DETENTION REPORT

VETERANS MEMORIAL PARKWAY & GALAXY DRIVE
O'FALLON, MO

Prepared For:

RELIABLE INVESTMENTS

Prepared By:

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ST. LOUIS, MO

Project 320-171

MARCH 2022

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1.0 DETENTION SUMMARY

Reliable Investments

16-Mar-22

Stormwater Detention Summary

OUTFALL STRUCTURE 02	
LOW FLOW ORIFICE	
DIA.	4"
ELEVATION	498.00
TOP OF STRUCTURE	
WEIR LENGTH	12'
RIM ELEVATION	501.50

PRE-DEVELOPED FLOW

	AREA	Q (cfs)
2 YEAR	1.96	**2.07**
15 YEAR	1.96	**3.07**
100 YEAR	1.96	**4.14**

POST-DEVELOPED FLOW TO BASIN

	AREA	Q (cfs) IN	Q (cfs) OUT	ELEV
2 YEAR	0.96	2.04	0.49	499.48
15 YEAR	0.96	3.02	0.61	500.20
100 YEAR LFB	0.96	4.08	0.00	501.23

POST-DEVELOPED BYPASS

	AREA	Q (cfs)
2 YEAR	1.00	1.10
15 YEAR	1.00	1.63
100 YEAR LFB	1.00	2.19

POST-DEVELOPED DISCHARGE

	AREA	Q (cfs)		Q(ALLOWABLE)
2 YEAR	1.96	**1.59**	<	2.07
15 YEAR	1.96	**2.24**	<	3.07
100 YEAR	1.96	**2.19**	<	4.14

BASIN

2 YEAR	499.48
15 YEAR	500.20
100 YEAR LFB	501.23
TOP OF DAM	504.00
Free Board	2.77

APPENDIX A

Project Description

File Name	SSA - GALAXY-Mod-LFB.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Modified Rational
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Kinematic Wave
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	NO

Analysis Options

Start Analysis On	Feb 01, 2022	00:00:00
End Analysis On	Feb 02, 2022	00:00:00
Start Reporting On	Feb 01, 2022	00:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	0
Subbasins	11
Nodes	16
Junctions	12
Outfalls	3
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	13
Channels	0
Pipes	12
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

Rainfall Intensity	6.2 in/hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Weighted Runoff Coefficient	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DR-01	0.28	0.3400	2.07	0.70	0.20	0.59	0 00:05:00
2	DR-02	0.09	0.3400	2.07	0.70	0.06	0.19	0 00:05:00
3	DR-05	0.27	0.7200	2.07	1.49	0.40	1.21	0 00:05:00
4	DR-06	0.12	0.7200	2.07	1.49	0.18	0.54	0 00:05:00
5	DR-07	0.15	0.7200	2.07	1.49	0.22	0.67	0 00:05:00
6	DR-09	0.18	0.7200	2.07	1.49	0.27	0.80	0 00:05:00
7	DR-10	0.15	0.7200	2.07	1.49	0.22	0.67	0 00:05:00
8	DR-12	0.21	0.3400	2.07	0.70	0.15	0.44	0 00:05:00
9	DR-13	0.26	0.7200	2.07	1.49	0.39	1.16	0 00:05:00
10	DR-14	1.80	0.7200	2.07	1.49	2.68	8.04	0 00:05:00
11	PRE-DEVELOPMENT	1.96	0.3400	2.07	0.70	1.38	4.13	0 00:05:00

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	AI05	Junction	508.11	512.70	508.11	512.70	10.00	1.21	508.42	0.00	4.28	0 00:00	0.00	0.00
2	AI12	Junction	494.50	500.50	494.50	500.50	0.00	9.65	500.50	0.00	0.00	0 00:20	0.06	15.00
3	AI13	Junction	505.61	511.44	505.61	511.44	10.00	1.16	505.87	0.00	5.57	0 00:00	0.00	0.00
4	FE14	Junction	500.60	501.85	500.60	501.85	0.00	8.04	501.28	0.00	0.58	0 00:00	0.00	0.00
5	GI06	Junction	505.16	509.76	505.16	509.76	10.00	1.21	505.56	0.00	4.20	0 00:00	0.00	0.00
6	GI07	Junction	508.36	512.86	508.36	512.86	10.00	0.67	508.60	0.00	4.26	0 00:00	0.00	0.00
7	GI09	Junction	498.44	505.24	498.44	505.24	10.00	1.47	500.88	0.00	4.36	0 00:00	0.00	0.00
8	GI10	Junction	508.46	512.96	508.46	512.96	10.00	0.67	508.66	0.00	4.30	0 00:00	0.00	0.00
9	Jun-01	Junction	497.25	504.00	497.25	0.00	0.00	0.00	497.25	0.00	6.75	0 00:00	0.00	0.00
10	MH04	Junction	498.18	510.20	498.18	510.20	10.00	2.42	505.17	0.00	5.03	0 00:00	0.00	0.00
11	PRE-JUNCT	Junction	500.00	505.00	500.00	0.00	0.00	4.13	500.36	0.00	4.64	0 00:00	0.00	0.00
12	YD01	Junction	496.94	498.67	496.94	0.00	0.00	0.59	497.11	0.00	1.56	0 00:00	0.00	0.00
13	EX-NE	Outfall	493.26					10.13	494.40					
14	Outfall	Outfall	493.73					0.59	493.90					
15	PRE-OUT	Outfall	499.00					4.14	499.36					
16	OS02	Storage Node	497.25	504.00	497.25		0.00	4.08	501.23				0.00	0.00

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 Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	01-OUT	Pipe	YD01	Outfall	49.91	496.94	493.73	6.4300	12.000	0.0130	0.59	9.04	0.07	7.55	0.17	0.17	0.00	Calculated
2	10-9	Pipe	GI10	GI09	172.65	508.45	500.68	4.5000	12.000	0.0130	0.67	7.56	0.09	9.33	0.20	0.20	0.00	Calculated
3	12-EX	Pipe	AI12	EX-NE	58.54	494.34	493.26	1.8400	15.000	0.0130	10.13	9.40	1.08	8.99	1.15	0.92	0.00	> CAPACITY
4	13-12	Pipe	AI13	AI12	236.52	505.60	494.50	4.6900	12.000	0.0130	1.17	7.72	0.15	11.43	0.26	0.26	0.00	Calculated
5	14-12	Pipe	FE14	AI12	76.28	500.60	494.50	8.0000	12.000	0.0130	8.04	10.08	0.80	15.85	0.67	0.67	0.00	Calculated
6	2-1	Pipe	Jun-01	YD01	30.15	497.25	496.94	1.0300	12.000	0.0130	0.00	3.61	0.00	0.00	0.00	0.00	0.00	Calculated
7	4-3	Pipe	MH04	OS02	19.97	498.18	497.25	4.6800	12.000	0.0130	2.42	7.70	0.31	8.67	0.38	0.38	0.00	Calculated
8	5-4	Pipe	AI05	MH04	133.63	508.11	504.77	2.5000	12.000	0.0130	1.21	5.63	0.22	8.51	0.31	0.31	0.00	Calculated
9	6-4	Pipe	GI06	MH04	38.77	505.16	504.77	1.0100	12.000	0.0130	1.21	3.57	0.34	4.12	0.40	0.40	0.00	Calculated
10	7-6	Pipe	GI07	GI06	137.50	508.36	505.26	2.2500	12.000	0.0130	0.67	5.35	0.13	7.36	0.24	0.24	0.00	Calculated
11	9-8	Pipe	GI09	OS02	43.70	498.43	498.00	0.9800	12.000	0.0130	1.47	3.56	0.41	4.34	0.45	0.45	0.00	Calculated
12	PRE-LINK	Pipe	PRE-JUNCT	PRE-OUT	50.00	500.00	499.00	2.0000	60.000	0.0120	4.14	399.01	0.01	6.72	0.36	0.07	0.00	Calculated
13	Weir-01	Weir	OS02	Jun-01		497.25	497.25				0.00							

