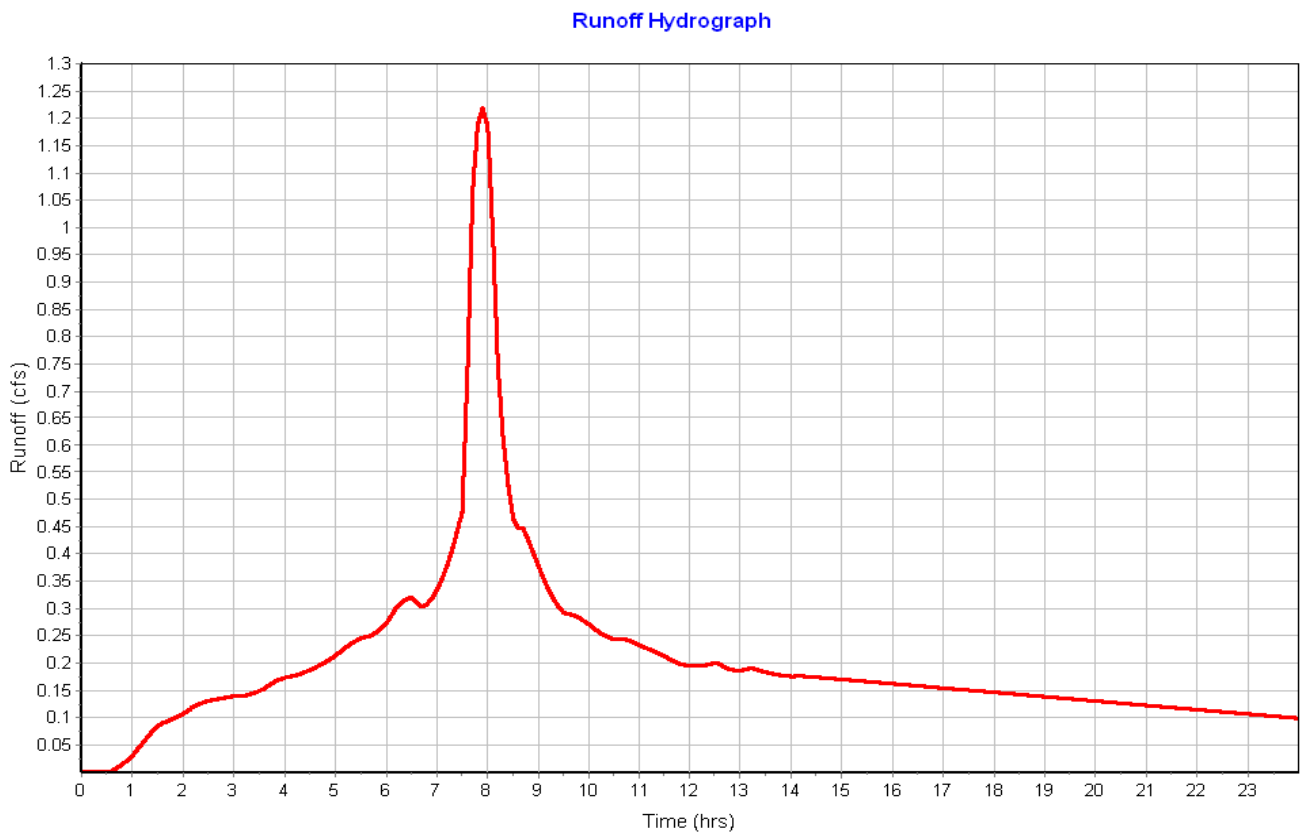
Flow Length (ft) 500.00
Slope (%) 2.0
Computed TOC (min) 4.21

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 1.22
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:04:13

Subbasin : 0300-5





Subbasin : 0300-6

Input Data

Area (ac) 1.29
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.29		98

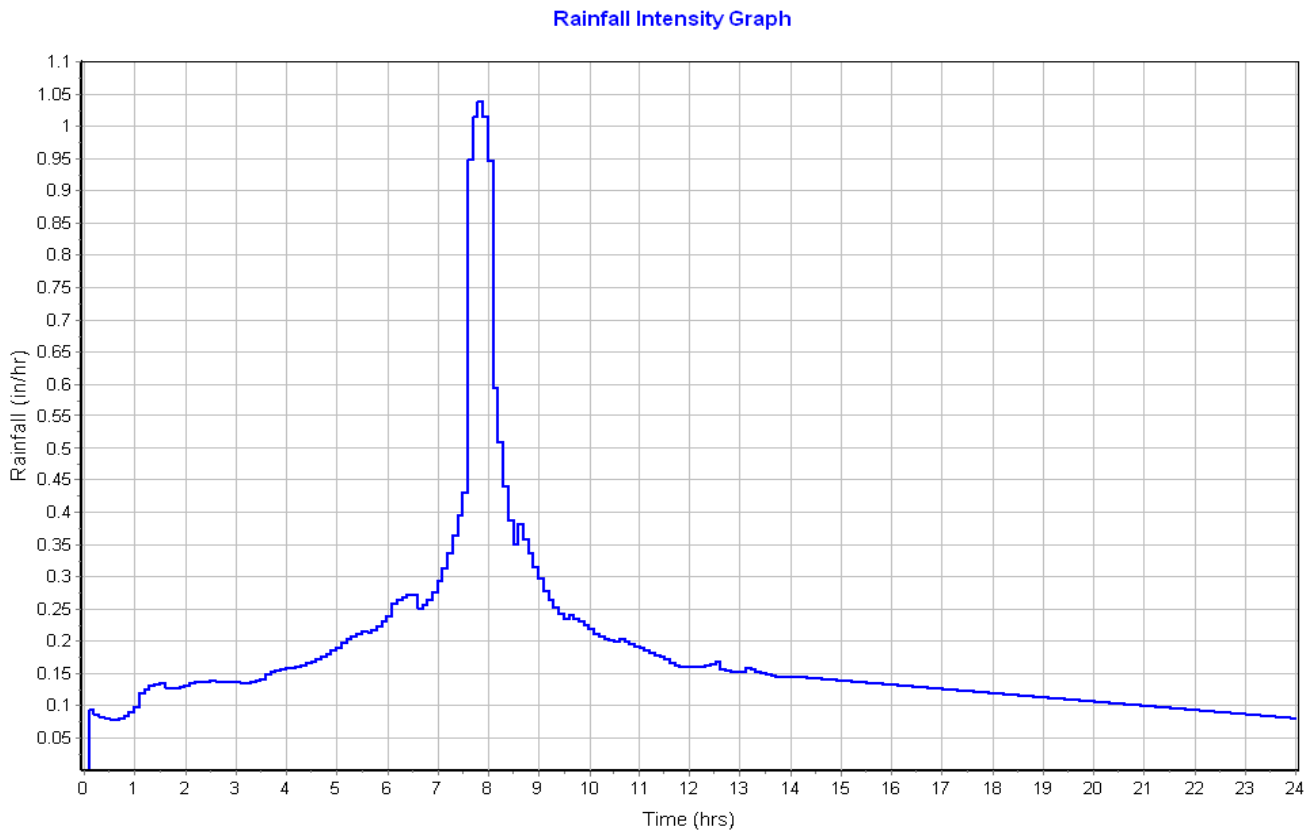
Time of Concentration

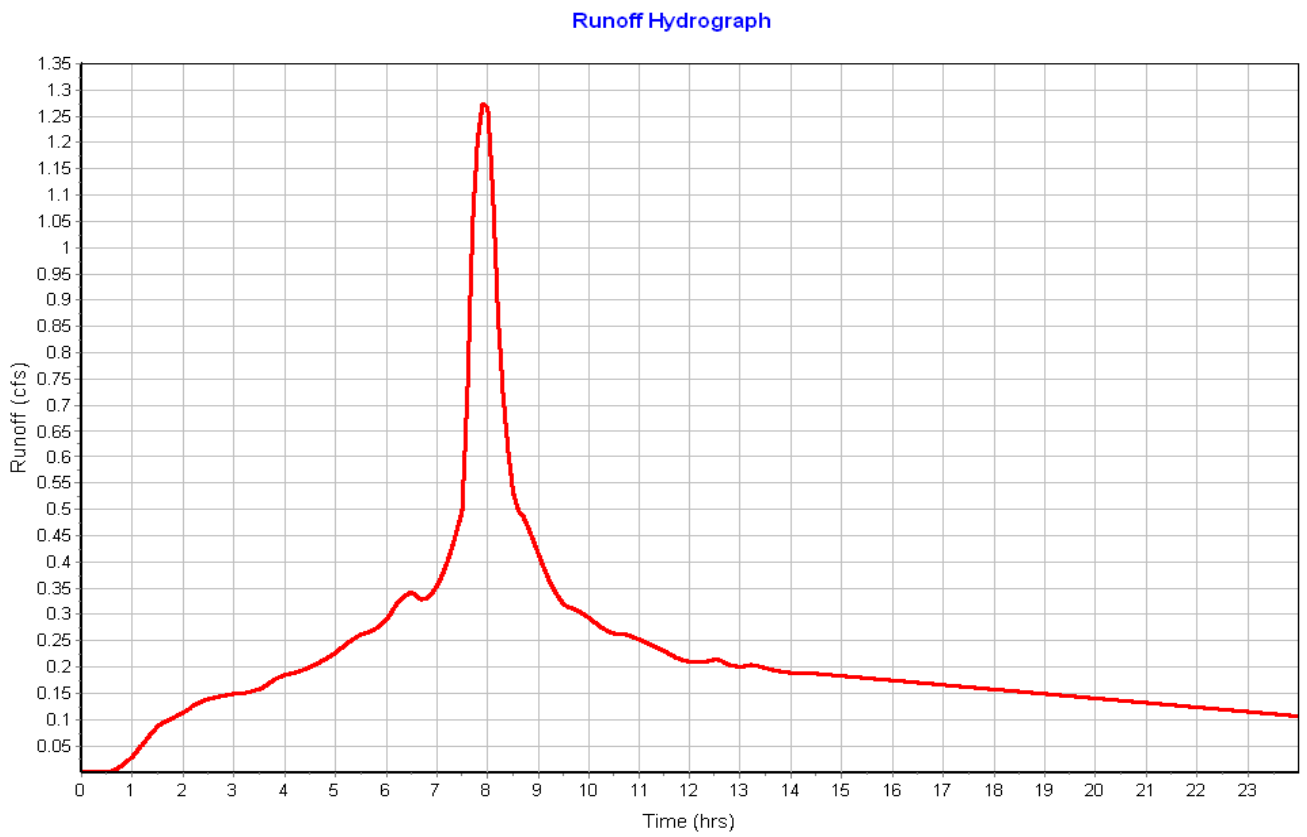
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 1.27
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : 0300-6





Subbasin : 0300-7

Input Data

Area (ac) 1.37
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.37		98

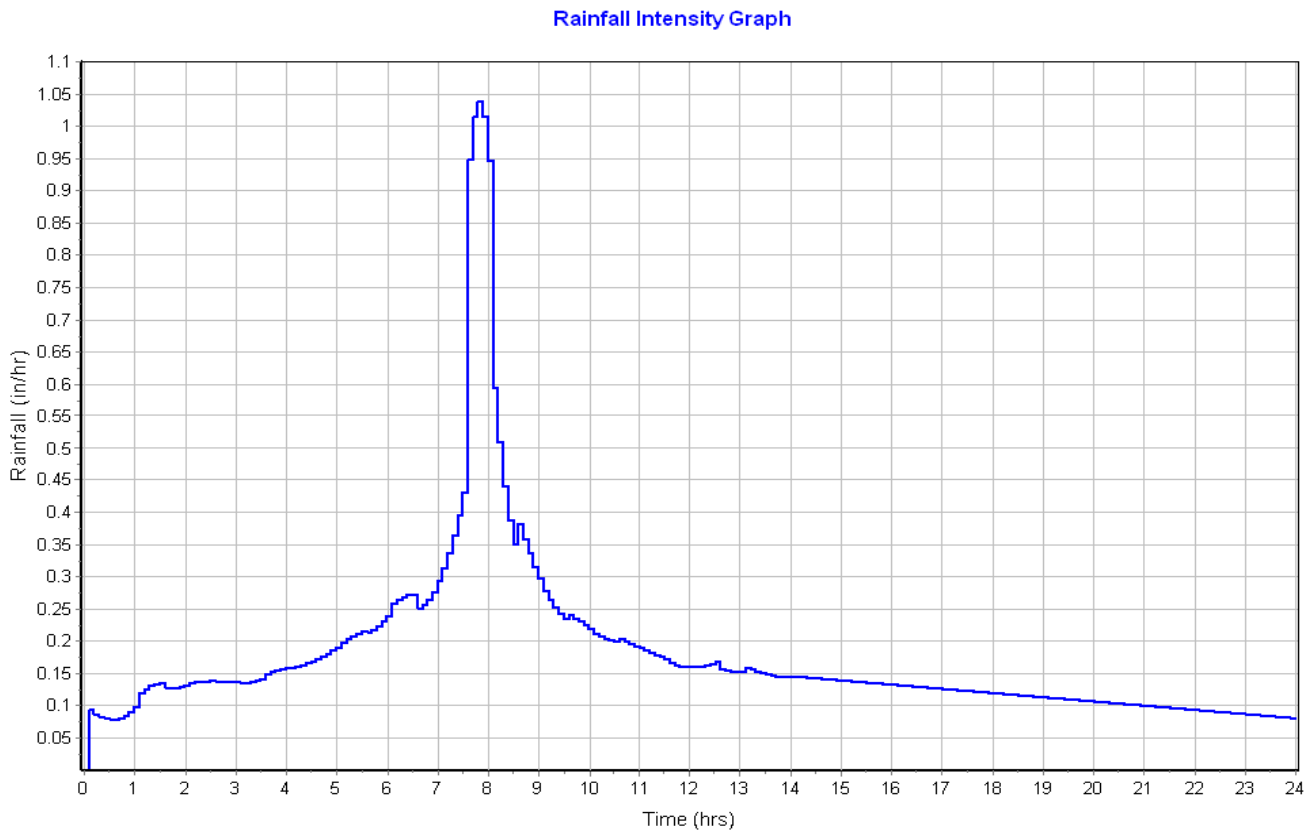
Time of Concentration

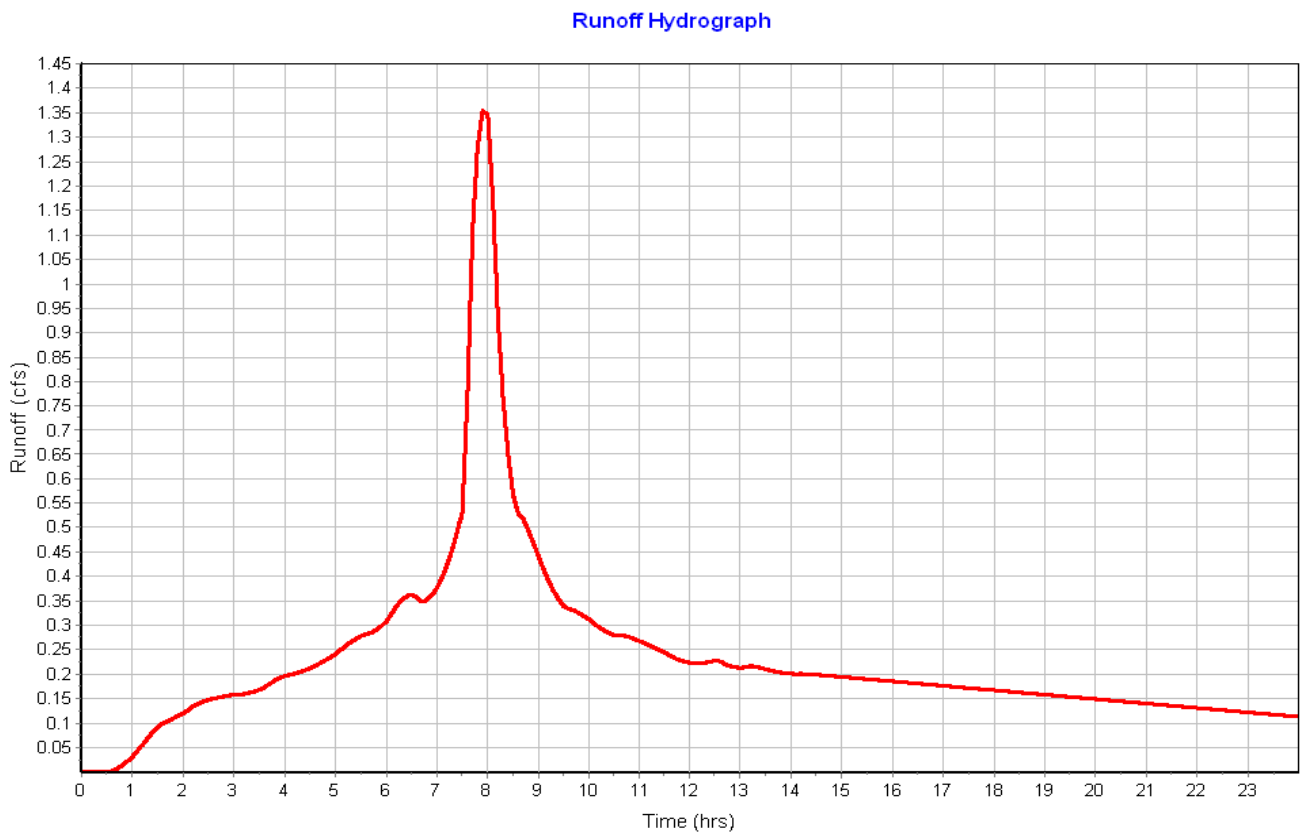
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 1.35
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : 0300-7