Subbasin Hydrology

Subbasin : DR-01

Input Data

Area (ac) 0.28
Weighted Runoff Coefficient 0.3400

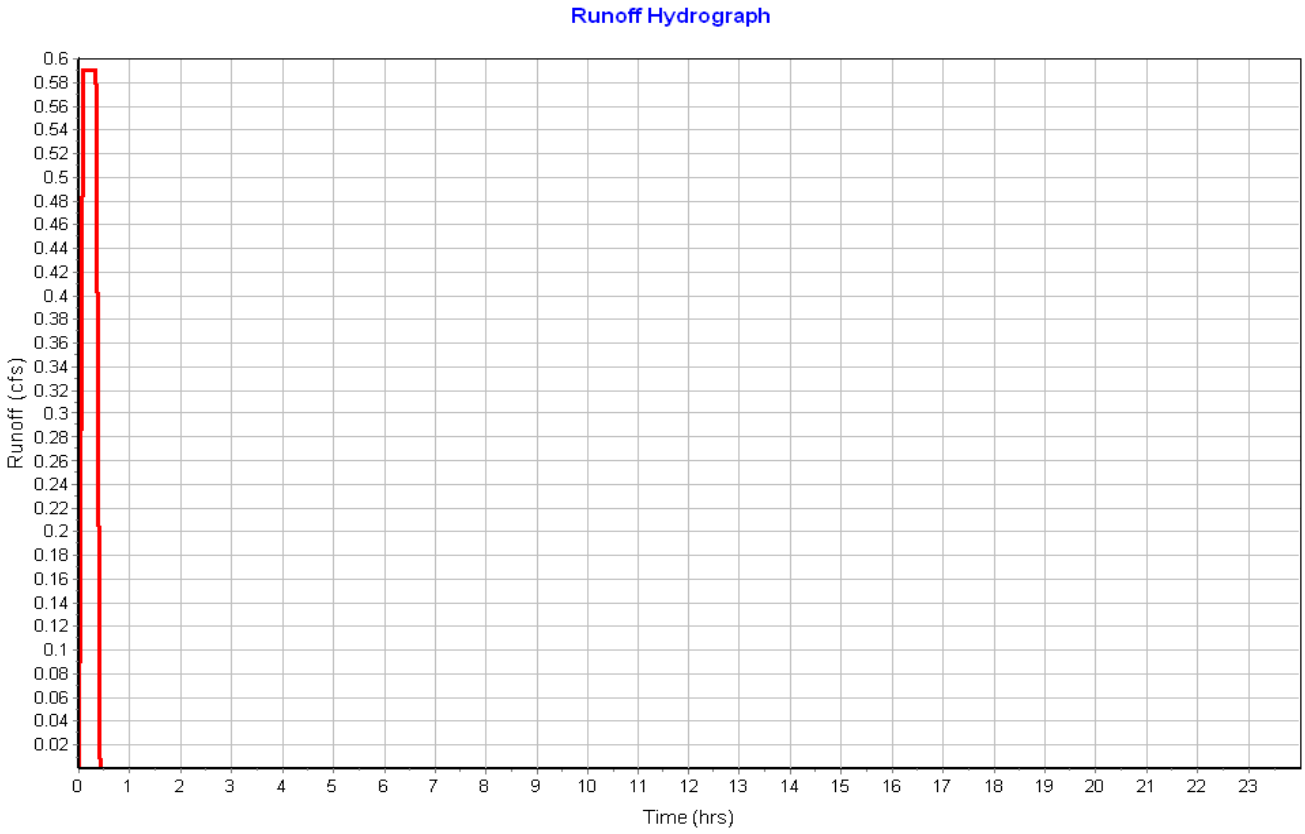
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	0.28	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	0.28		0.34

Subbasin Runoff Results

Total Rainfall (in) 2.07
Total Runoff (in) 0.70
Peak Runoff (cfs) 0.59
Rainfall Intensity 6.200
Weighted Runoff Coefficient 0.3400
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-01



Subbasin : DR-02

Input Data

Area (ac) 0.09
Weighted Runoff Coefficient 0.3400

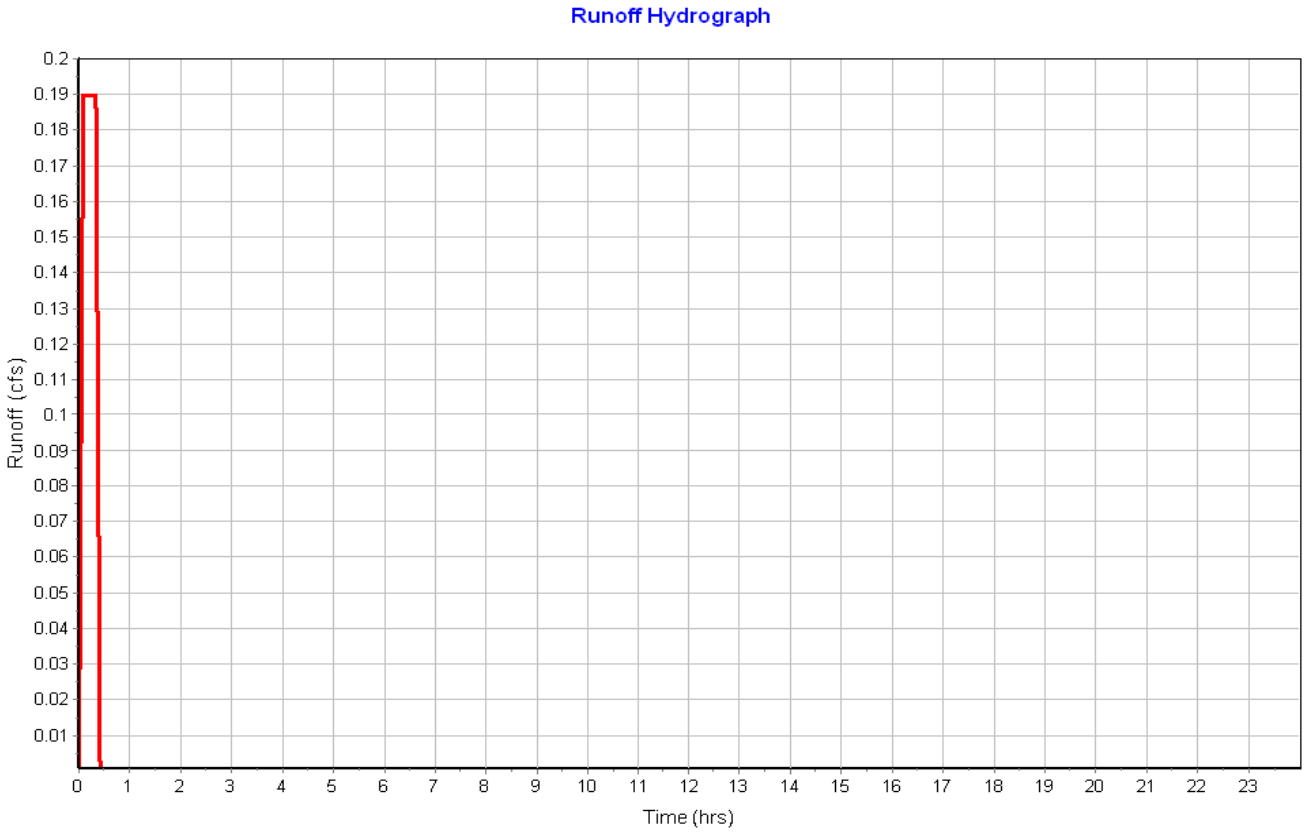
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	0.09	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	0.09		0.34

Subbasin Runoff Results

Total Rainfall (in) 2.07
Total Runoff (in) 0.70
Peak Runoff (cfs) 0.19
Rainfall Intensity 6.200
Weighted Runoff Coefficient 0.3400
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-02



Subbasin : DR-05

Input Data

Area (ac) 0.27
Weighted Runoff Coefficient 0.7200

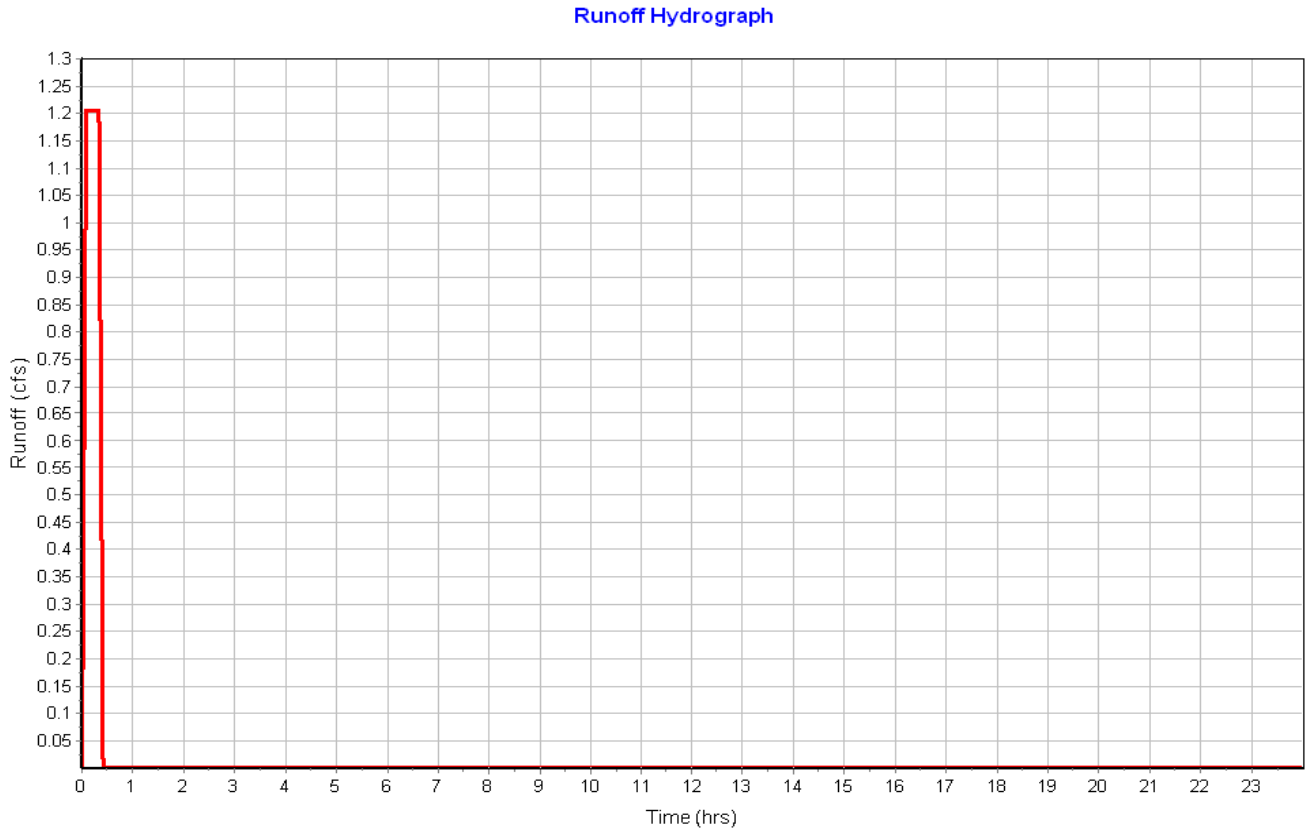
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.27	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.27		0.72