Subbasin : 0300-8

Input Data

Area (ac) 1.21
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.21		98

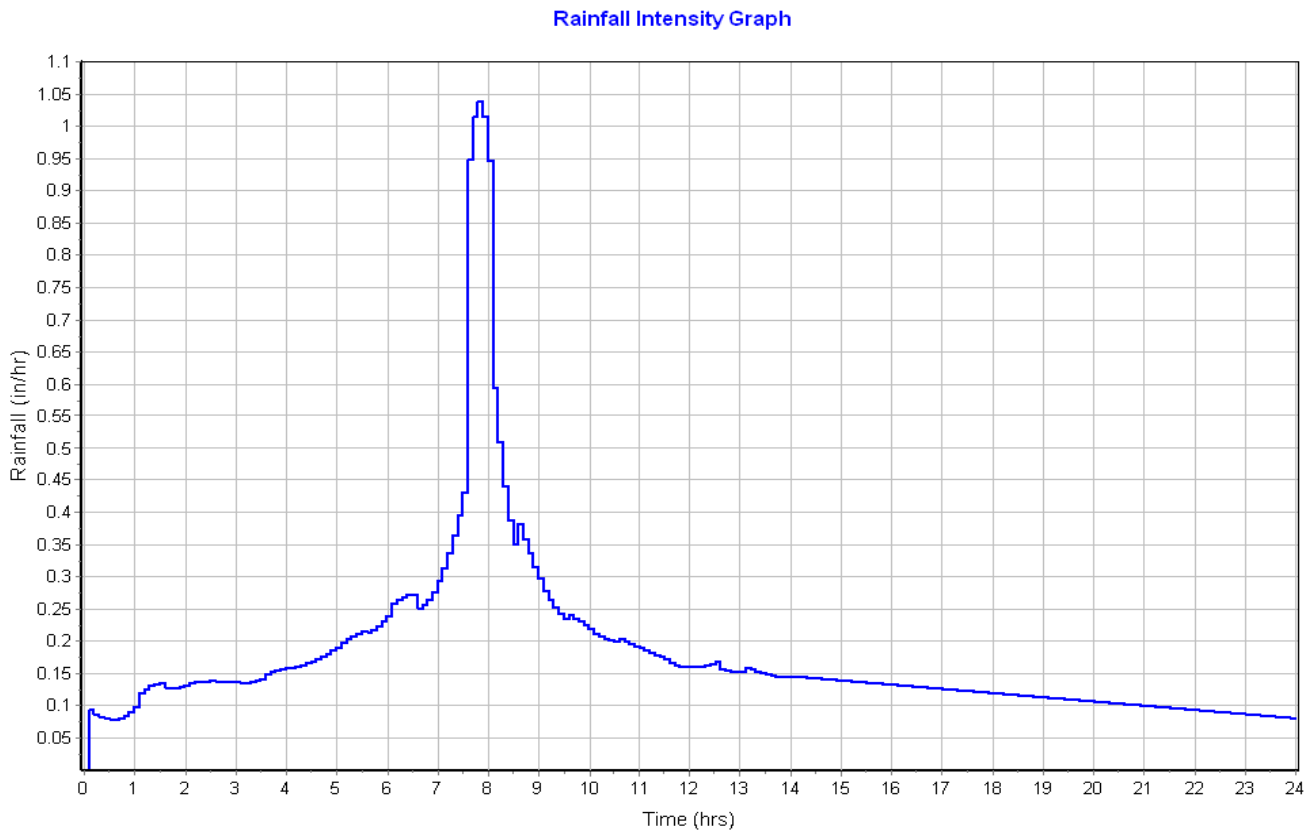
Time of Concentration

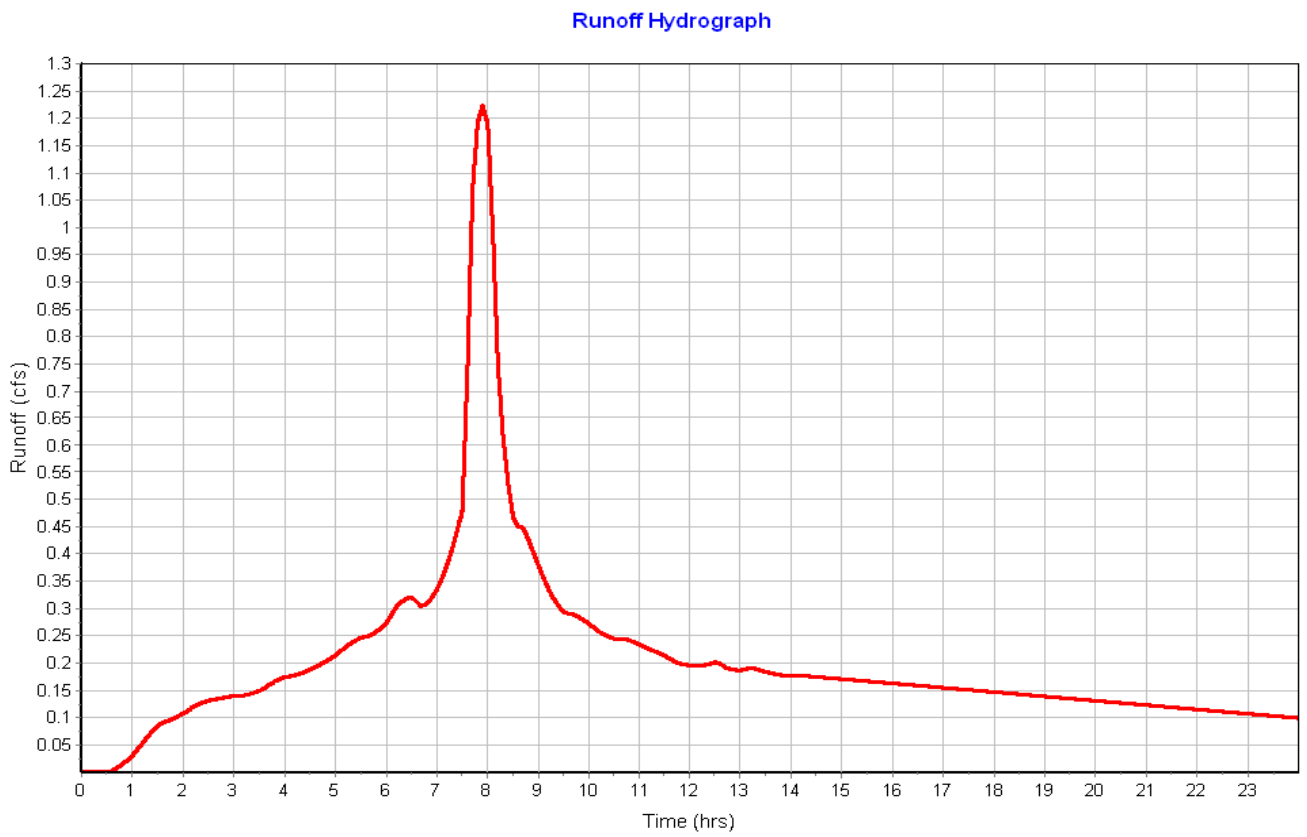
Flow Length (ft) 500.00
Slope (%) 2.0
Computed TOC (min) 4.21

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 1.22
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:04:13

Subbasin : 0300-8





Subbasin : 0300-9

Input Data

Area (ac) 1.75
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.75		98

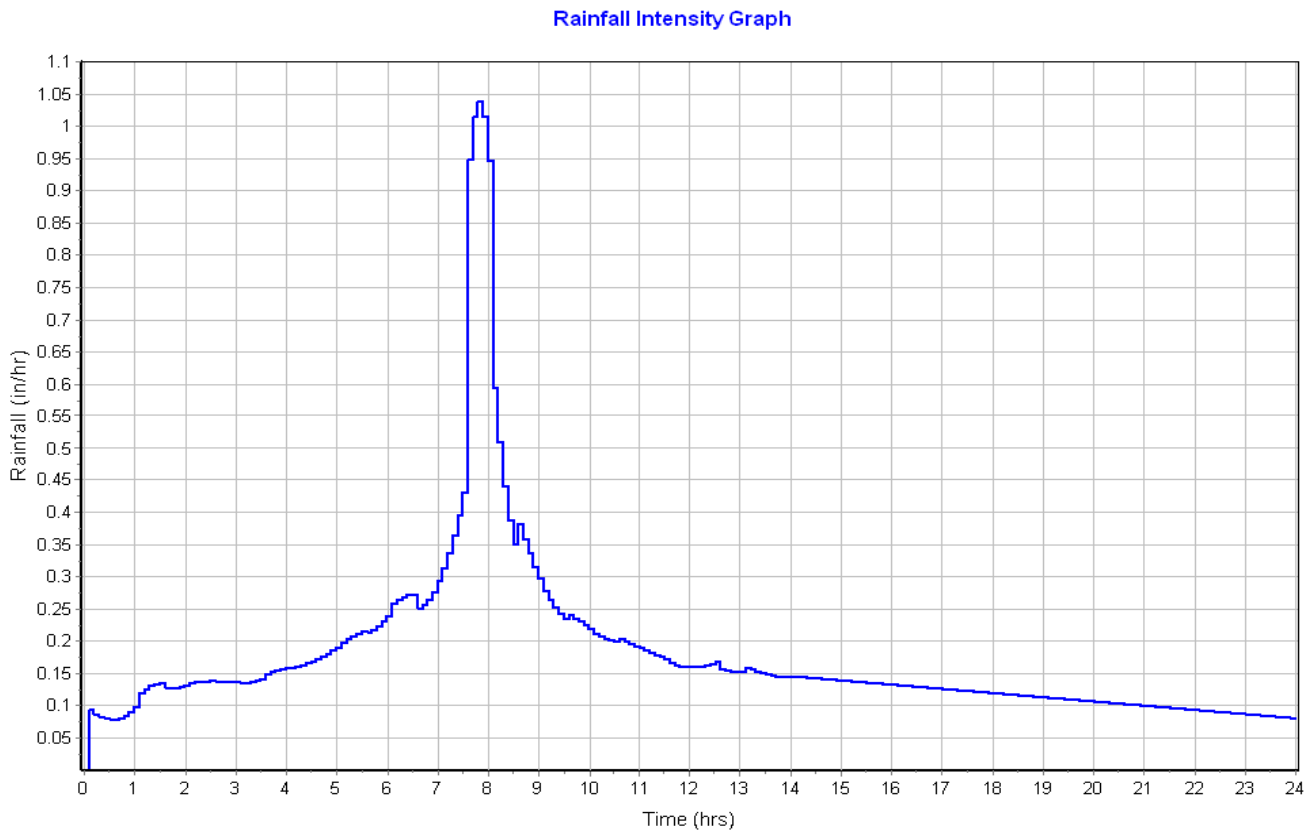
Time of Concentration

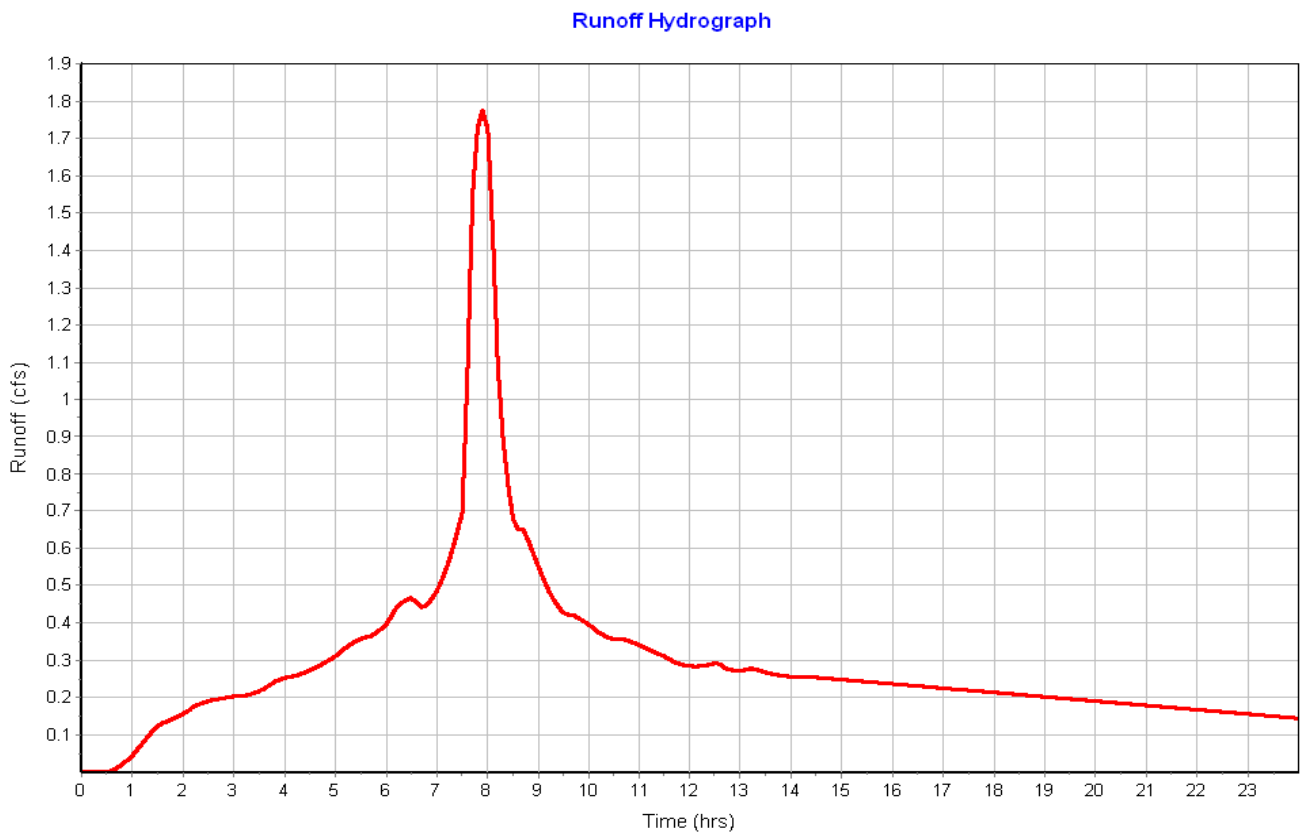
Flow Length (ft) 500.00
Slope (%) 2.0
Computed TOC (min) 4.21

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 1.77
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:04:13