Subbasin Runoff Results

Total Rainfall (in) 2.07
Total Runoff (in) 1.49
Peak Runoff (cfs) 1.21
Rainfall Intensity 6.200
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-05



Subbasin : DR-06

Input Data

Area (ac) 0.12
Weighted Runoff Coefficient 0.7200

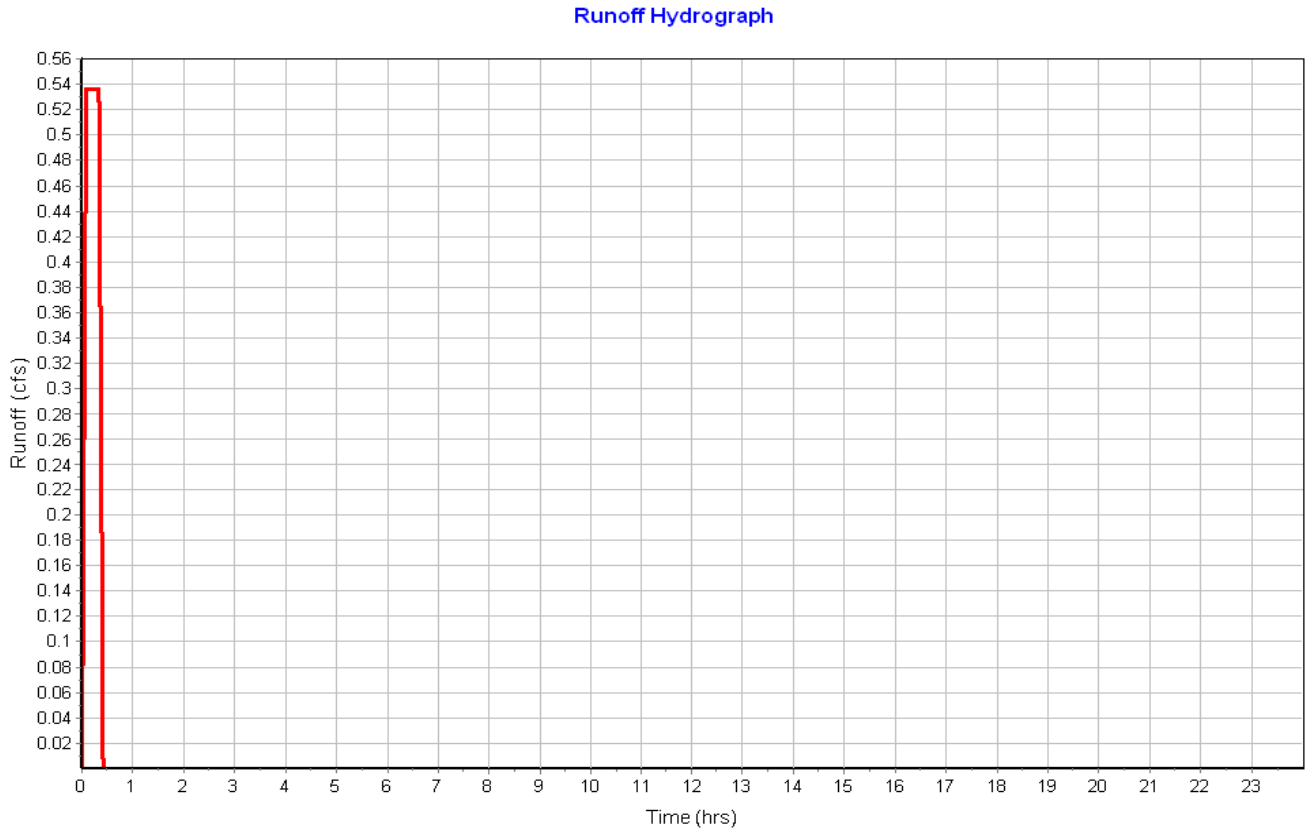
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.12	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.12		0.72

Subbasin Runoff Results

Total Rainfall (in) 2.07
Total Runoff (in) 1.49
Peak Runoff (cfs) 0.54
Rainfall Intensity 6.200
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-06



Subbasin : DR-07

Input Data

Area (ac) 0.15
Weighted Runoff Coefficient 0.7200

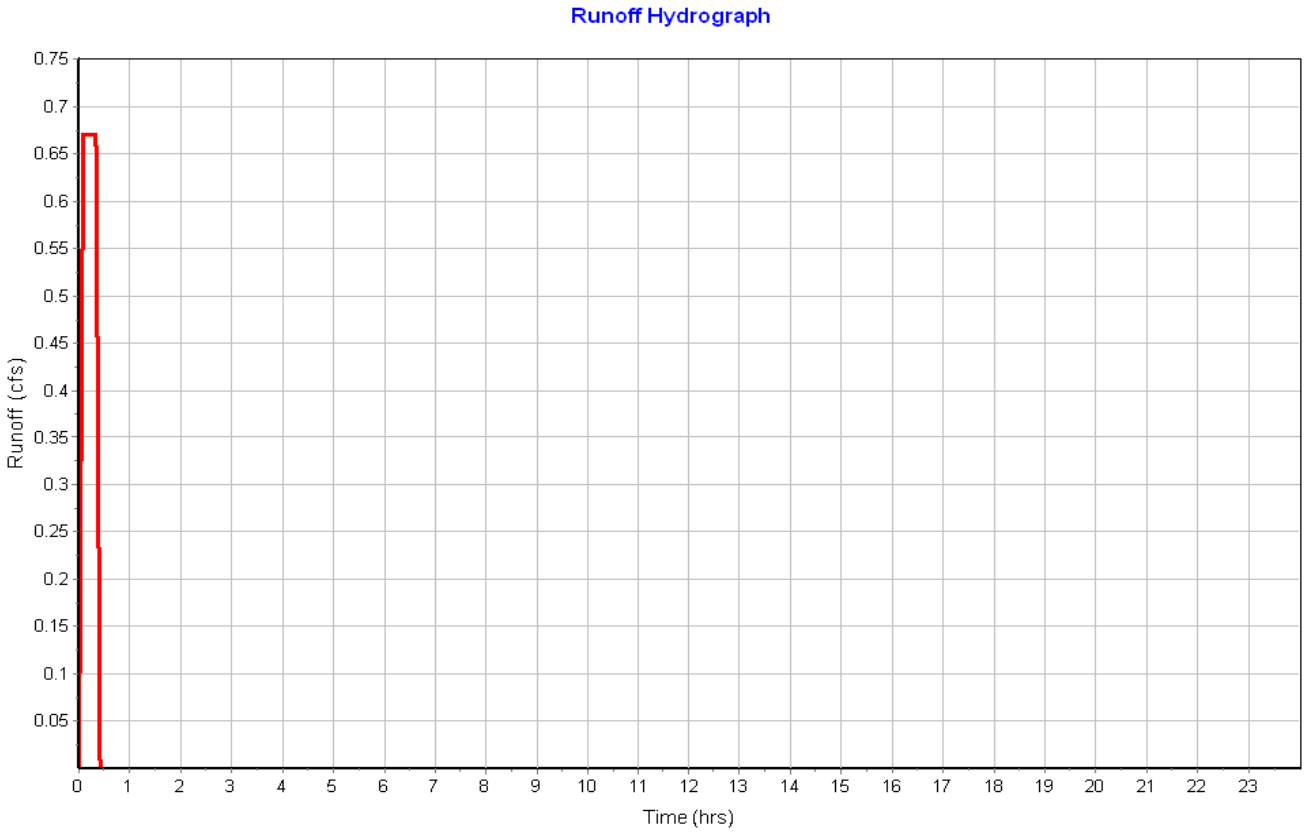
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.15	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.15		0.72