Subbasin : 0300-9





Subbasin : 0600-1

Input Data

Area (ac) 0.19
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.19		98

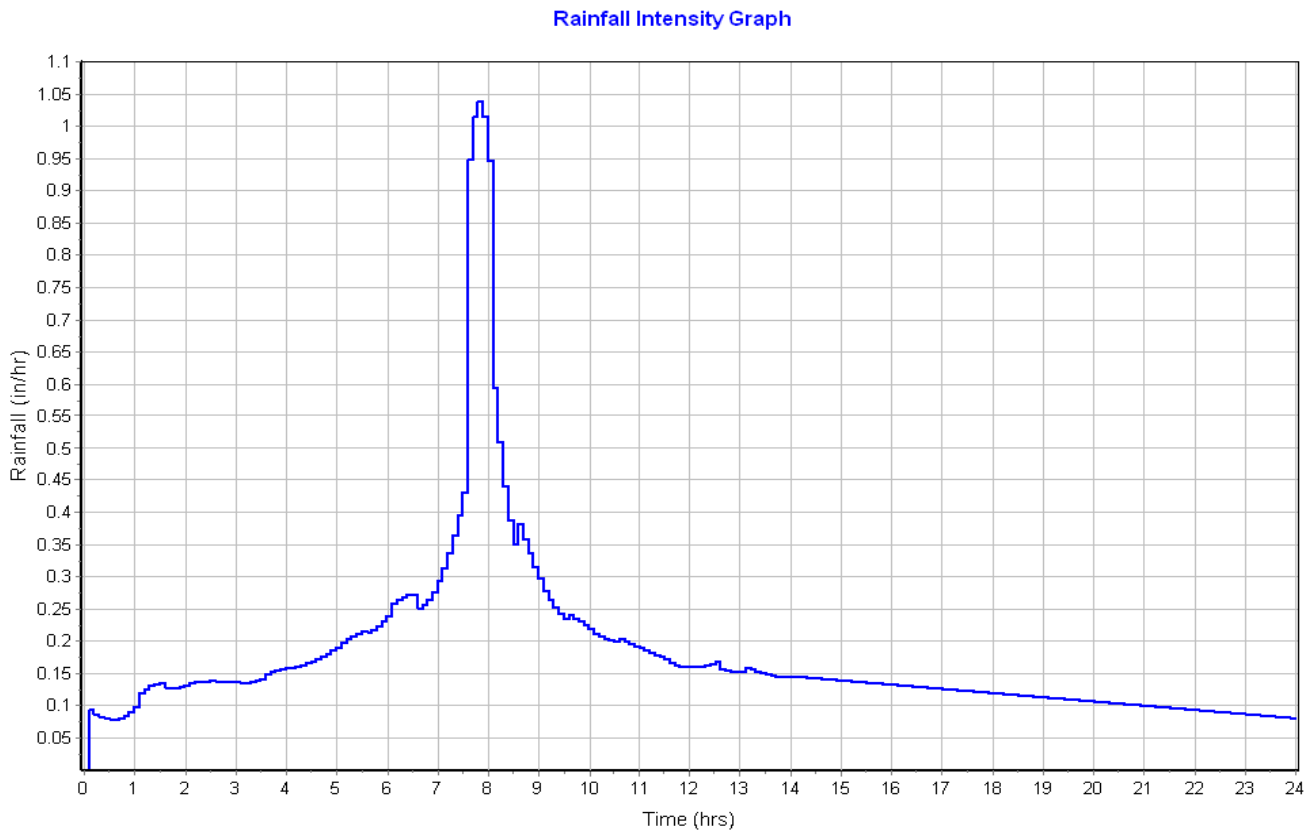
Time of Concentration

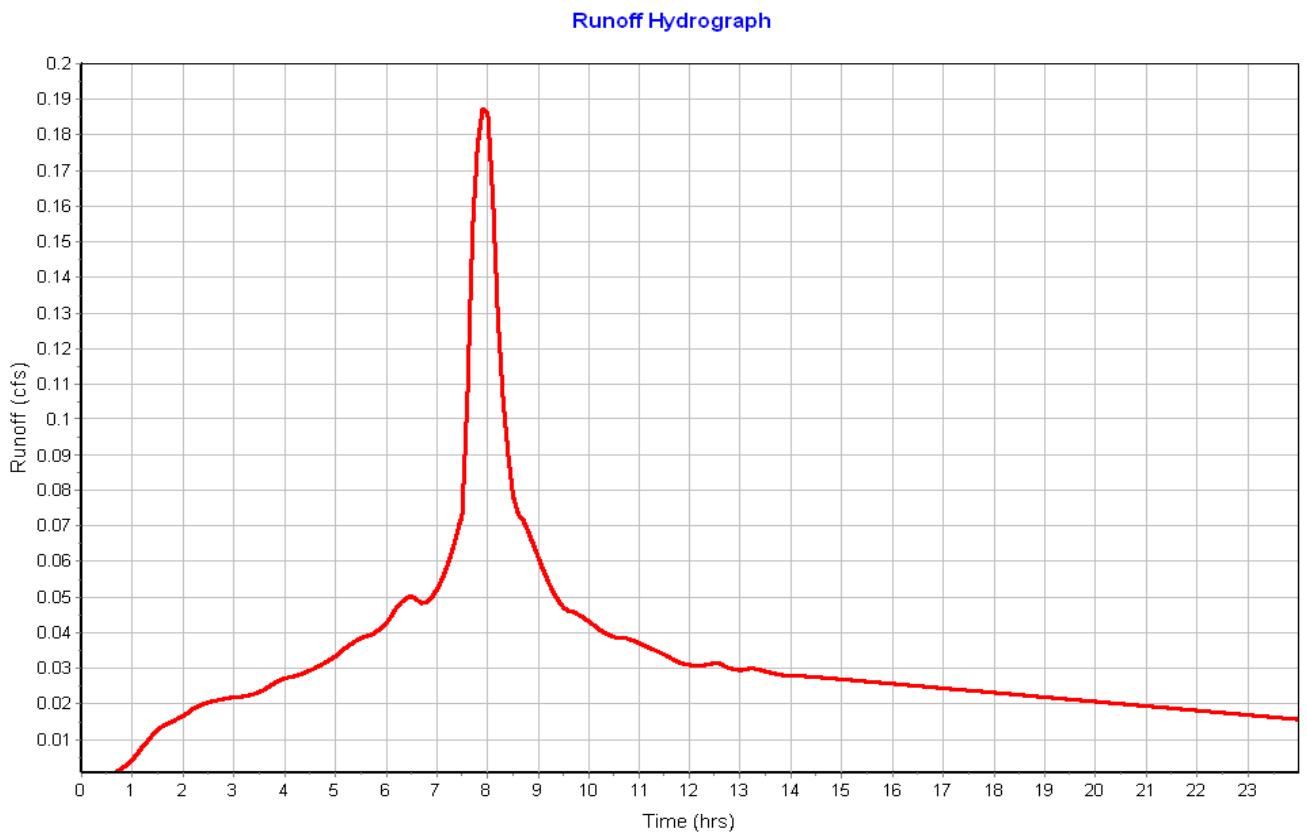
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 0.19
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : 0600-1





Subbasin : 0600-2

Input Data

Area (ac) 0.05
Impervious Area (%) 80.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 2.0000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.05		93.6

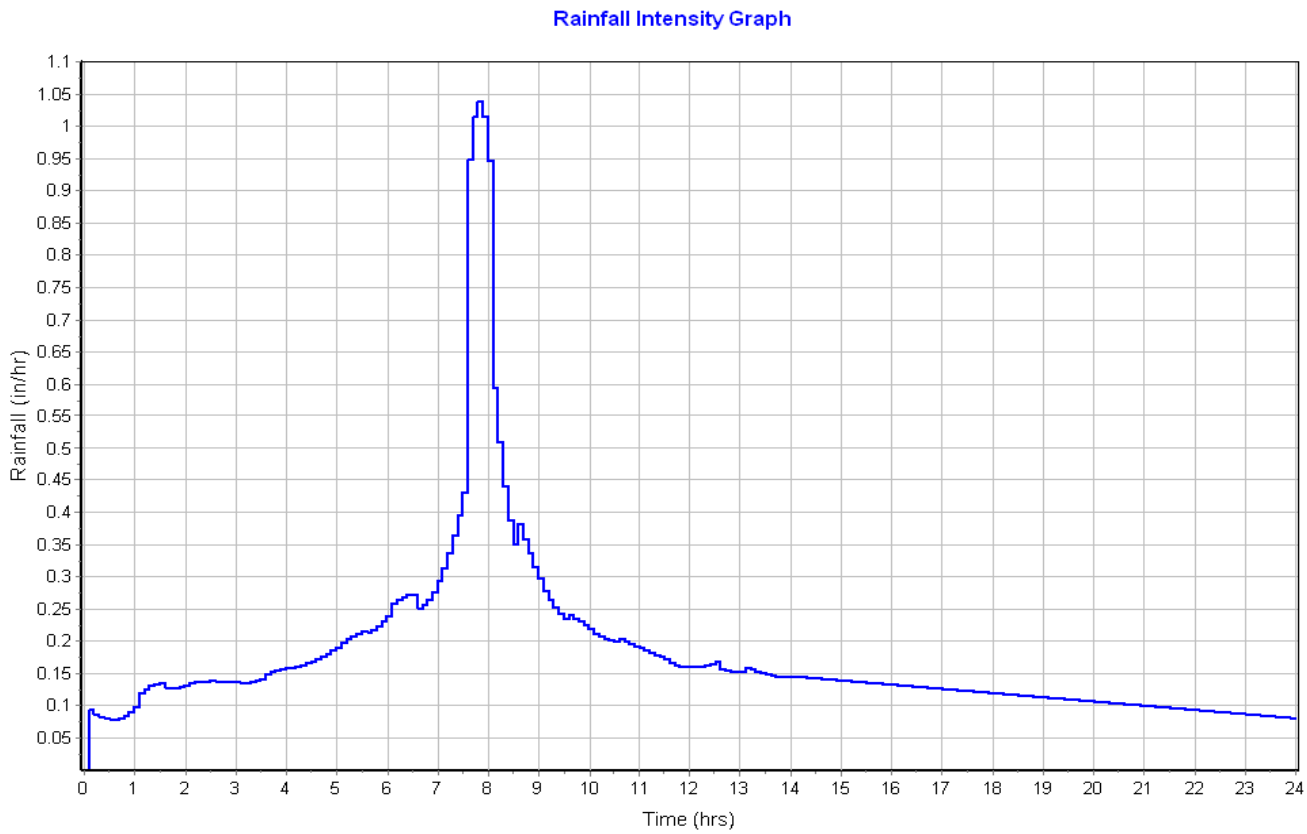
Time of Concentration

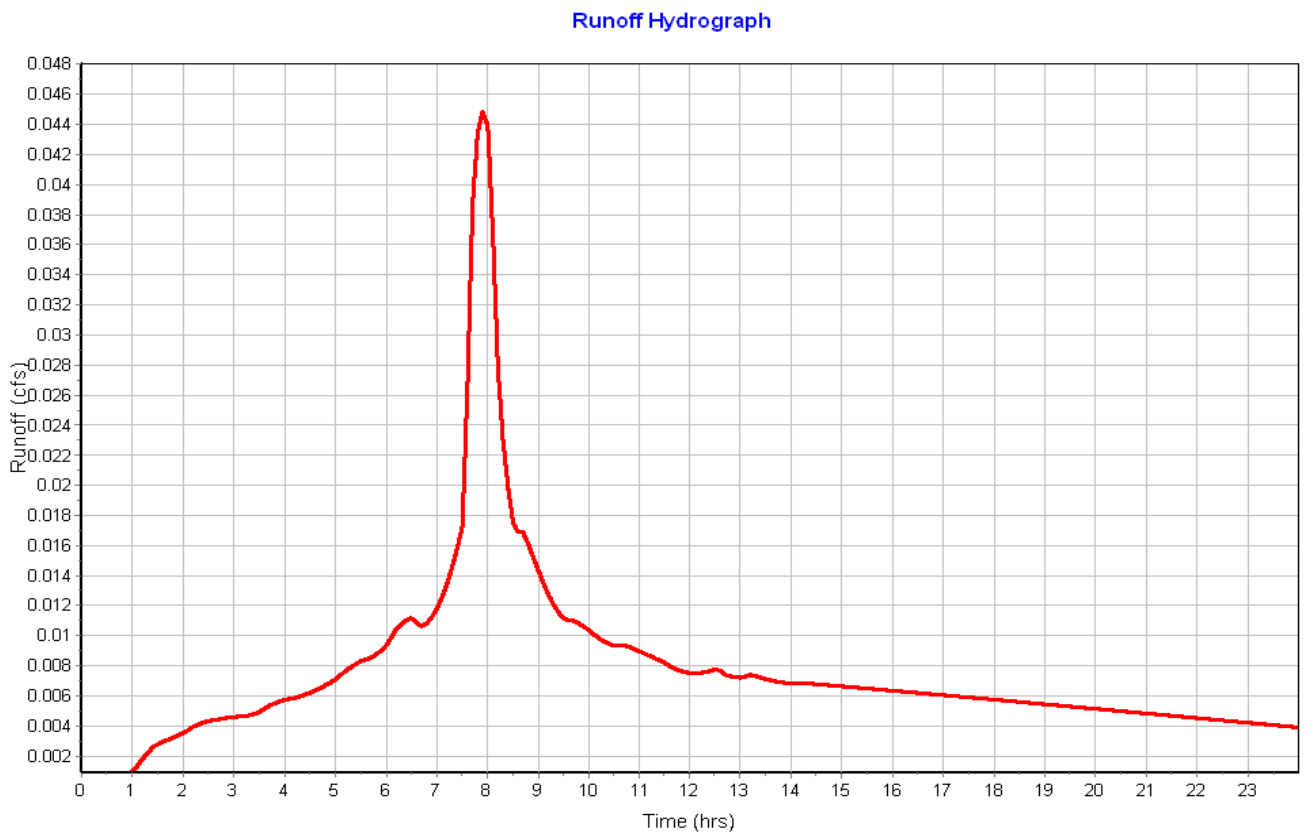
Flow Length (ft) 500.00
Slope (%) 2.0
Computed TOC (min) 4.21

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 3.64
Peak Runoff (cfs) 0.05
Weighted Curve Number 93.60
Time of Concentration (days hh:mm:ss) 0 00:04:13

Subbasin : 0600-2





Subbasin : 0600-3

Input Data

Area (ac) 0.20
Impervious Area (%) 50.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 1.0000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	0.20		87

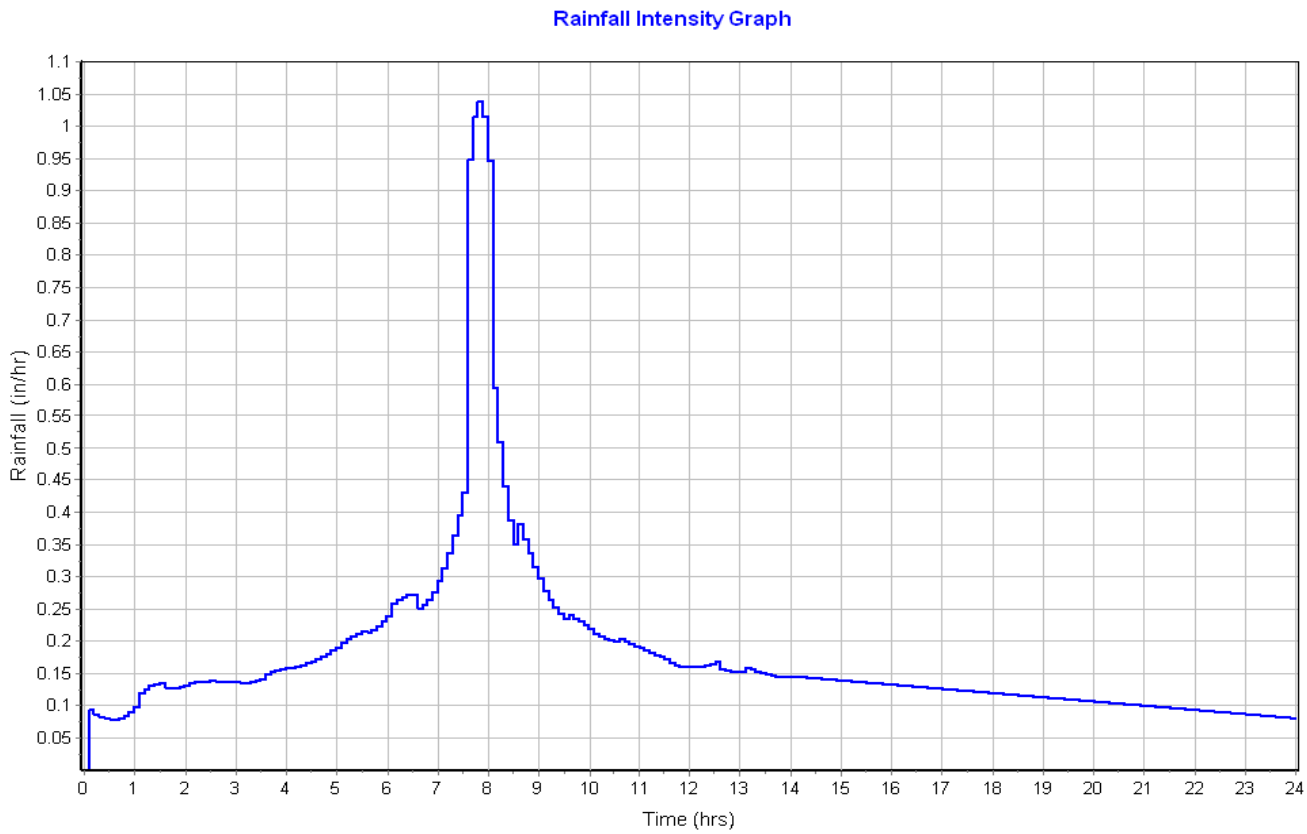
Time of Concentration

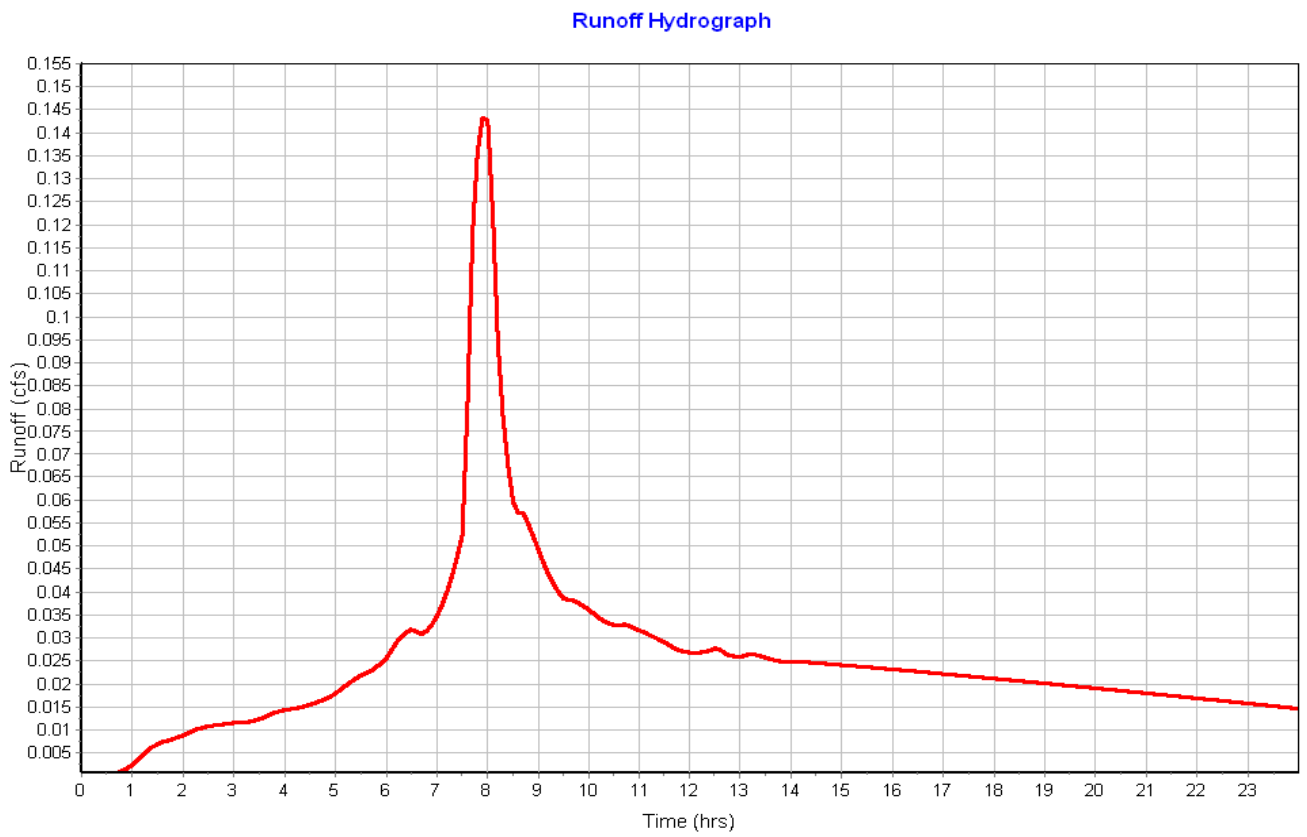
Flow Length (ft) 500.00
Slope (%) 1.0
Computed TOC (min) 5.50

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 3.01
Peak Runoff (cfs) 0.14
Weighted Curve Number 87.00
Time of Concentration (days hh:mm:ss) 0 00:05:30

Subbasin : 0600-3





Subbasin : Future Tank 1

Input Data

Area (ac) 1.06
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.06		98

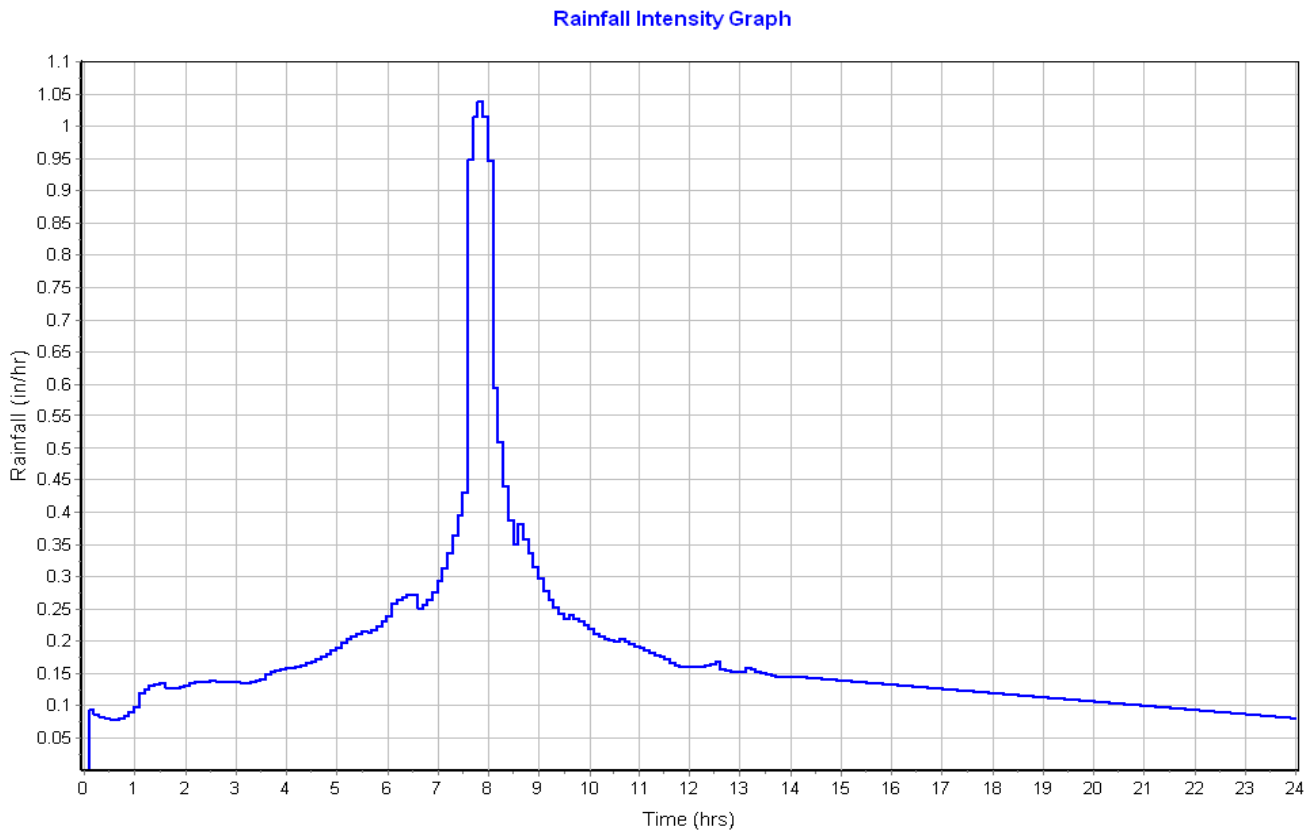
Time of Concentration

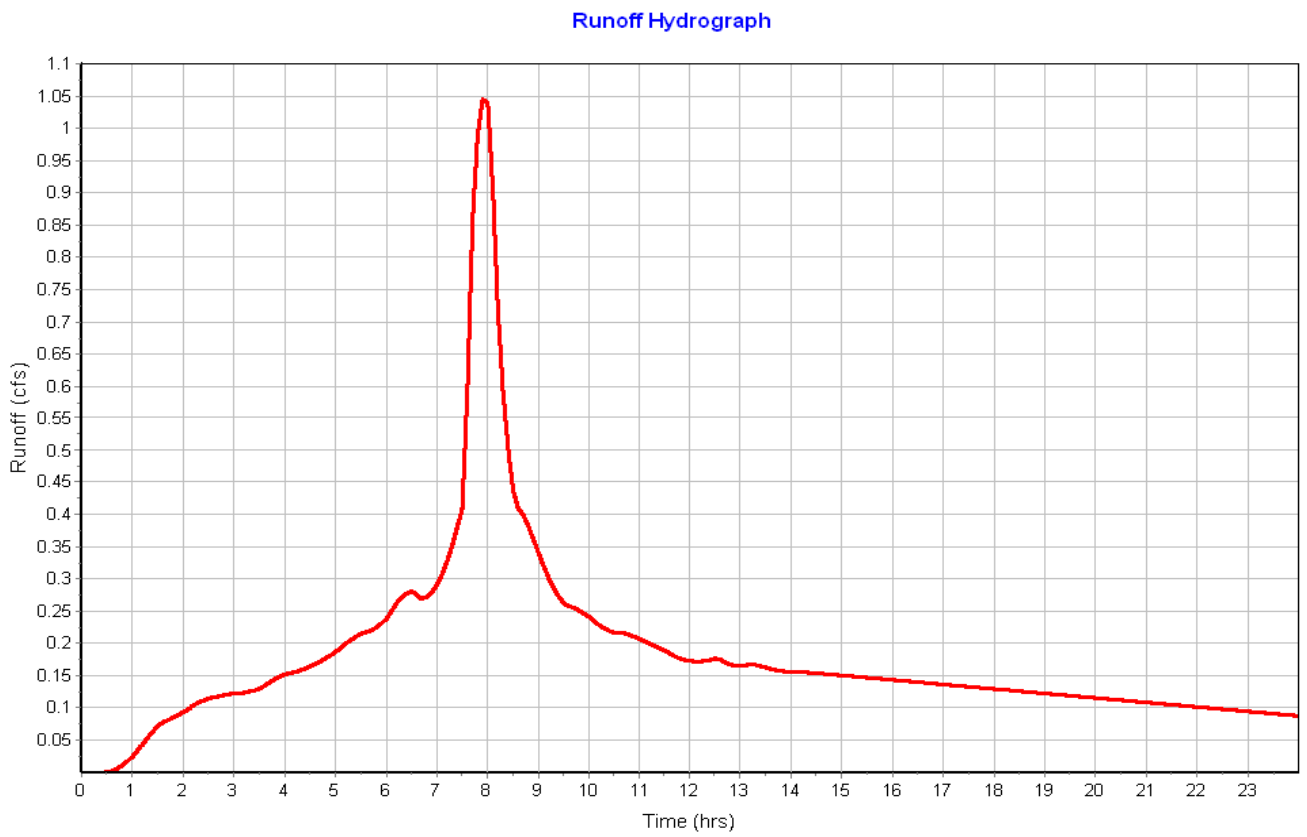
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 1.05
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Future Tank 1





Subbasin : Future Tank 2

Input Data

Area (ac) 1.06
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.06		98

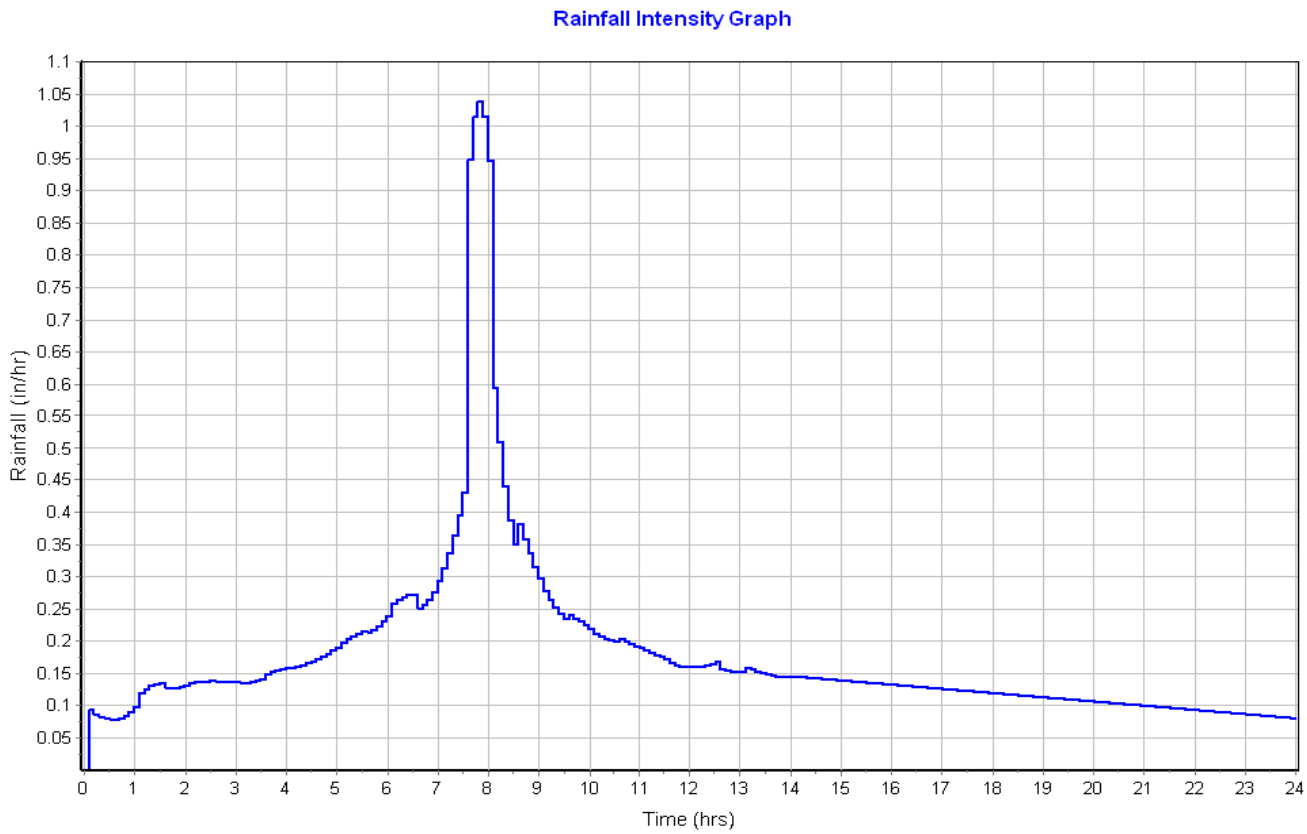
Time of Concentration

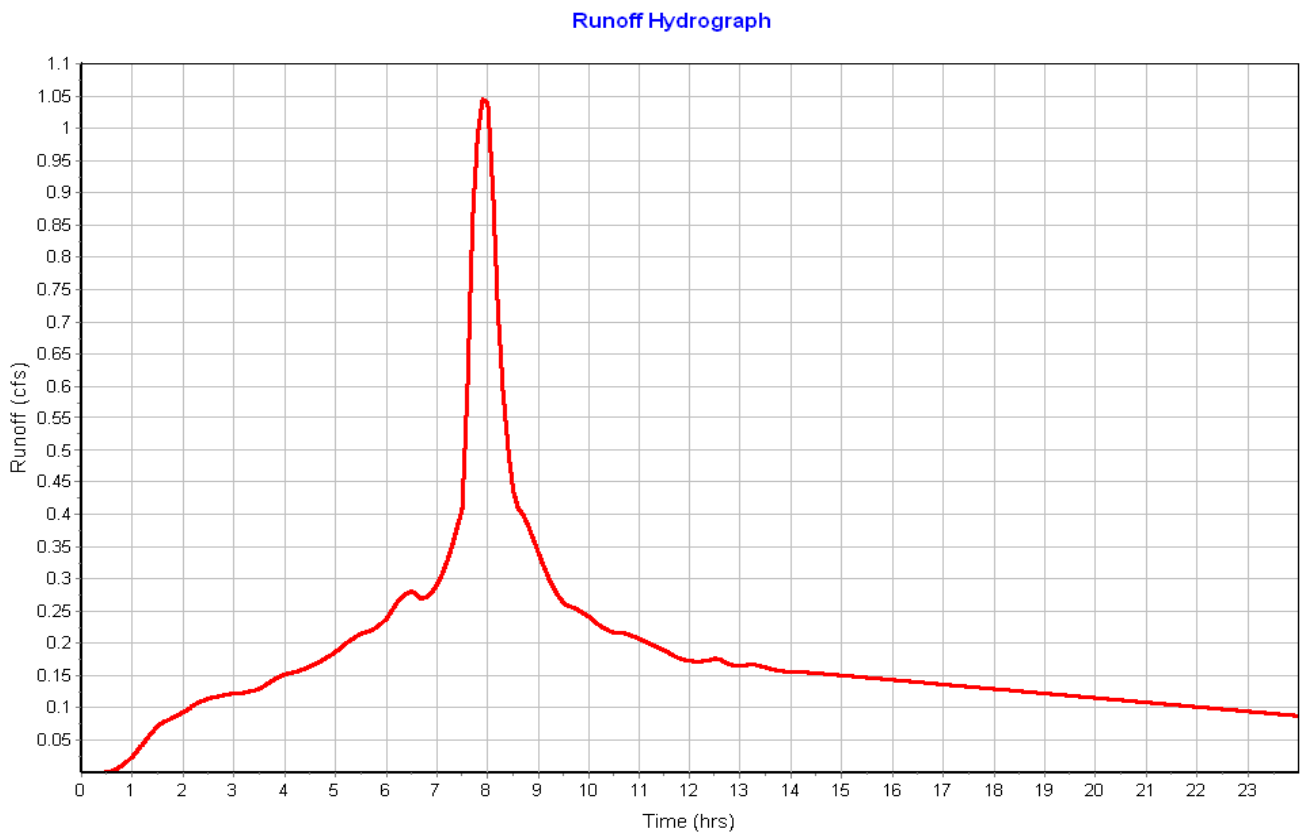
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 1.05
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Future Tank 2