Subbasin Runoff Results

Total Rainfall (in) 2.07
Total Runoff (in) 1.49
Peak Runoff (cfs) 0.67
Rainfall Intensity 6.200
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-07



Subbasin : DR-09

Input Data

Area (ac) 0.18
Weighted Runoff Coefficient 0.7200

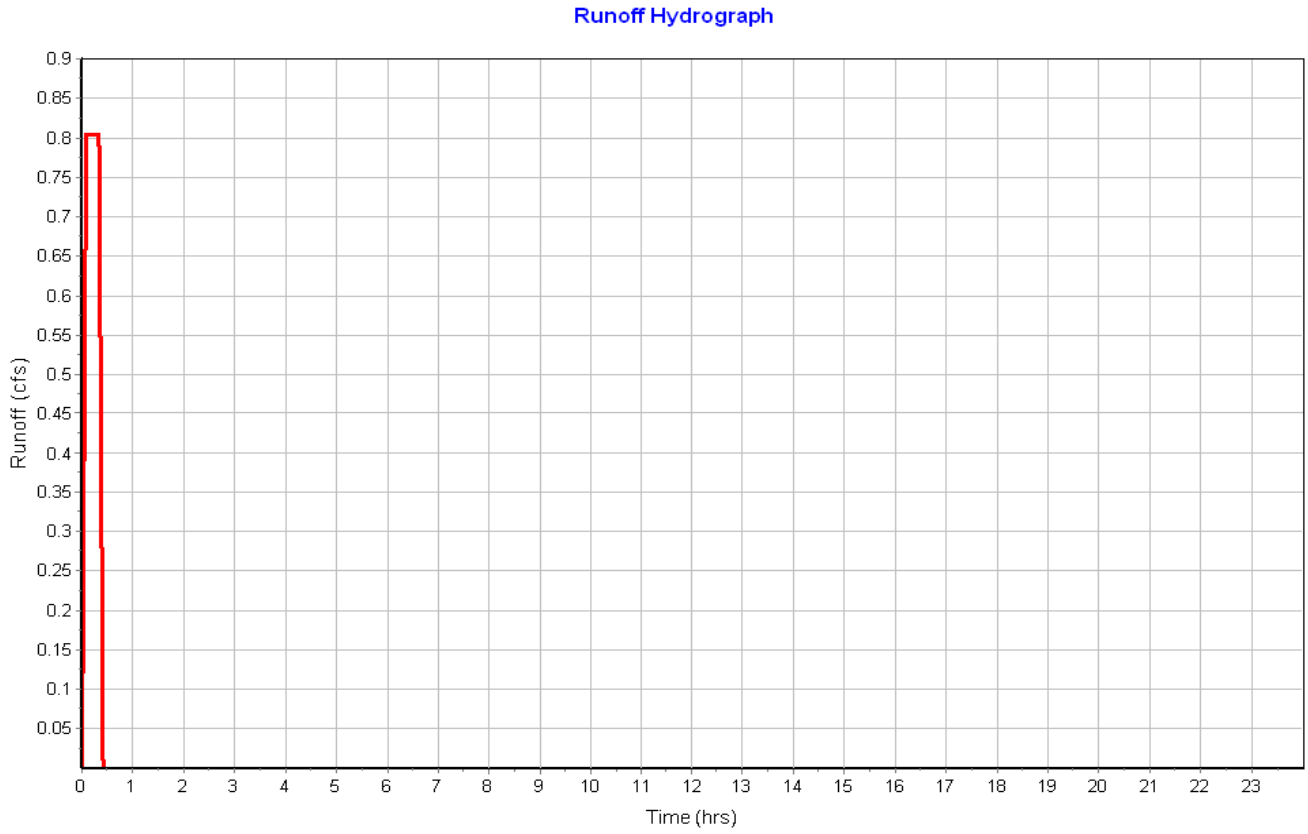
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.18	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.18		0.72

Subbasin Runoff Results

Total Rainfall (in) 2.07
Total Runoff (in) 1.49
Peak Runoff (cfs) 0.80
Rainfall Intensity 6.200
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-09



Subbasin : DR-10

Input Data

Area (ac) 0.15
Weighted Runoff Coefficient 0.7200

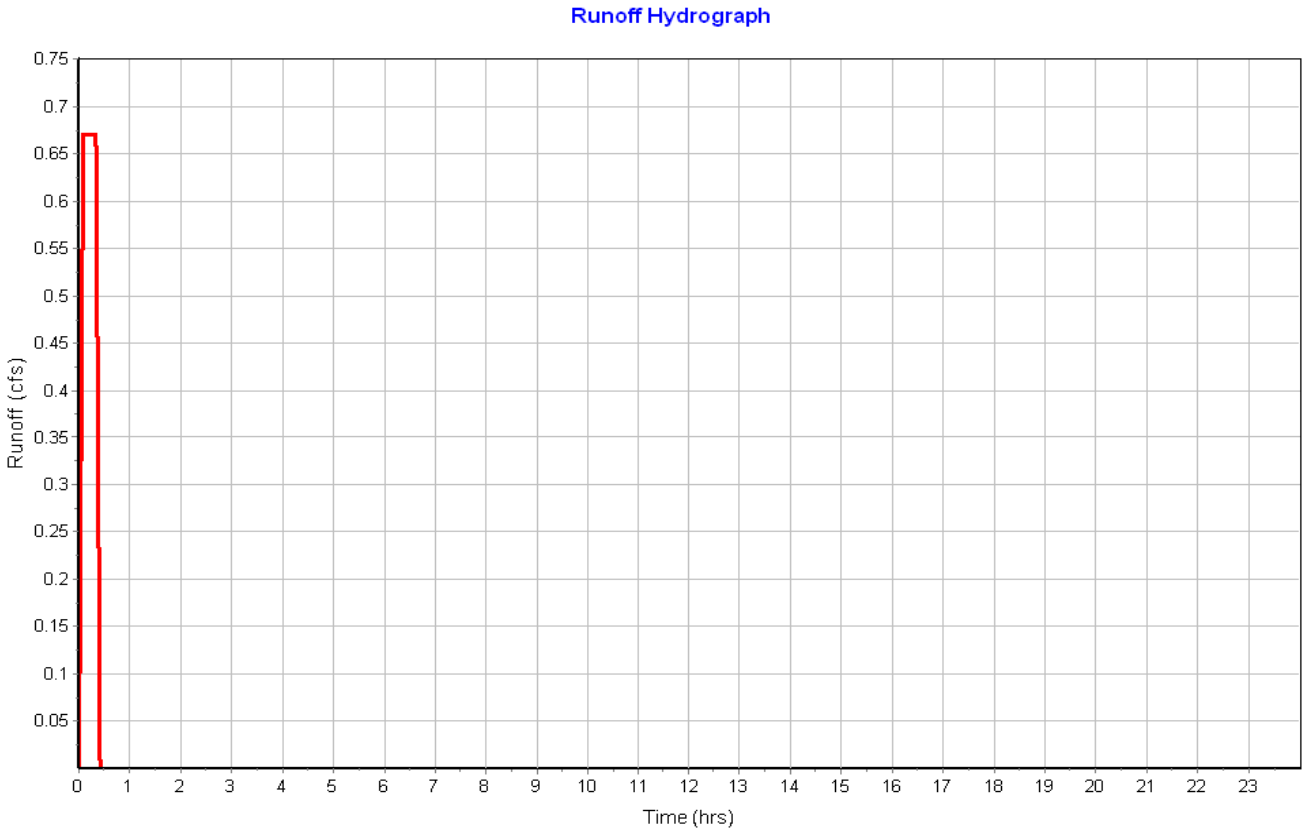
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.15	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.15		0.72

Subbasin Runoff Results

Total Rainfall (in) 2.07
Total Runoff (in) 1.49
Peak Runoff (cfs) 0.67
Rainfall Intensity 6.200
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-10



Subbasin : DR-12

Input Data

Area (ac) 0.21
Weighted Runoff Coefficient 0.3400

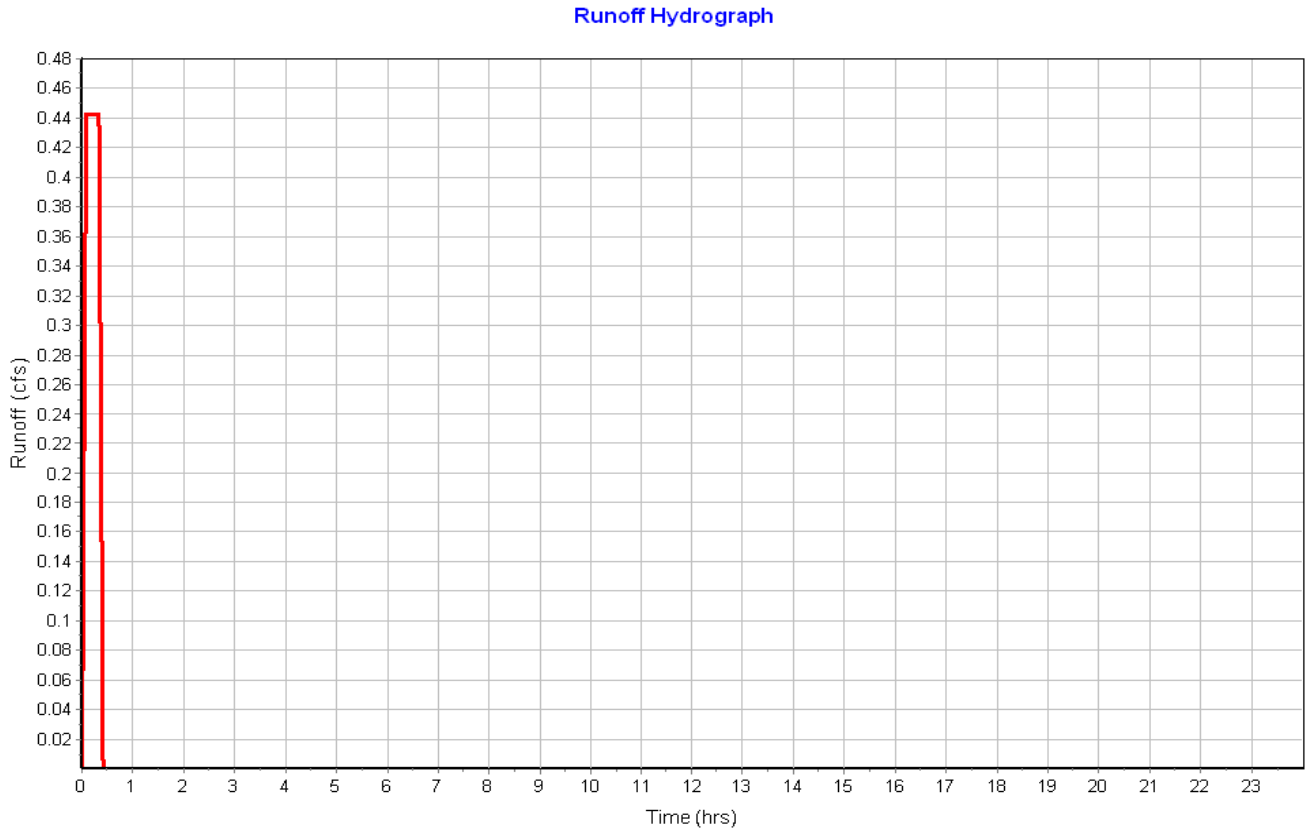
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	0.21	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	0.21		0.34

Subbasin Runoff Results

Total Rainfall (in) 2.07
Total Runoff (in) 0.70
Peak Runoff (cfs) 0.44
Rainfall Intensity 6.200
Weighted Runoff Coefficient 0.3400
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-12



Subbasin : DR-13

Input Data

Area (ac) 0.26
Weighted Runoff Coefficient 0.7200

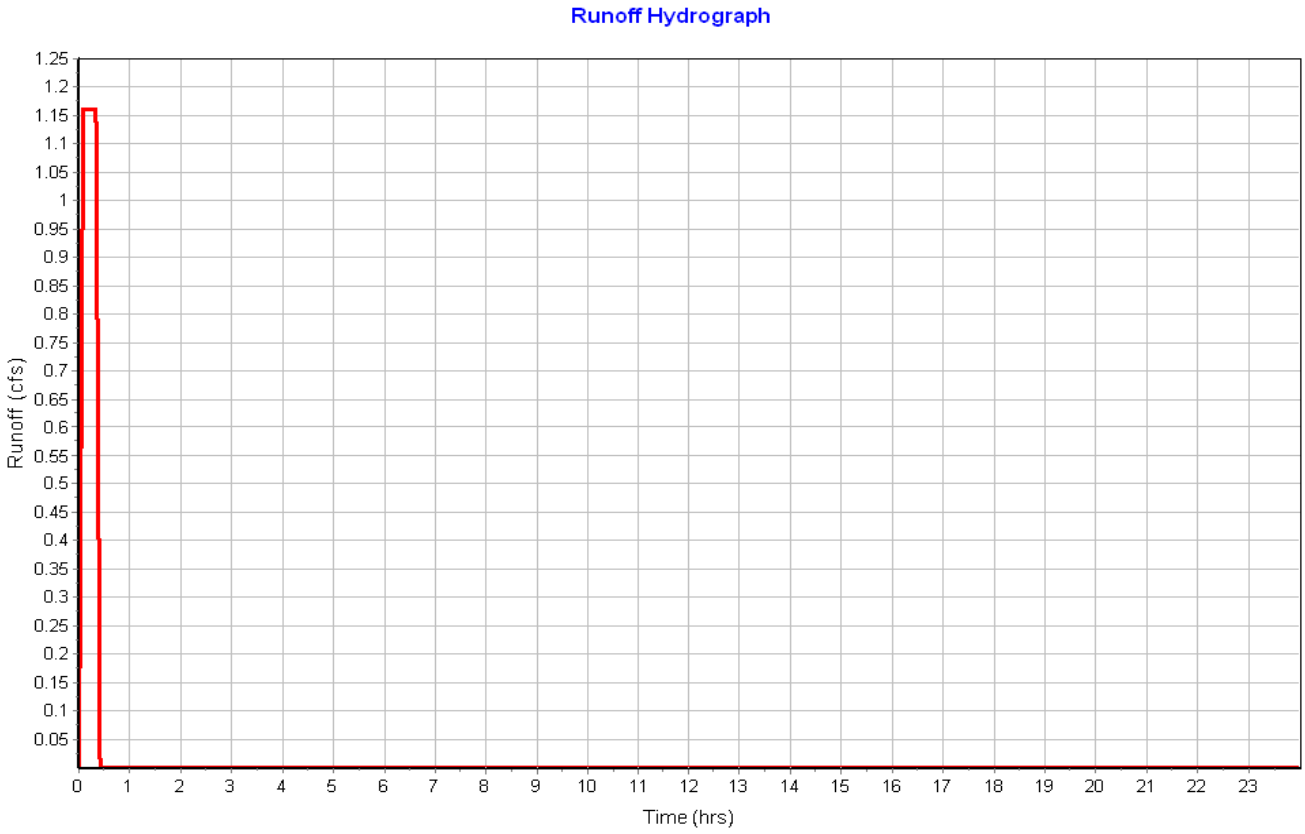
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.26	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.26		0.72

Subbasin Runoff Results

Total Rainfall (in) 2.07
Total Runoff (in) 1.49
Peak Runoff (cfs) 1.16
Rainfall Intensity 6.200
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-13



Subbasin : DR-14

Input Data

Area (ac) 1.80
Weighted Runoff Coefficient 0.7200

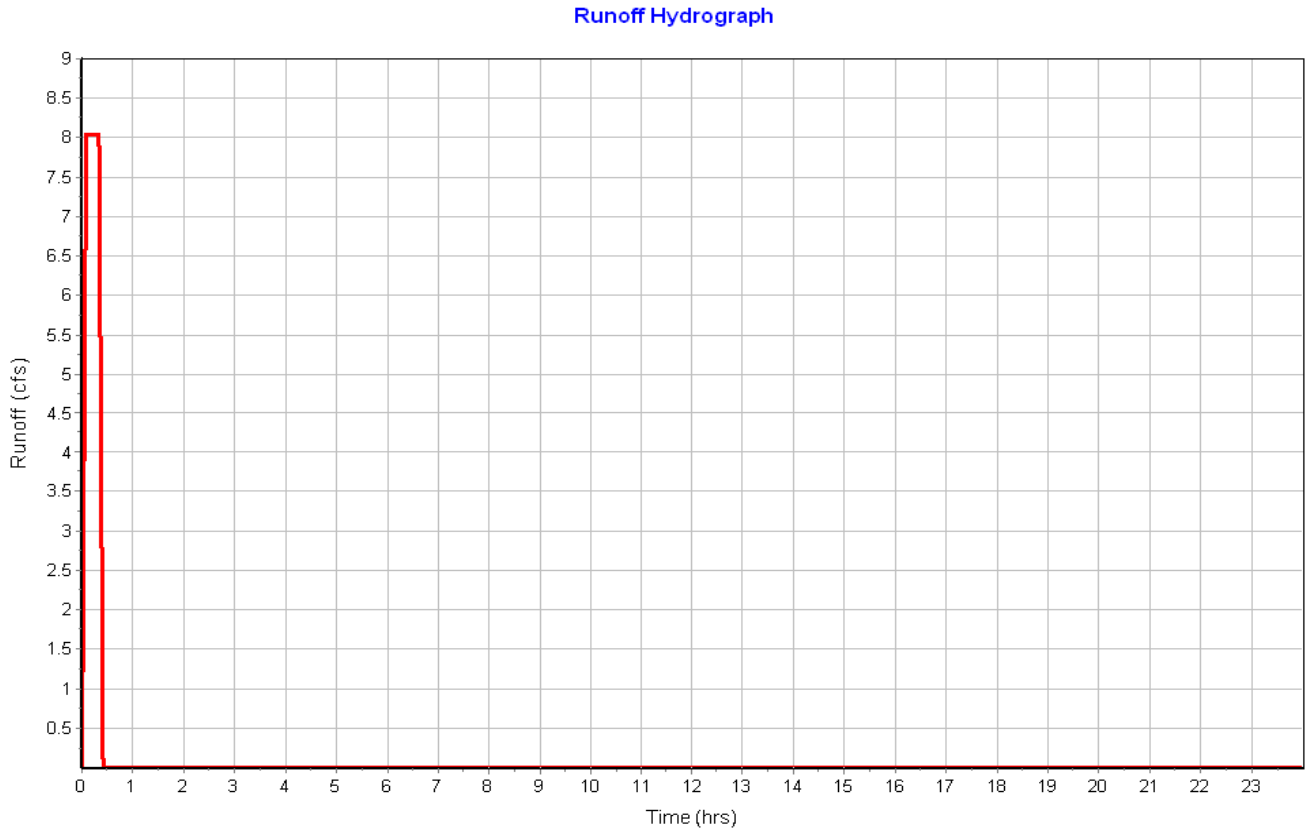
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	1.80	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	1.80		0.72