Subbasin : Rail Shed Roof - East

Input Data

Area (ac) 1.90
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.90		98

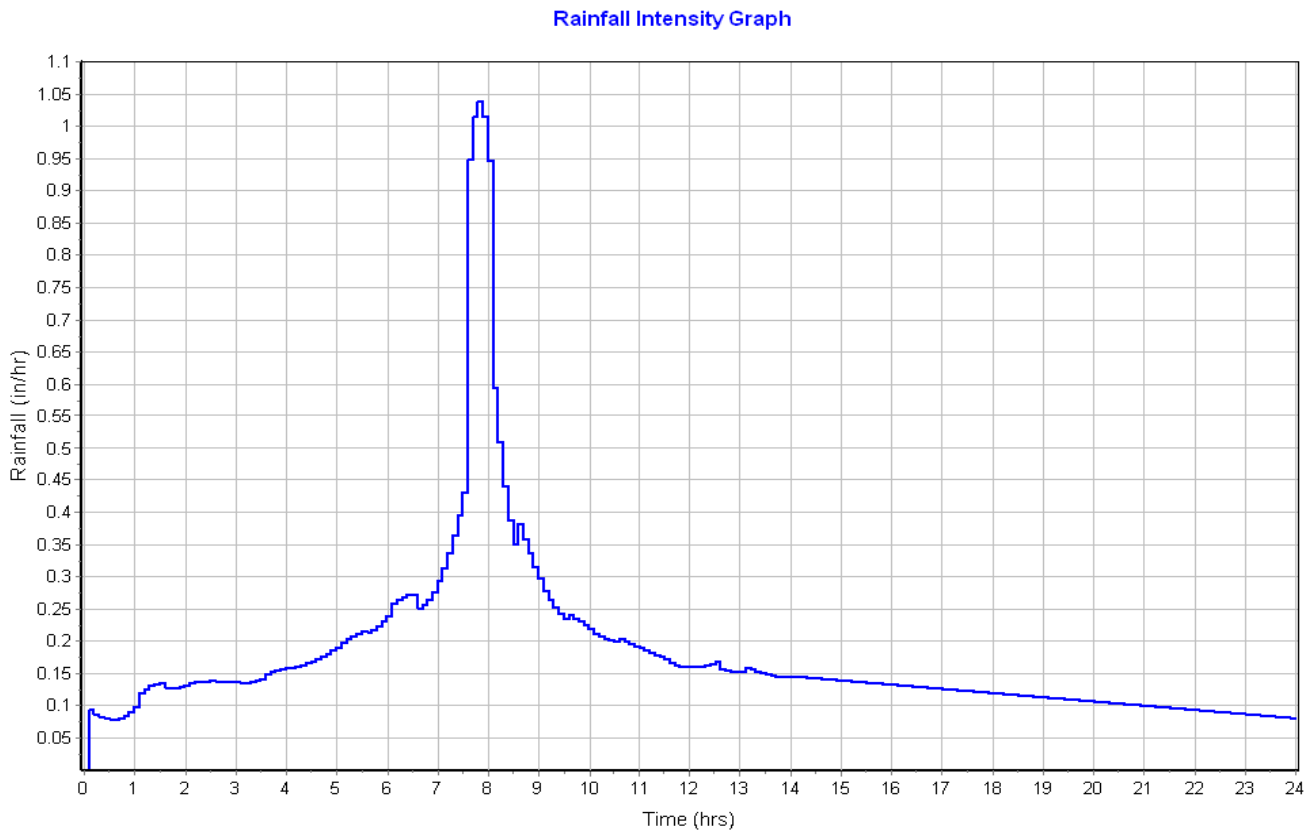
Time of Concentration

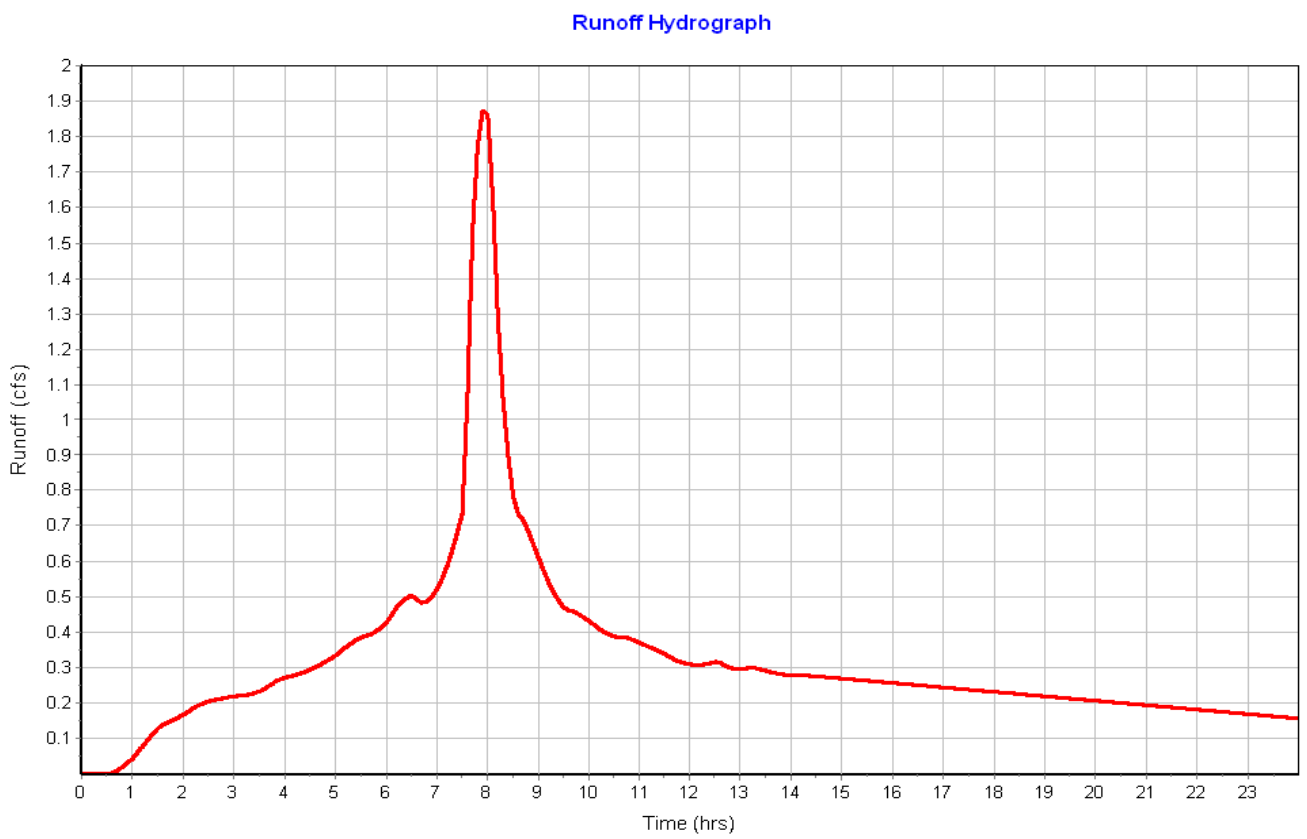
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 1.87
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Rail Shed Roof - East





Subbasin : Rail Unloading Shed - West

Input Data

Area (ac) 1.57
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	1.57		98

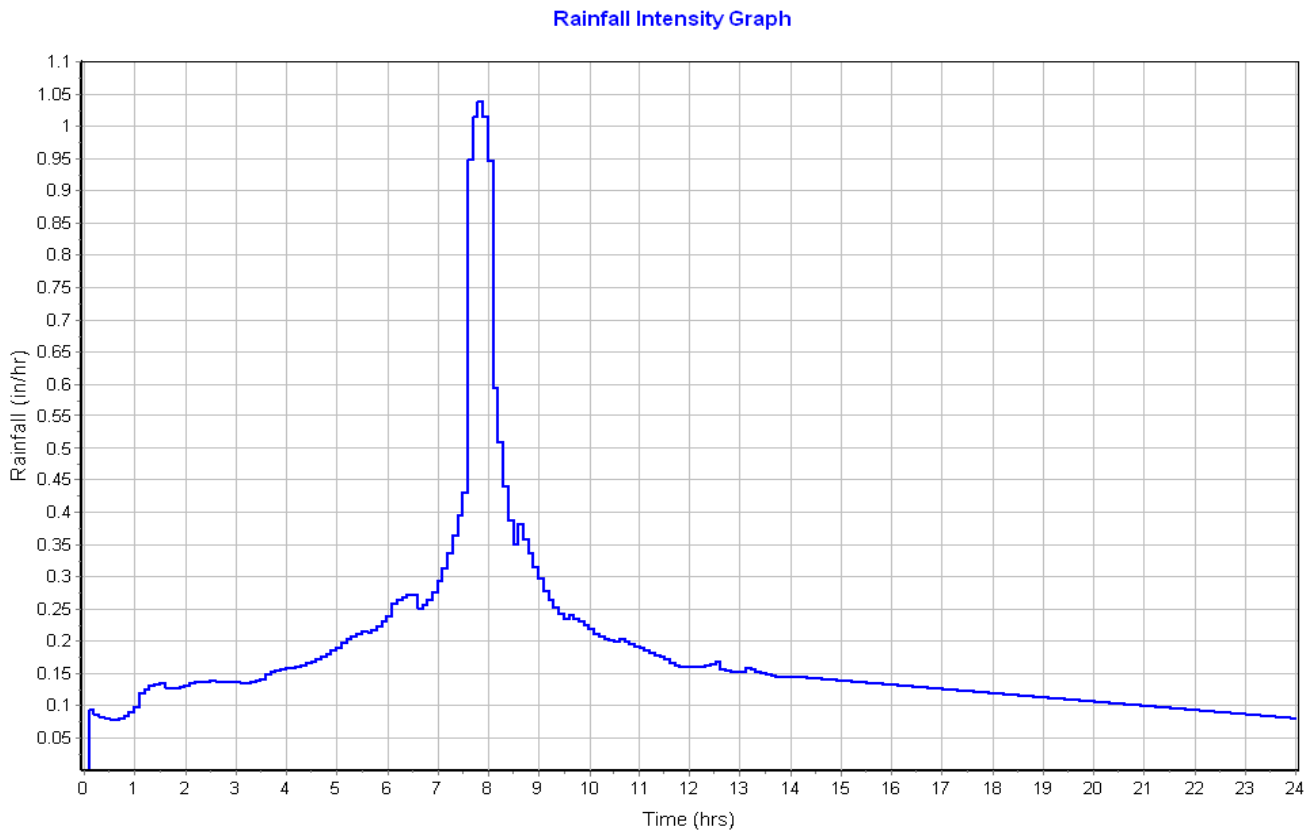
Time of Concentration

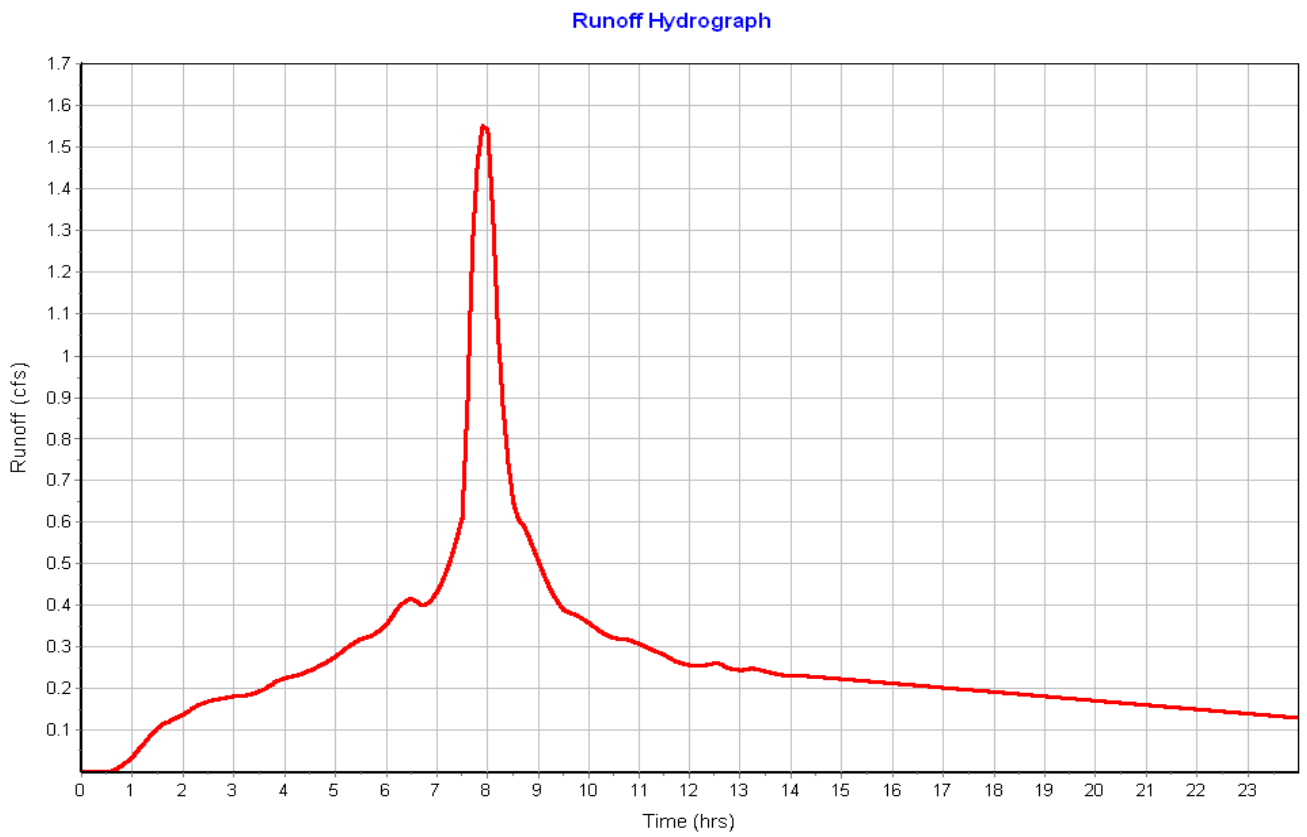
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 1.55
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Rail Unloading Shed - West