Subbasin Runoff Results

Total Rainfall (in) 2.07
Total Runoff (in) 1.49
Peak Runoff (cfs) 8.04
Rainfall Intensity 6.200
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-14



Subbasin : PRE-DEVELOPMENT

Input Data

Area (ac) 1.96
Weighted Runoff Coefficient 0.3400

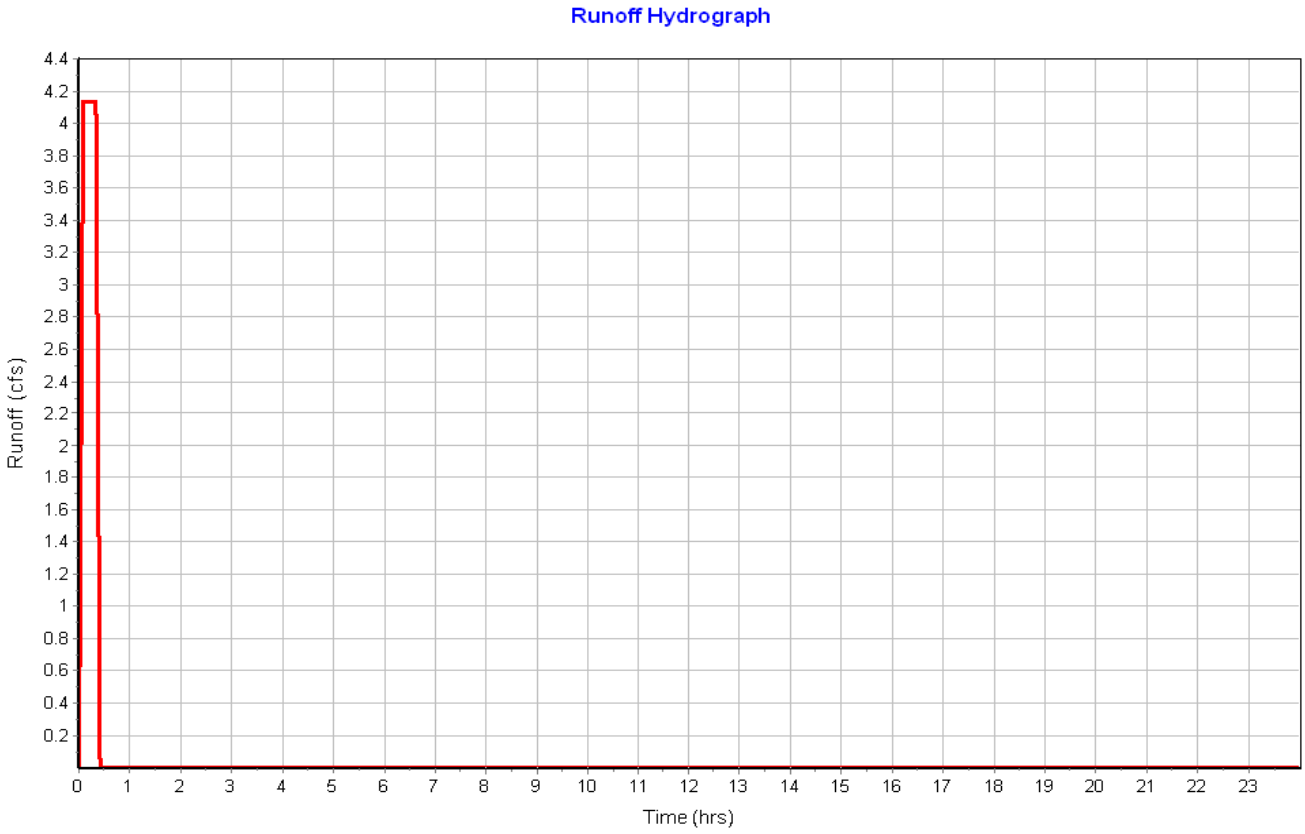
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	1.96	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	1.96		0.34

Subbasin Runoff Results

Total Rainfall (in) 2.07
Total Runoff (in) 0.70
Peak Runoff (cfs) 4.13
Rainfall Intensity 6.200
Weighted Runoff Coefficient 0.3400
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : PRE-DEVELOPMENT



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 (in)
1	AI05	508.11	512.70	4.59	508.11	0.00	512.70	0.00	10.00	43.08
2	AI12	494.50	500.50	6.00	494.50	0.00	500.50	0.00	0.00	58.92
3	AI13	505.61	511.44	5.83	505.61	0.00	511.44	0.00	10.00	58.10
4	FE14	500.60	501.85	1.25	500.60	0.00	501.85	0.00	0.00	3.04
5	GI06	505.16	509.76	4.60	505.16	0.00	509.76	0.00	10.00	42.01
6	GI07	508.36	512.86	4.50	508.36	0.00	512.86	0.00	10.00	42.00
7	GI09	498.44	505.24	6.80	498.44	0.00	505.24	0.00	10.00	42.70
8	GI10	508.46	512.96	4.50	508.46	0.00	512.96	0.00	10.00	42.07
9	Jun-01	497.25	504.00	6.75	497.25	0.00	0.00	-504.00	0.00	0.00
10	MH04	498.18	510.20	12.02	498.18	0.00	510.20	0.00	10.00	53.17
11	PRE-JUNCT	500.00	505.00	5.00	500.00	0.00	0.00	-505.00	0.00	0.00
12	YD01	496.94	498.67	1.73	496.94	0.00	0.00	-498.67	0.00	8.04

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	AI05	1.21	1.21	508.42	0.31	0.00	4.28	508.11	0.00	0 00:05	0 00:00	0.00	0.00
2	AI12	9.65	0.44	500.50	6.00	0.00	0.00	494.57	0.07	0 00:05	0 00:20	0.06	15.00
3	AI13	1.16	1.16	505.87	0.26	0.00	5.57	505.61	0.00	0 00:05	0 00:00	0.00	0.00
4	FE14	8.04	8.04	501.28	0.68	0.00	0.58	500.61	0.01	0 00:05	0 00:00	0.00	0.00
5	GI06	1.21	0.54	505.56	0.40	0.00	4.20	505.26	0.10	0 00:12	0 00:00	0.00	0.00
6	GI07	0.67	0.67	508.60	0.24	0.00	4.26	508.36	0.00	0 00:05	0 00:00	0.00	0.00
7	GI09	1.47	0.80	500.88	2.44	0.00	4.36	500.68	2.24	0 00:20	0 00:00	0.00	0.00
8	GI10	0.67	0.67	508.66	0.20	0.00	4.30	508.46	0.00	0 00:05	0 00:00	0.00	0.00
9	Jun-01	0.00	0.00	497.25	0.00	0.00	6.75	497.25	0.00	0 00:00	0 00:00	0.00	0.00
10	MH04	2.42	0.00	505.17	6.99	0.00	5.03	504.78	6.60	0 00:20	0 00:00	0.00	0.00
11	PRE-JUNCT	4.13	4.13	500.36	0.36	0.00	4.64	500.01	0.01	0 00:05	0 00:00	0.00	0.00
12	YD01	0.59	0.59	497.11	0.17	0.00	1.56	496.94	0.00	0 00:05	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 (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate
1	01-OUT	49.91	496.94	0.00	493.73	0.00	3.21	6.4300	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
2	10-9	172.65	508.45	-0.01	500.68	2.24	7.77	4.5000	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
3	12-EX	58.54	494.34	-0.16	493.26	0.00	1.08	1.8400	CIRCULAR	15.000	15.000	0.0130	0.5000	0.5000	0.0000	0.00	No
4	13-12	236.52	505.60	-0.01	494.50	0.00	11.10	4.6900	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
5	14-12	76.28	500.60	0.00	494.50	0.00	6.10	8.0000	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
6	2-1	30.15	497.25	0.00	496.94	0.00	0.31	1.0300	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
7	4-3	19.97	498.18	0.00	497.25	0.00	0.93	4.6800	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
8	5-4	133.63	508.11	0.00	504.77	6.59	3.34	2.5000	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
9	6-4	38.77	505.16	0.00	504.77	6.59	0.39	1.0100	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
10	7-6	137.50	508.36	0.00	505.26	0.10	3.10	2.2500	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
11	9-8	43.70	498.43	-0.01	498.00	0.75	0.43	0.9800	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
12	PRE-LINK	50.00	500.00	0.00	499.00	0.00	1.00	2.0000	CIRCULAR	60.000	60.000	0.0120	0.5000	0.5000	0.0000	0.00	No

No. of Barrels
1
1
1
1
1
1
1
1
1
1
1
1

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	01-OUT	0.59	0 00:20	9.04	0.07	7.55	0.11	0.17	0.17	0.00		Calculated
2	10-9	0.67	0 00:20	7.56	0.09	9.33	0.31	0.20	0.20	0.00		Calculated
3	12-EX	10.13	0 00:20	9.40	1.08	8.99	0.11	1.15	0.92	0.00		> CAPACITY
4	13-12	1.17	0 00:20	7.72	0.15	11.43	0.34	0.26	0.26	0.00		Calculated
5	14-12	8.04	0 00:20	10.08	0.80	15.85	0.08	0.67	0.67	0.00		Calculated
6	2-1	0.00	0 00:00	3.61	0.00	0.00		0.00	0.00	0.00		Calculated
7	4-3	2.42	0 00:20	7.70	0.31	8.67	0.04	0.38	0.38	0.00		Calculated
8	5-4	1.21	0 00:20	5.63	0.22	8.51	0.26	0.31	0.31	0.00		Calculated
9	6-4	1.21	0 00:20	3.57	0.34	4.12	0.16	0.40	0.40	0.00		Calculated
10	7-6	0.67	0 00:20	5.35	0.13	7.36	0.31	0.24	0.24	0.00		Calculated
11	9-8	1.47	0 00:20	3.56	0.41	4.34	0.17	0.45	0.45	0.00		Calculated
12	PRE-LINK	4.14	0 00:20	399.01	0.01	6.72	0.12	0.36	0.07	0.00		Calculated

Storage Nodes

Storage Node : OS02

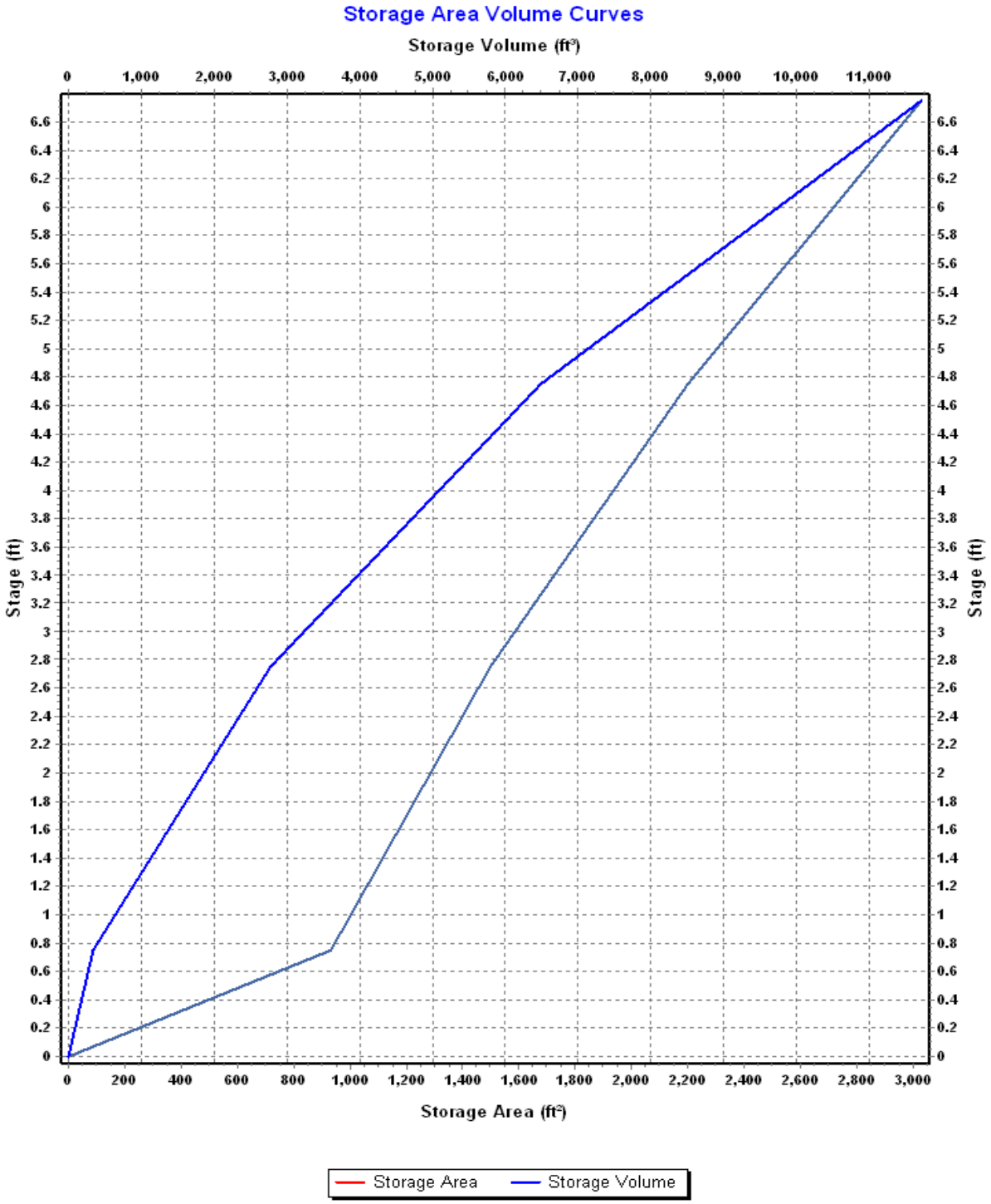
Input Data

Invert Elevation (ft)	497.25
Max (Rim) Elevation (ft)	504.00
Max (Rim) Offset (ft)	6.75
Initial Water Elevation (ft)	497.25
Initial Water Depth (ft)	0.00
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : Storage-01

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	0	0.000
0.75	930	348.75
2.75	1500	2778.75
4.75	2200	6478.75
6.75	3030	11708.75


Storage Area Volume Curves
Storage Volume (ft³)
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
11,000
Stage (ft)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3
3.2
3.4
3.6
3.8
4
4.2
4.4
4.6
4.8
5
5.2
5.4
5.6
5.8
6
6.2
6.4
6.6
0
200
400
600
800
1,000
1,200
1,400
1,600
1,800
2,000
2,200
2,400
2,600
2,800
3,000
Storage Area (ft²)
Storage Area
Storage Volume

Storage Node : OS02 (continued)

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	501.50	4.25	12.00	1.00	3.33

Output Summary Results

Peak Inflow (cfs)	4.08
Peak Lateral Inflow (cfs)	0.19
Peak Outflow (cfs)	0.00
Peak Exfiltration Flow Rate (cfm)	0.00
Max HGL Elevation Attained (ft)	501.23
Max HGL Depth Attained (ft)	3.98
Average HGL Elevation Attained (ft)	501.20
Average HGL Depth Attained (ft)	3.95
Time of Max HGL Occurrence (days hh:mm)	0 00:51
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	SSA - GALAXY-Mod.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Modified Rational
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Kinematic Wave
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	NO

Analysis Options

Start Analysis On	Feb 01, 2022	00:00:00
End Analysis On	Feb 02, 2022	00:00:00
Start Reporting On	Feb 01, 2022	00:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	0
Subbasins	11
Nodes	16
Junctions	12
Outfalls	3
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	14
Channels	0
Pipes	12
Pumps	0
Orifices	1
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

Rainfall Intensity	4.6 in/hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Weighted Runoff Coefficient	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DR-01	0.28	0.3400	1.53	0.52	0.15	0.44	0 00:05:00
2	DR-02	0.09	0.3400	1.53	0.52	0.05	0.14	0 00:05:00
3	DR-05	0.27	0.7200	1.53	1.10	0.30	0.89	0 00:05:00
4	DR-06	0.12	0.7200	1.53	1.10	0.13	0.40	0 00:05:00
5	DR-07	0.15	0.7200	1.53	1.10	0.17	0.50	0 00:05:00
6	DR-09	0.18	0.7200	1.53	1.10	0.20	0.60	0 00:05:00
7	DR-10	0.15	0.7200	1.53	1.10	0.17	0.50	0 00:05:00
8	DR-12	0.21	0.3400	1.53	0.52	0.11	0.33	0 00:05:00
9	DR-13	0.26	0.7200	1.53	1.10	0.29	0.86	0 00:05:00
10	DR-14	1.80	0.7200	1.53	1.10	1.99	5.96	0 00:05:00
11	PRE-DEVELOPMENT	1.96	0.3400	1.53	0.52	1.02	3.07	0 00:05:00