Subbasin : Tank Roofs

Input Data

Area (ac) 4.22
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	4.22		98

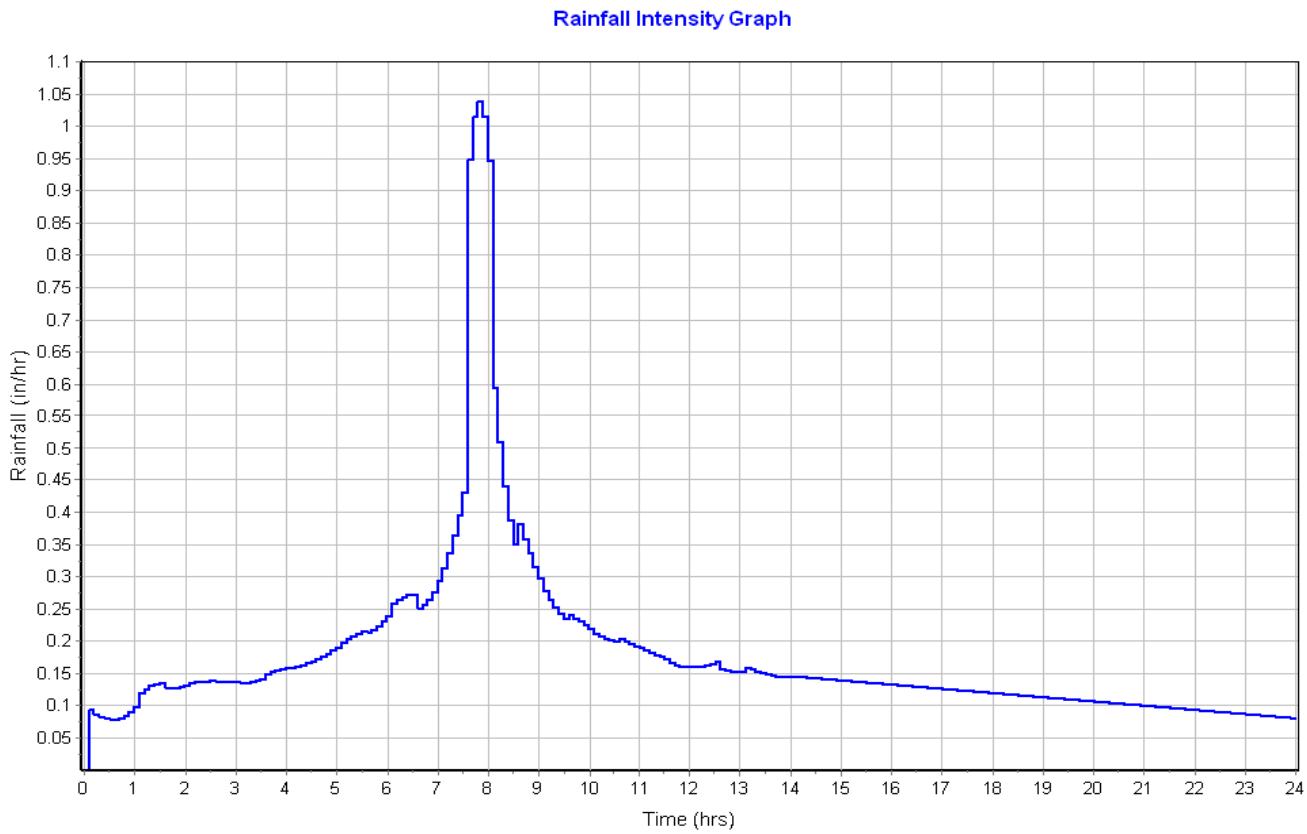
Time of Concentration

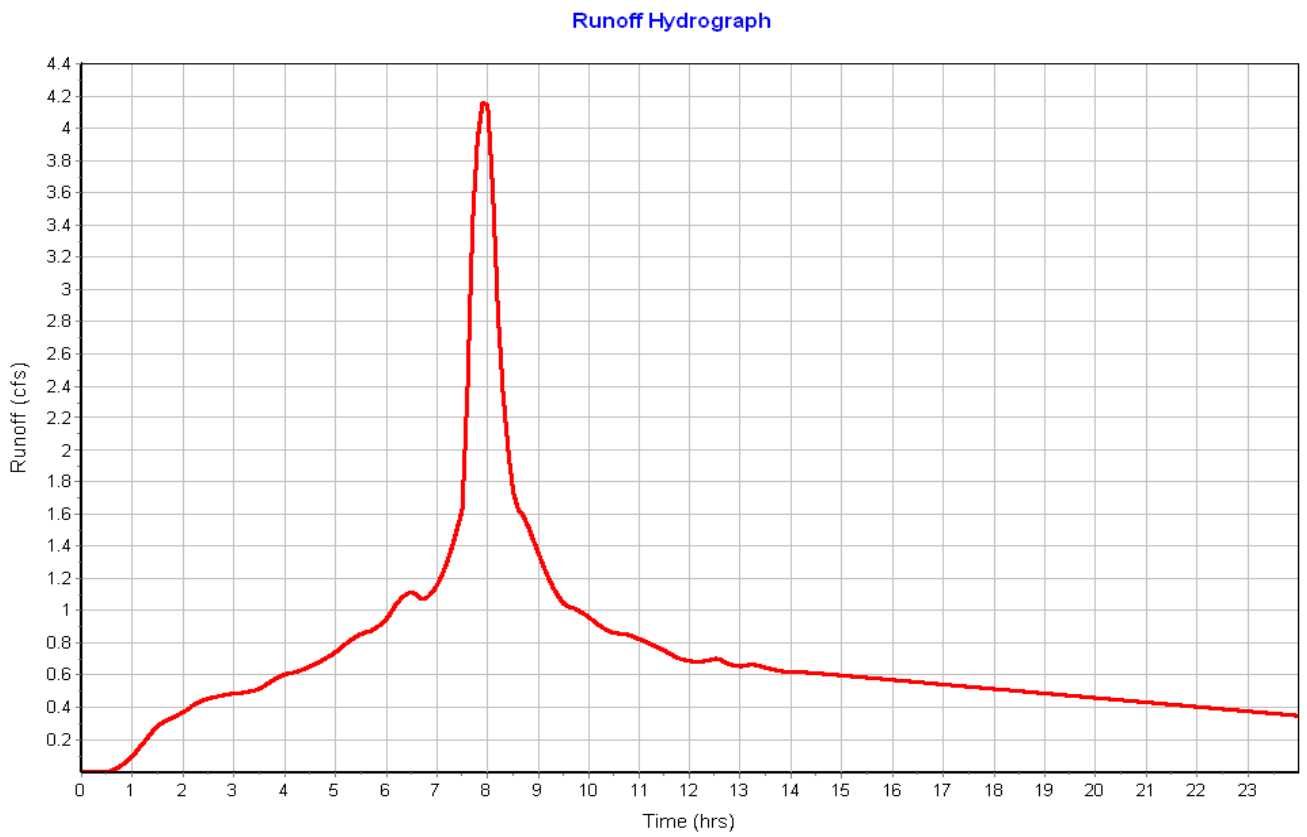
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 4.16
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Tank Roofs





Subbasin : Vanexo Cap - East

Input Data

Area (ac) 4.76
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	4.76		98

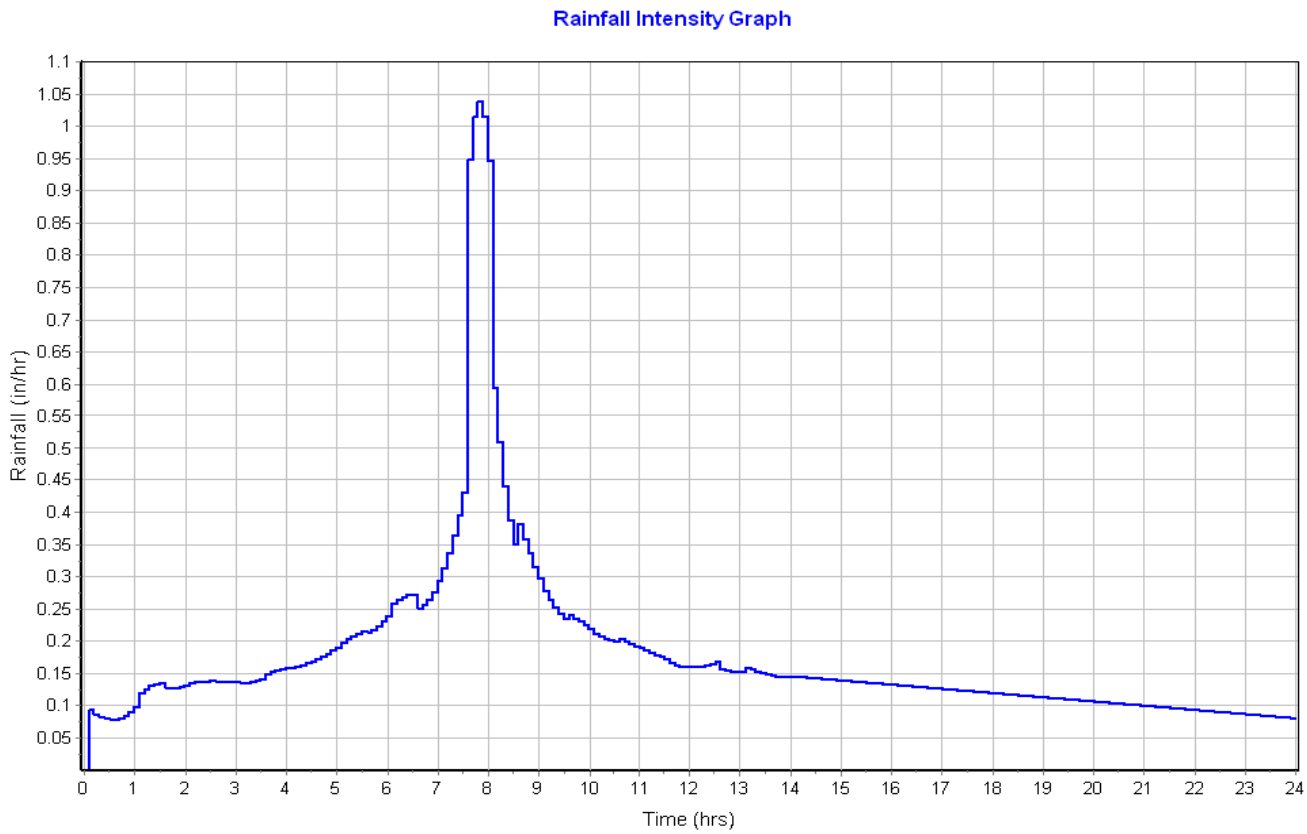
Time of Concentration

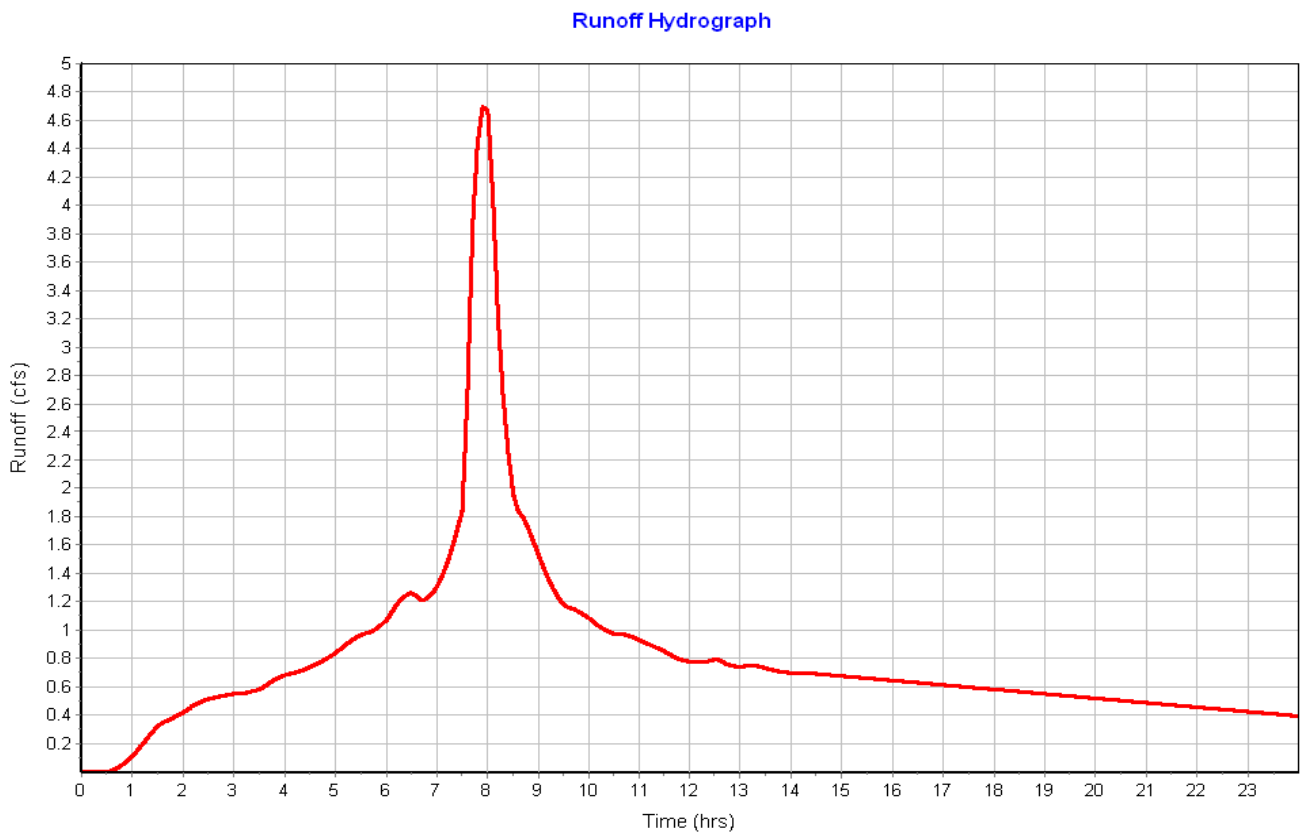
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 4.70
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Vanexo Cap - East





Subbasin : Vanexo Cap - West

Input Data

Area (ac) 2.62
Impervious Area (%) 100.00
Impervious Area Curve Number 98.00
Pervious Area Curve Number 76.00
Average Slope (%) 0.5000
Flow Length (ft) 500.00
Rain Gage ID 100-Year-Storm

Composite Curve Number

Soil/Surface Description	Area (acres)	Soil Group	Curve Number
Composite Area & Weighted CN	2.62		98

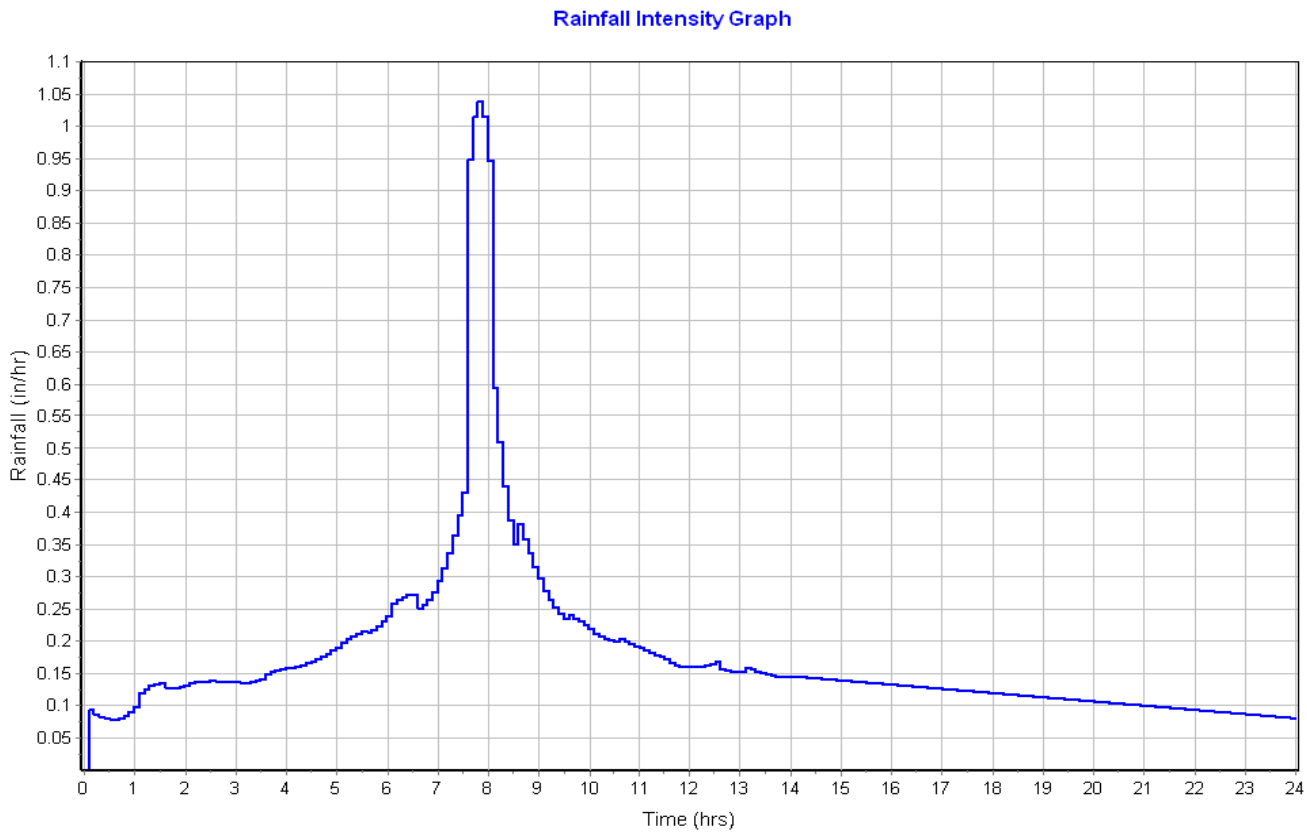
Time of Concentration

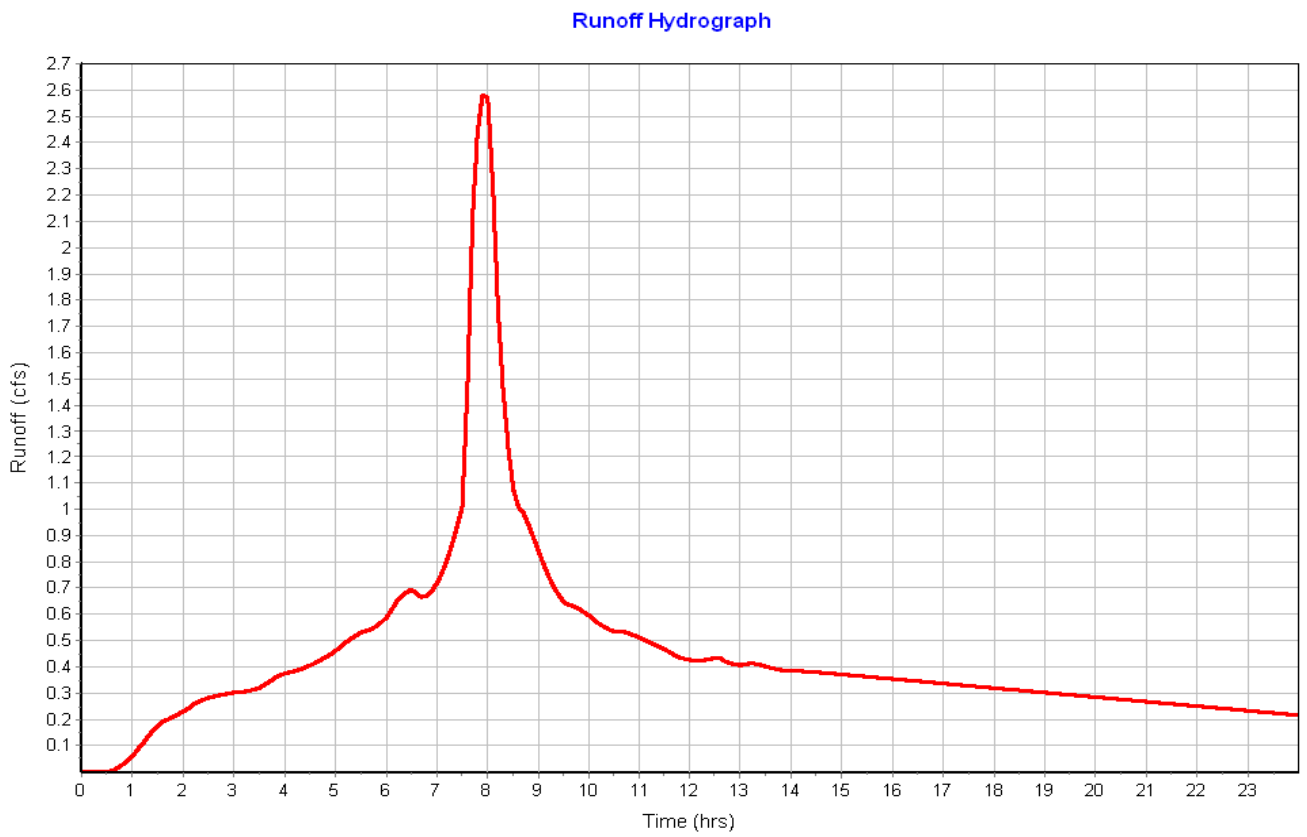
Flow Length (ft) 500.00
Slope (%) 0.5
Computed TOC (min) 7.18

Subbasin Runoff Results

Total Rainfall (in) 4.29
Total Runoff (in) 4.05
Peak Runoff (cfs) 2.58
Weighted Curve Number 98.00
Time of Concentration (days hh:mm:ss) 0 00:07:11

Subbasin : Vanexo Cap - West





Junction Input

SN	Element ID	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Ground/Rim (Max) Offset (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Surcharge Elevation (ft)	Surcharge Depth (ft)	Ponded Area (ft²)	Minimum Pipe Cover (ft)
1	0200-CB-001	28.07	32.50	4.43	0.00	-28.07	0.00	-32.50	0.00	0.00
2	0200-CB-002	27.37	32.78	5.41	0.00	-27.37	32.78	0.00	131000.00	0.00
3	0200-CB-003	24.20	31.58	7.38	0.00	-24.20	0.00	-31.58	100.00	0.00
4	0200-CB-004	26.27	31.58	5.31	0.00	-26.27	31.58	0.00	10.00	0.00
5	0200-CB-005	25.59	31.58	5.99	0.00	-25.59	0.00	-31.58	0.00	0.00
6	0200-CB-006	25.86	31.58	5.72	0.00	-25.86	0.00	-31.58	0.00	0.00
7	0200-CB-007	26.88	31.58	4.70	0.00	-26.88	0.00	-31.58	0.00	0.00
8	0200-CB-008	27.50	31.58	4.08	0.00	-27.50	31.58	0.00	10.00	0.00
9	0200-CB-009	26.36	31.58	5.22	0.00	-26.36	6.00	-25.58	0.00	0.00
10	0200-CB-010	27.07	31.58	4.51	0.00	-27.07	0.00	-31.58	0.00	0.00
11	0200-CB-011	27.50	30.74	3.24	0.00	-27.50	30.74	0.00	10.00	0.00
12	0200-SDMH-001	26.62	33.34	6.72	0.00	-26.62	0.00	-33.34	0.00	0.00
13	0200-SDMH-002	25.92	34.31	8.39	0.00	-25.92	0.00	-34.31	0.00	0.00
14	0200-SDMH-003	25.18	32.55	7.37	0.00	-25.18	0.00	-32.55	0.00	0.00
15	0200-SDMH-004	24.46	30.40	5.94	0.00	-24.46	0.00	-30.40	100.00	0.00
16	0200-SDMH-005	24.10	31.77	7.67	0.00	-24.10	0.00	-31.77	100.00	0.00
17	0200-SDMH-006	21.50	30.39	8.89	0.00	-21.50	0.00	-30.39	100.00	0.00
18	0200-SDMH-009	28.05	31.77	3.72	0.00	-28.05	0.00	-31.77	0.00	0.00
19	0200-SDMH-010	21.72	31.75	10.03	0.00	-21.72	6.00	-25.75	0.00	0.00
20	0200-SDMH-011	21.39	30.52	9.13	0.00	-21.39	0.00	-30.52	0.00	0.00
21	0200-SDMH-012	21.03	30.50	9.47	0.00	-21.03	0.00	-30.50	0.00	0.00
22	0200-SDMH-013	21.08	30.70	9.62	0.00	-21.08	0.00	-30.70	0.00	0.00
23	0200-SDMH-018	22.86	31.75	8.89	0.00	-22.86	0.00	-31.75	0.00	0.00
24	0200-SDMH-019	23.67	31.81	8.14	0.00	-23.67	0.00	-31.81	0.00	0.00
25	0200-SDMH-020	24.20	31.30	7.10	0.00	-24.20	0.00	-31.30	0.00	0.00
26	0200-SDMH-021	23.73	31.83	8.10	0.00	-23.73	0.00	-31.83	0.00	0.00
27	0200-SDMH-022	27.50	31.81	4.31	0.00	-27.50	0.00	-31.81	0.00	0.00
28	0300 STM-2	18.90	25.96	7.06	0.00	-18.90	0.00	-25.96	0.00	0.00
29	0300-CB-001	23.00	26.61	3.61	0.00	-23.00	0.00	-26.61	10.00	0.00
30	0300-CB-002	24.20	26.88	2.68	0.00	-24.20	26.88	0.00	10.00	0.00
31	0300-CB-003	24.88	27.88	3.00	0.00	-24.88	27.88	0.00	10.00	0.00
32	0300-CB-004	23.50	24.04	0.54	0.00	-23.50	0.00	-24.04	72000.00	0.00
33	0300-CB-005	24.70	25.24	0.54	0.00	-24.70	25.24	0.00	78000.00	0.00
34	0300-CB-006	24.62	25.16	0.54	0.00	-24.62	25.16	0.00	74000.00	0.00
35	0300-CB-007	24.61	25.14	0.53	0.00	-24.61	25.14	0.00	90000.00	0.00
36	0300-CB-008	24.98	25.51	0.53	0.00	-24.98	25.51	0.00	130680.00	0.00
37	0300-CB-009	24.63	25.17	0.54	0.00	-24.63	0.00	-25.17	152000.00	0.00
38	0300-OWS-001	22.12	27.61	5.49	0.00	-22.12	0.00	-27.61	0.00	0.00
39	0300-SDMH-001	19.74	26.79	7.05	0.00	-19.74	6.00	-20.79	0.00	0.00
40	0300-SDMH-002	23.80	27.19	3.39	0.00	-23.80	0.00	-27.19	0.00	0.00
41	0300-SDMH-003	24.53	27.86	3.33	0.00	-24.53	6.00	-21.86	0.00	0.00
42	0300-SDMH-004	22.00	26.87	4.87	0.00	-22.00	0.00	-26.87	0.00	0.00
43	0300-SDMH-005	22.50	26.12	3.62	0.00	-22.50	0.00	-26.12	0.00	0.00
44	0300-SDMH-006	22.69	25.72	3.03	0.00	-22.69	0.00	-25.72	0.00	0.00
45	0300-SDMH-007	22.74	25.92	3.18	0.00	-22.74	0.00	-25.92	0.00	0.00
46	0300-SDMH-008	22.91	26.09	3.18	0.00	-22.91	0.00	-26.09	0.00	0.00
47	0300-SDMH-009	23.47	26.04	2.57	0.00	-23.47	0.00	-26.04	0.00	0.00
48	0600-CB-001	26.97	29.47	2.50	0.00	-26.97	29.47	0.00	10.00	0.00
49	0600-CB-002	26.72	30.05	3.33	0.00	-26.72	0.00	-30.05	0.00	0.00
50	0600-CB-0300	27.05	31.40	4.35	0.00	-27.05	31.40	0.00	10.00	0.00
51	0600-SDMH-001	26.62	29.35	2.73	0.00	-26.62	0.00	-29.35	0.00	0.00
52	EXIST SDMH	19.65	27.18	7.53	19.65	0.00	0.00	-27.18	0.00	0.00
53	Jun-27	24.40	26.04	1.64	0.00	-24.40	0.00	-26.04	0.00	0.00
54	Jun-46	23.95	27.64	3.69	0.00	-23.95	10000.00	9972.36	0.00	0.00
55	Jun-47	23.14	26.63	3.49	0.00	-23.14	10000.00	9973.37	0.00	0.00
56	Jun-50	19.77	30.00	10.23	0.00	-19.77	0.00	-30.00	0.00	0.00
57	Jun-51	21.70	30.00	8.30	0.00	-21.70	0.00	-30.00	0.00	0.00

Junction Results

SN	Element ID	Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Max HGL Elevation Attained (ft)	Max HGL Depth Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Average HGL Elevation Attained (ft)	Average HGL Depth Attained (ft)	Time of Max HGL Occurrence (days hh:mm)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	0200-CB-001	0.63	0.63	28.58	0.51	0.00	3.92	28.29	0.22	0 07:56	0 00:00	0.00	0.00
2	0200-CB-002	0.18	0.18	27.66	0.29	0.00	5.12	27.50	0.13	0 07:55	0 00:00	0.00	0.00
3	0200-CB-003	0.19	0.14	24.68	0.48	0.00	6.90	24.54	0.34	0 08:00	0 00:00	0.00	0.00
4	0200-CB-004	0.05	0.05	26.37	0.10	0.00	5.21	26.32	0.05	0 08:01	0 00:00	0.00	0.00
5	0200-CB-005	0.61	0.10	25.74	0.15	0.00	5.84	25.66	0.07	0 08:01	0 00:00	0.00	0.00
6	0200-CB-006	0.18	0.05	26.13	0.27	0.00	5.45	25.99	0.13	0 08:00	0 00:00	0.00	0.00
7	0200-CB-007	0.14	0.07	27.12	0.24	0.00	4.46	27.00	0.12	0 08:00	0 00:00	0.00	0.00
8	0200-CB-008	0.06	0.06	27.66	0.16	0.00	3.92	27.58	0.08	0 08:00	0 00:00	0.00	0.00
9	0200-CB-009	0.34	0.20	26.72	0.36	0.00	4.86	26.54	0.18	0 08:02	0 00:00	0.00	0.00
10	0200-CB-010	0.14	0.07	27.30	0.23	0.00	4.28	27.19	0.12	0 07:56	0 00:00	0.00	0.00
11	0200-CB-011	0.07	0.07	27.68	0.18	0.00	3.06	27.59	0.09	0 08:00	0 00:00	0.00	0.00
12	0200-SDMH-001	0.80	0.00	27.16	0.54	0.00	6.18	26.88	0.26	0 07:58	0 00:00	0.00	0.00
13	0200-SDMH-002	0.80	0.00	26.45	0.53	0.00	7.86	26.18	0.26	0 08:00	0 00:00	0.00	0.00
14	0200-SDMH-003	1.17	0.00	25.79	0.61	0.00	6.76	25.45	0.27	0 08:01	0 00:00	0.00	0.00
15	0200-SDMH-004	1.17	0.00	25.46	1.00	0.00	4.94	25.11	0.65	0 08:05	0 00:00	0.00	0.00
16	0200-SDMH-005	1.33	0.00	24.32	0.22	0.00	7.45	24.20	0.10	0 08:04	0 00:00	0.00	0.00
17	0200-SDMH-006	2.85	0.00	22.09	0.59	0.00	8.30	21.74	0.24	0 08:00	0 00:00	0.00	0.00
18	0200-SDMH-009	1.55	1.55	28.39	0.34	0.00	3.38	28.20	0.15	0 07:54	0 00:00	0.00	0.00
19	0200-SDMH-010	2.58	2.58	22.58	0.86	0.00	9.17	22.07	0.35	0 07:57	0 00:00	0.00	0.00
20	0200-SDMH-011	2.58	0.00	22.34	0.95	0.00	8.18	21.81	0.42	0 07:58	0 00:00	0.00	0.00
21	0200-SDMH-012	3.18	0.00	21.79	0.76	0.00	8.71	21.37	0.34	0 08:01	0 00:00	0.00	0.00
22	0200-SDMH-013	0.61	0.00	21.80	0.72	0.00	8.90	21.38	0.30	0 08:01	0 00:00	0.00	0.00
23	0200-SDMH-018	6.55	0.00	24.47	1.61	0.00	7.28	23.63	0.77	0 07:58	0 00:00	0.00	0.00
24	0200-SDMH-019	4.70	0.00	24.88	1.21	0.00	6.93	24.21	0.54	0 07:57	0 00:00	0.00	0.00
25	0200-SDMH-020	0.16	0.00	24.88	0.68	0.00	6.42	24.27	0.07	0 07:59	0 00:00	0.00	0.00
26	0200-SDMH-021	4.70	4.70	25.00	1.27	0.00	6.83	24.27	0.54	0 07:57	0 00:00	0.00	0.00
27	0200-SDMH-022	1.87	1.87	27.99	0.49	0.00	3.82	27.71	0.21	0 07:55	0 00:00	0.00	0.00
28	0300 STM-2	2.09	0.00	25.96	7.06	0.00	0.00	25.84	6.94	0 01:59	0 07:54	8.45	1320.00
29	0300-CB-001	4.47	0.42	23.51	0.51	0.00	3.10	23.30	0.30	0 07:59	0 00:00	0.00	0.00
30	0300-CB-002	0.94	0.47	24.84	0.64	0.00	2.04	24.48	0.28	0 07:56	0 00:00	0.00	0.00
31	0300-CB-003	0.47	0.47	25.31	0.43	0.00	2.57	25.08	0.20	0 07:54	0 00:00	0.00	0.00
32	0300-CB-004	1.45	0.99	24.19	0.69	0.15	0.00	24.07	0.57	0 12:01	0 07:54	3.06	1080.00
33	0300-CB-005	1.22	1.22	25.26	0.56	0.02	0.00	24.93	0.23	0 08:22	0 07:54	0.37	145.00
34	0300-CB-006	1.27	1.27	25.19	0.57	0.03	0.00	24.91	0.29	0 08:51	0 07:54	0.57	243.00
35	0300-CB-007	1.35	1.35	25.17	0.56	0.03	0.00	24.95	0.34	0 09:00	0 07:54	0.67	309.00
36	0300-CB-008	1.22	1.22	25.42	0.44	0.00	1.06	25.17	0.19	0 07:54	0 00:00	0.00	0.00
37	0300-CB-009	1.77	1.77	25.20	0.57	0.03	0.00	25.16	0.53	0 10:09	0 07:54	1.31	914.00
38	0300-OWS-001	2.07	0.00	23.05	0.93	0.00	4.56	22.87	0.75	0 07:57	0 00:00	0.00	0.00
39	0300-SDMH-001	4.10	0.00	20.83	1.09	0.00	5.96	20.55	0.81	0 08:01	0 00:00	0.00	0.00
40	0300-SDMH-002	4.12	0.00	24.56	0.76	0.00	2.63	24.22	0.42	0 07:59	0 00:00	0.00	0.00
41	0300-SDMH-003	0.47	0.00	24.92	0.39	0.00	2.94	24.71	0.18	0 07:55	0 00:00	0.00	0.00
42	0300-SDMH-004	2.10	0.00	24.63	2.63	0.00	2.24	23.76	1.76	0 07:59	0 00:00	0.00	0.00
43	0300-SDMH-005	2.10	0.00	24.73	2.23	0.00	1.39	23.82	1.32	0 07:56	0 00:00	0.00	0.00
44	0300-SDMH-006	2.54	0.00	24.81	2.12	0.00	0.91	23.89	1.20	0 07:57	0 00:00	0.00	0.00
45	0300-SDMH-007	2.54	0.00	24.87	2.13	0.00	1.05	23.92	1.18	0 07:57	0 00:00	0.00	0.00
46	0300-SDMH-008	2.09	0.00	24.91	2.00	0.00	1.18	23.97	1.06	0 07:57	0 00:00	0.00	0.00
47	0300-SDMH-009	1.50	0.00	25.02	1.55	0.00	1.02	24.11	0.64	0 07:55	0 00:00	0.00	0.00
48	0600-CB-001	0.19	0.19	27.21	0.24	0.00	2.26	27.10	0.13	0 07:55	0 00:00	0.00	0.00
49	0600-CB-002	0.19	0.04	27.09	0.37	0.00	2.96	26.92	0.20	0 07:58	0 00:00	0.00	0.00
50	0600-CB-0300	0.14	0.14	27.31	0.26	0.00	4.09	27.18	0.13	0 07:55	0 00:00	0.00	0.00
51	0600-SDMH-001	0.37	0.00	27.02	0.40	0.00	2.33	26.81	0.19	0 08:00	0 00:00	0.00	0.00
52	EXIST SDMH	8.21	4.16	20.57	0.92	0.00	6.61	20.24	0.59	0 08:00	0 00:00	0.00	0.00
53	Jun-27	0.02	0.00	24.88	0.48	0.00	1.16	24.43	0.03	0 07:59	0 00:00	0.00	0.00
54	Jun-46	3.53	0.00	29.72	5.77	2.08	0.00	24.75	0.80	0 07:58	0 00:00	0.00	0.00
55	Jun-47	4.18	0.00	25.16	2.02	0.00	1.47	24.31	1.17	0 06:07	0 00:00	0.00	0.00
56	Jun-50	2.09	1.05	26.71	6.94	0.00	3.29	25.91	6.14	0 07:57	0 00:00	0.00	0.00
57	Jun-51	1.05	1.05	27.18	5.48	0.00	2.82	25.98	4.28	0 07:57	0 00:00	0.00	0.00

Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (ft)	Pipe Width (ft)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate
1	03	111.80	26.97	0.00	26.72	0.10	0.25	0.2200	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
2	04	201.11	26.62	0.00	26.18	1.00	0.44	0.2200	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
3	05	157.26	25.92	0.00	25.68	0.50	0.24	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
4	06	293.00	26.62	0.00	26.12	0.20	0.50	0.1700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
5	07	24.65	27.37	0.00	27.32	0.70	0.05	0.2000	CIRCULAR	0.670	0.670	0.0150	0.5000	0.5000	0.0000	0.00	No
6	08	34.01	27.05	0.00	26.98	0.26	0.07	0.2100	CIRCULAR	0.670	0.670	0.0150	0.5000	0.5000	0.0000	0.00	No
7	09	26.85	26.78	0.06	26.72	0.10	0.06	0.2200	CIRCULAR	0.670	0.670	0.0150	0.5000	0.5000	0.0000	0.00	No
8	10	301.17	28.07	0.00	27.32	0.70	0.75	0.2500	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
9	12	346.68	25.18	0.00	24.84	0.38	0.34	0.1000	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
10	13	328.80	24.79	0.33	24.46	0.36	0.33	0.1000	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
11	14	56.91	24.49	0.29	24.20	0.10	0.29	0.5100	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
12	17	170.96	21.72	0.00	21.44	0.05	0.28	0.1600	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
13	20	159.13	25.86	0.00	25.59	0.00	0.27	0.1700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
14	21	216.85	26.88	0.00	26.36	0.50	0.52	0.2400	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
15	22	159.02	27.50	0.00	27.08	0.20	0.42	0.2600	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
16	23	300.00	26.36	0.00	25.85	0.26	0.51	0.1700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
17	24	300.00	27.07	0.00	26.56	0.20	0.51	0.1700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
18	25	137.04	27.50	0.00	27.27	0.20	0.23	0.1700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
19	26	37.09	24.40	0.00	24.30	0.10	0.10	0.2700	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
20	27	277.00	24.20	0.00	23.78	0.11	0.42	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
21	28	15.07	23.73	0.00	23.71	0.04	0.02	0.1300	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
22	29	127.25	23.67	0.00	23.53	0.67	0.14	0.1100	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
23	30	164.24	27.50	0.00	24.53	1.67	2.97	1.8100	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
24	31	165.62	23.03	0.17	22.86	0.00	0.17	0.1000	CIRCULAR	2.500	2.500	0.0150	0.5000	0.5000	0.0000	0.00	No
25	32	370.18	21.39	0.00	21.03	0.00	0.36	0.1000	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
26	33	41.91	21.08	0.00	21.03	0.00	0.05	0.1200	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
27	34	59.75	25.09	-0.50	21.13	0.05	3.96	6.6300	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
28	36	37.14	24.00	-0.10	21.50	0.00	2.50	6.7300	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
29	37	128.94	28.05	0.00	22.25	0.75	5.80	4.5000	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
30	38	316.25	26.27	0.00	24.69	0.49	1.58	0.5000	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
31	39	73.01	24.98	0.00	24.52	1.05	0.46	0.6300	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
32	40	41.38	24.63	0.00	24.50	1.03	0.13	0.3100	CIRCULAR	0.500	0.500	0.0150	0.5000	0.5000	0.0000	0.00	No
33	54	43.05	23.80	0.00	23.20	0.20	0.60	1.3900	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
34	55	89.70	23.00	0.00	18.35	8.35	4.65	5.1800	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
35	56	64.99	19.74	0.00	19.65	0.00	0.09	0.1400	CIRCULAR	2.000	2.000	0.0150	0.5000	0.5000	0.0000	0.00	No
36	58	23.65	22.12	0.00	22.07	7.07	0.05	0.2100	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
37	59	45.61	23.95	0.00	23.95	0.15	0.00	0.0000	Circular Force Main	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	Yes
38	60	16.69	21.03	0.00	20.98	0.00	0.05	0.3000	CIRCULAR	3.000	3.000	0.0150	0.5000	0.5000	0.0000	0.00	No
39	63	17.95	23.14	0.00	23.14	3.40	0.00	0.0000	Circular Force Main	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	Yes
40	64	4.47	19.65	0.00	19.60	0.00	0.05	1.1200	CIRCULAR	4.000	4.000	0.0150	0.5000	0.5000	0.0000	0.00	No
41	65	142.65	22.40	-0.10	22.19	0.19	0.21	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
42	66	0.10	21.50	0.00	21.40	0.00	0.10	100.0000	CIRCULAR	3.000	3.000	0.0150	0.5000	0.5000	0.0000	0.00	No
43	67	385.63	21.70	0.00	20.79	1.02	0.91	0.2400	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
44	68	133.68	19.57	-0.20	18.90	0.00	0.67	0.5000	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
45	178	65.12	24.53	0.00	24.40	0.20	0.13	0.2000	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
46	179	75.09	24.88	0.00	24.73	0.20	0.15	0.2000	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
47	199	97.58	24.20	0.00	24.00	0.20	0.20	0.2000	CIRCULAR	1.000	1.000	0.0150	0.5000	0.5000	0.0000	0.00	No
48	204	175.87	22.09	0.09	22.00	0.00	0.09	0.0500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
49	205	126.22	22.69	0.00	22.50	0.00	0.19	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
50	206	34.53	22.74	0.00	22.69	0.00	0.05	0.1400	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
51	207	113.77	22.91	0.00	22.74	0.00	0.17	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No
52	211	66.96	23.50	0.00	23.20	0.51	0.30	0.4500	CIRCULAR	0.500	0.500	0.0150	0.5000	0.5000	0.0000	0.00	No
53	213	39.21	24.70	0.00	23.48	0.74	1.22	3.1100	CIRCULAR	0.500	0.500	0.0150	0.5000	0.5000	0.0000	0.00	No
54	215	57.30	24.62	0.00	23.47	0.56	1.15	2.0100	CIRCULAR	0.500	0.500	0.0150	0.5000	0.5000	0.0000	0.00	No
55	217	60.46	24.61	0.00	24.07	1.16	0.54	0.8900	CIRCULAR	0.500	0.500	0.0150	0.5000	0.5000	0.0000	0.00	No
56	223	369.87	23.47	0.00	22.91	0.00	0.56	0.1500	CIRCULAR	1.500	1.500	0.0150	0.5000	0.5000	0.0000	0.00	No

No. of Barrels
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Pipe Results

SN	Element ID	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Travel Time (min)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Froude Number	Reported Condition
1	03	0.19	0 07:55	1.46	0.13	1.13	1.65	0.27	0.27	0.00		Calculated
2	04	0.37	0 08:00	1.44	0.26	1.69	1.98	0.32	0.32	0.00		Calculated
3	05	0.80	0 08:00	3.56	0.22	1.89	1.39	0.43	0.29	0.00		Calculated
4	06	0.80	0 07:58	3.76	0.21	1.87	2.61	0.44	0.29	0.00		Calculated
5	07	0.18	0 07:55	0.47	0.38	1.57	0.26	0.24	0.36	0.00		Calculated
6	08	0.14	0 07:55	0.48	0.30	1.44	0.39	0.22	0.33	0.00		Calculated
7	09	0.19	0 07:55	0.50	0.38	1.26	0.36	0.30	0.46	0.00		Calculated
8	10	0.62	0 07:56	1.54	0.40	2.00	2.51	0.42	0.42	0.00		Calculated
9	12	1.17	0 08:01	6.14	0.19	1.44	4.01	0.61	0.31	0.00		Calculated
10	13	1.15	0 08:05	6.21	0.18	1.77	3.10	0.52	0.26	0.00		Calculated
11	14	0.19	0 08:00	6.50	0.03	1.68	0.56	0.17	0.11	0.00		Calculated
12	17	2.58	0 07:55	7.93	0.32	1.96	1.45	0.88	0.44	0.00		Calculated
13	20	0.18	0 08:01	3.75	0.05	1.22	2.17	0.21	0.14	0.00		Calculated
14	21	0.14	0 08:01	1.51	0.09	1.28	2.82	0.19	0.19	0.00		Calculated
15	22	0.06	0 08:00	1.59	0.04	1.06	2.50	0.13	0.13	0.00		Calculated
16	23	0.33	0 08:02	3.75	0.09	1.41	3.55	0.28	0.19	0.00		Calculated
17	24	0.14	0 08:00	3.75	0.04	1.04	4.81	0.19	0.13	0.00		Calculated
18	25	0.07	0 08:00	3.73	0.02	0.88	2.60	0.14	0.09	0.00		Calculated
19	26	0.02	0 07:41	4.73	0.00	0.24	2.58	0.53	0.35	0.00		Calculated
20	27	0.16	0 07:41	3.54	0.04	0.21	21.98	0.89	0.59	0.00		Calculated
21	28	4.70	0 07:54	7.14	0.66	2.36	0.11	1.22	0.61	0.00		Calculated
22	29	4.68	0 07:57	6.50	0.72	2.72	0.78	1.08	0.54	0.00		Calculated
23	30	1.87	0 07:55	4.15	0.45	5.00	0.55	0.48	0.48	0.00		Calculated
24	31	6.55	0 07:58	11.39	0.58	2.32	1.19	1.40	0.56	0.00		Calculated
25	32	2.58	0 07:59	6.11	0.42	2.03	3.04	0.85	0.43	0.00		Calculated
26	33	0.61	0 08:02	6.77	0.09	0.59	1.18	0.74	0.37	0.00		Calculated
27	34	0.61	0 08:01	53.57	0.01	1.41	0.71	0.41	0.20	0.00		Calculated
28	36	1.33	0 08:04	51.87	0.03	3.07	0.20	0.40	0.20	0.00		Calculated
29	37	1.55	0 07:54	6.55	0.24	6.64	0.32	0.34	0.34	0.00		Calculated
30	38	0.05	0 08:01	6.43	0.01	1.17	4.50	0.09	0.06	0.00		Calculated
31	39	1.22	0 07:54	7.23	0.17	2.80	0.43	0.47	0.31	0.00		Calculated
32	40	0.38	0 10:09	0.27	1.39	2.22	0.31	0.50	1.00	13.00		SURCHARGED
33	54	4.06	0 07:59	10.75	0.38	5.03	0.14	0.70	0.47	0.00		Calculated
34	55	4.44	0 07:59	20.73	0.21	8.80	0.17	0.49	0.33	0.00		Calculated
35	56	4.10	0 08:01	7.30	0.56	3.13	0.35	1.01	0.50	0.00		Calculated
36	58	2.07	0 07:57	1.42	1.46	3.19	0.12	0.77	0.77	0.00		> CAPACITY
37	59	3.20	0 10:14	0.17	19.17	4.38	0.17	0.89	0.90	0.00		> CAPACITY
38	60	3.17	0 08:01	31.64	0.10	2.54	0.11	0.70	0.23	0.00		Calculated
39	63	4.10	0 08:01	0.28	14.83	5.40	0.06	0.93	0.93	0.00		> CAPACITY
40	64	8.20	0 08:00	131.66	0.06	4.57	0.02	0.80	0.20	0.00		Calculated
41	65	2.10	0 07:43	4.24	0.49	1.27	1.87	1.50	1.00	326.00		SURCHARGED
42	66	2.85	0 08:00	578.05	0.00	5.67	0.00	0.37	0.12	0.00		Calculated
43	67	1.05	0 07:54	1.50	0.70	1.33	4.83	1.00	1.00	1321.00		SURCHARGED
44	68	2.09	0 07:54	2.49	0.84	2.66	0.84	1.00	1.00	1355.00		SURCHARGED
45	178	0.47	0 07:59	4.07	0.12	1.30	0.83	0.41	0.27	0.00		Calculated
46	179	0.47	0 07:54	1.38	0.34	1.86	0.67	0.36	0.36	0.00		Calculated
47	199	0.99	0 07:59	1.40	0.71	2.27	0.72	0.59	0.59	0.00		Calculated
48	204	2.10	0 07:42	2.06	1.02	1.19	2.46	1.50	1.00	658.00		SURCHARGED
49	205	2.10	0 07:42	3.53	0.59	1.38	1.52	1.50	1.00	272.00		SURCHARGED
50	206	2.54	0 07:43	3.46	0.73	1.44	0.40	1.50	1.00	243.00		SURCHARGED
51	207	2.09	0 07:55	3.52	0.59	1.18	1.61	1.50	1.00	176.00		SURCHARGED
52	211	0.46	0 07:55	0.33	1.41	2.34	0.48	0.50	1.00	600.00		SURCHARGED
53	213	0.62	0 07:34	0.86	0.72	3.59	0.18	0.50	1.00	166.00		SURCHARGED
54	215	0.56	0 11:34	0.69	0.81	3.12	0.31	0.50	1.00	262.00		SURCHARGED
55	217	0.49	0 10:21	0.46	1.07	2.70	0.37	0.50	1.00	96.00		SURCHARGED
56	223	1.49	0 07:55	3.54	0.42	0.95	6.49	1.50	1.00	19.00		SURCHARGED

Storage Nodes

Storage Node : 0300-CS-001

Input Data

Invert Elevation (ft) 22.00
Max (Rim) Elevation (ft) 32.00
Max (Rim) Offset (ft) 10.00
Initial Water Elevation (ft) 0.00
Initial Water Depth (ft) ..... -22.00
Ponded Area (ft²) 0.00
Evaporation Loss 0.00

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (ft)	Rectangular Orifice Height (ft)	Rectangular Orifice Width (ft)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	0300-CS-001 Orr	Side	CIRCULAR	No	0.67			22.46	0.61

Output Summary Results

Peak Inflow (cfs) 2.10
Peak Lateral Inflow (cfs) 0.00
Peak Outflow (cfs) 2.07
Peak Exfiltration Flow Rate (cfm) 0.00
Max HGL Elevation Attained (ft) 24.47
Max HGL Depth Attained (ft) 2.47
Average HGL Elevation Attained (ft) 23.69
Average HGL Depth Attained (ft) 1.69
Time of Max HGL Occurrence (days hh:mm) 0 07:57
Total Exfiltration Volume (1000-ft³) 0.000
Total Flooded Volume (ac-in) 0
Total Time Flooded (min) 0
Total Retention Time (sec) 0.00

Storage Node : 0300-PS-001 WW

Input Data

Invert Elevation (ft)	10.00
Max (Rim) Elevation (ft)	26.63
Max (Rim) Offset (ft)	16.63
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-10.00
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Output Summary Results

Peak Inflow (cfs)	4.44
Peak Lateral Inflow (cfs)	0.00
Peak Outflow (cfs)	4.18
Peak Exfiltration Flow Rate (cfm)	0.00
Max HGL Elevation Attained (ft)	18.38
Max HGL Depth Attained (ft)	8.38
Average HGL Elevation Attained (ft)	15.96
Average HGL Depth Attained (ft)	5.96
Time of Max HGL Occurrence (days hh:mm)	0 08:01
Total Exfiltration Volume (1000-ft³)	0.000
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0.00

Storage Node : 0300-PS-002 WW

Input Data

Invert Elevation (ft)	15.00
Max (Rim) Elevation (ft)	27.64
Max (Rim) Offset (ft)	12.64
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-15.00
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Output Summary Results

Peak Inflow (cfs)	2.07
Peak Lateral Inflow (cfs)	0.00
Peak Outflow (cfs)	3.53
Peak Exfiltration Flow Rate (cfm)	0.00
Max HGL Elevation Attained (ft)	22.06
Max HGL Depth Attained (ft)	7.06
Average HGL Elevation Attained (ft)	19.10
Average HGL Depth Attained (ft)	4.1
Time of Max HGL Occurrence (days hh:mm)	0 20:13
Total Exfiltration Volume (1000-ft³)	0.000
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0.00