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	AI05	Junction	508.11	512.70	508.11	512.70	10.00	0.89	508.38	0.00	4.32	0 00:00	0.00	0.00
2	AI12	Junction	494.50	500.50	494.50	500.50	0.00	7.16	495.32	0.00	5.18	0 00:00	0.00	0.00
3	AI13	Junction	505.61	511.44	505.61	511.44	10.00	0.86	505.83	0.00	5.61	0 00:00	0.00	0.00
4	FE14	Junction	500.60	501.85	500.60	501.85	0.00	5.96	501.16	0.00	0.70	0 00:00	0.00	0.00
5	GI06	Junction	505.16	509.76	505.16	509.76	10.00	0.89	505.50	0.00	4.26	0 00:00	0.00	0.00
6	GI07	Junction	508.36	512.86	508.36	512.86	10.00	0.50	508.57	0.00	4.29	0 00:00	0.00	0.00
7	GI09	Junction	498.44	505.24	498.44	505.24	10.00	1.09	500.85	0.00	4.38	0 00:00	0.00	0.00
8	GI10	Junction	508.46	512.96	508.46	512.96	10.00	0.50	508.63	0.00	4.33	0 00:00	0.00	0.00
9	Jun-01	Junction	497.25	504.00	497.25	0.00	0.00	0.61	497.53	0.00	6.47	0 00:00	0.00	0.00
10	MH04	Junction	498.18	510.20	498.18	510.20	10.00	1.79	505.11	0.00	5.09	0 00:00	0.00	0.00
11	PRE-JUNCT	Junction	500.00	505.00	500.00	0.00	0.00	3.07	500.31	0.00	4.69	0 00:00	0.00	0.00
12	YD01	Junction	496.94	498.67	496.94	0.00	0.00	1.01	497.22	0.00	1.45	0 00:00	0.00	0.00
13	EX-NE	Outfall	493.26					7.16	494.08					
14	Outfall	Outfall	493.73					1.01	493.96					
15	PRE-OUT	Outfall	499.00					3.07	499.31					
16	OS02	Storage Node	497.25	504.00	497.25		0.00	3.02	500.20				0.00	0.00

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 Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	01-OUT	Pipe	YD01	Outfall	49.91	496.94	493.73	6.4300	12.000	0.0130	1.01	9.04	0.11	7.61	0.23	0.23	0.00	Calculated
2	10-9	Pipe	GI10	GI09	172.65	508.45	500.68	4.5000	12.000	0.0130	0.50	7.56	0.07	8.70	0.17	0.17	0.00	Calculated
3	12-EX	Pipe	AI12	EX-NE	58.54	494.34	493.26	1.8400	15.000	0.0130	7.16	9.40	0.76	8.47	0.82	0.65	0.00	Calculated
4	13-12	Pipe	AI13	AI12	236.52	505.60	494.50	4.6900	12.000	0.0130	0.87	7.72	0.11	10.77	0.23	0.23	0.00	Calculated
5	14-12	Pipe	FE14	AI12	76.28	500.60	494.50	8.0000	12.000	0.0130	5.97	10.08	0.59	14.68	0.55	0.55	0.00	Calculated
6	2-1	Pipe	Jun-01	YD01	30.15	497.25	496.94	1.0300	12.000	0.0130	0.61	3.61	0.17	3.43	0.28	0.28	0.00	Calculated
7	4-3	Pipe	MH04	OS02	19.97	498.18	497.25	4.6800	12.000	0.0130	1.79	7.70	0.23	7.99	0.33	0.33	0.00	Calculated
8	5-4	Pipe	AI05	MH04	133.63	508.11	504.77	2.5000	12.000	0.0130	0.90	5.63	0.16	8.02	0.27	0.27	0.00	Calculated
9	6-4	Pipe	GI06	MH04	38.77	505.16	504.77	1.0100	12.000	0.0130	0.89	3.57	0.25	3.79	0.34	0.34	0.00	Calculated
10	7-6	Pipe	GI07	GI06	137.50	508.36	505.26	2.2500	12.000	0.0130	0.50	5.35	0.09	6.81	0.21	0.21	0.00	Calculated
11	9-8	Pipe	GI09	OS02	43.70	498.43	498.00	0.9800	12.000	0.0130	1.09	3.56	0.31	4.00	0.38	0.38	0.00	Calculated
12	PRE-LINK	Pipe	PRE-JUNCT	PRE-OUT	50.00	500.00	499.00	2.0000	60.000	0.0120	3.07	399.01	0.01	6.10	0.31	0.06	0.00	Calculated
13	Orifice-01	Orifice	OS02	Jun-01		497.25	497.25		4.000		0.61							
14	Weir-01	Weir	OS02	Jun-01		497.25	497.25				0.00							

Subbasin Hydrology

Subbasin : DR-01

Input Data

Area (ac) 0.28
Weighted Runoff Coefficient 0.3400

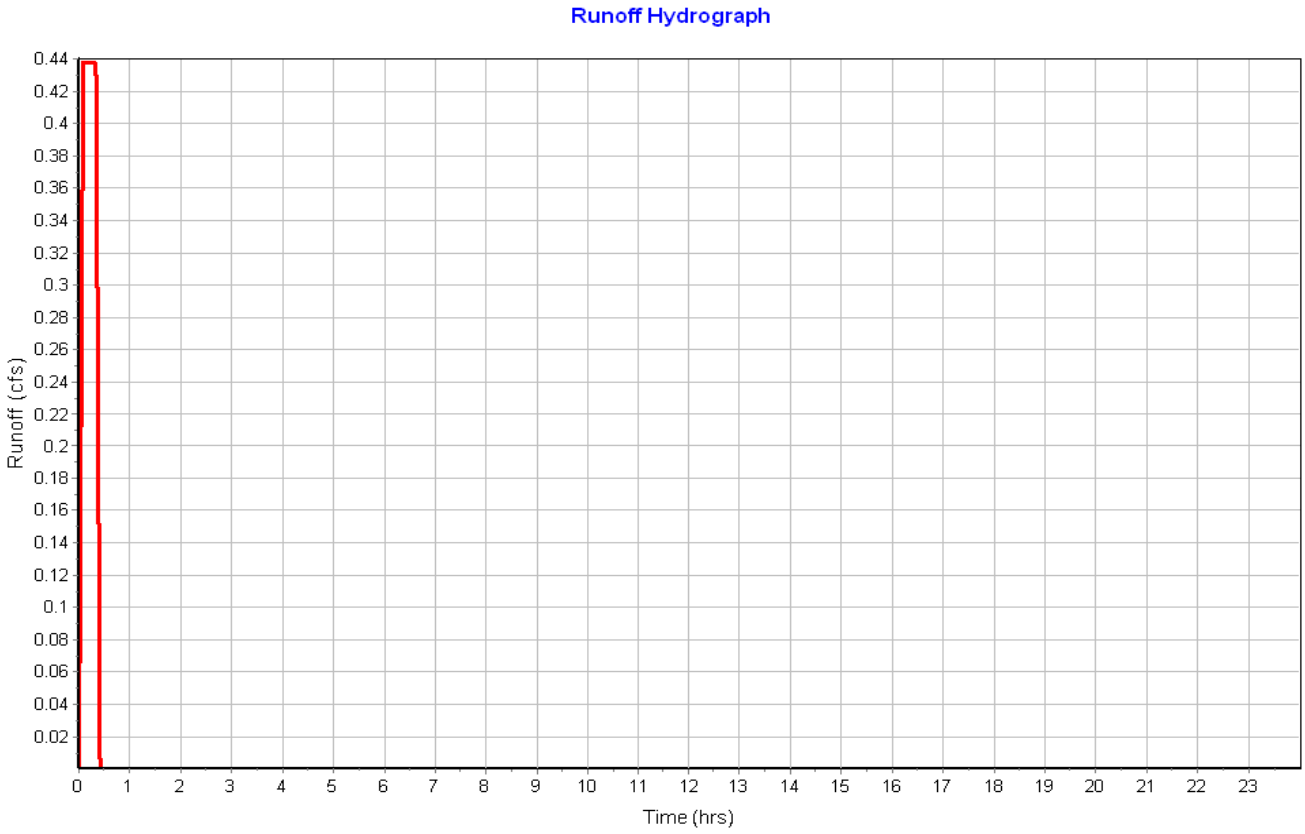
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	0.28	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	0.28		0.34

Subbasin Runoff Results

Total Rainfall (in) 1.53
Total Runoff (in) 0.52
Peak Runoff (cfs) 0.44
Rainfall Intensity 4.600
Weighted Runoff Coefficient 0.3400
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-01



Subbasin : DR-02

Input Data

Area (ac) 0.09
Weighted Runoff Coefficient 0.3400

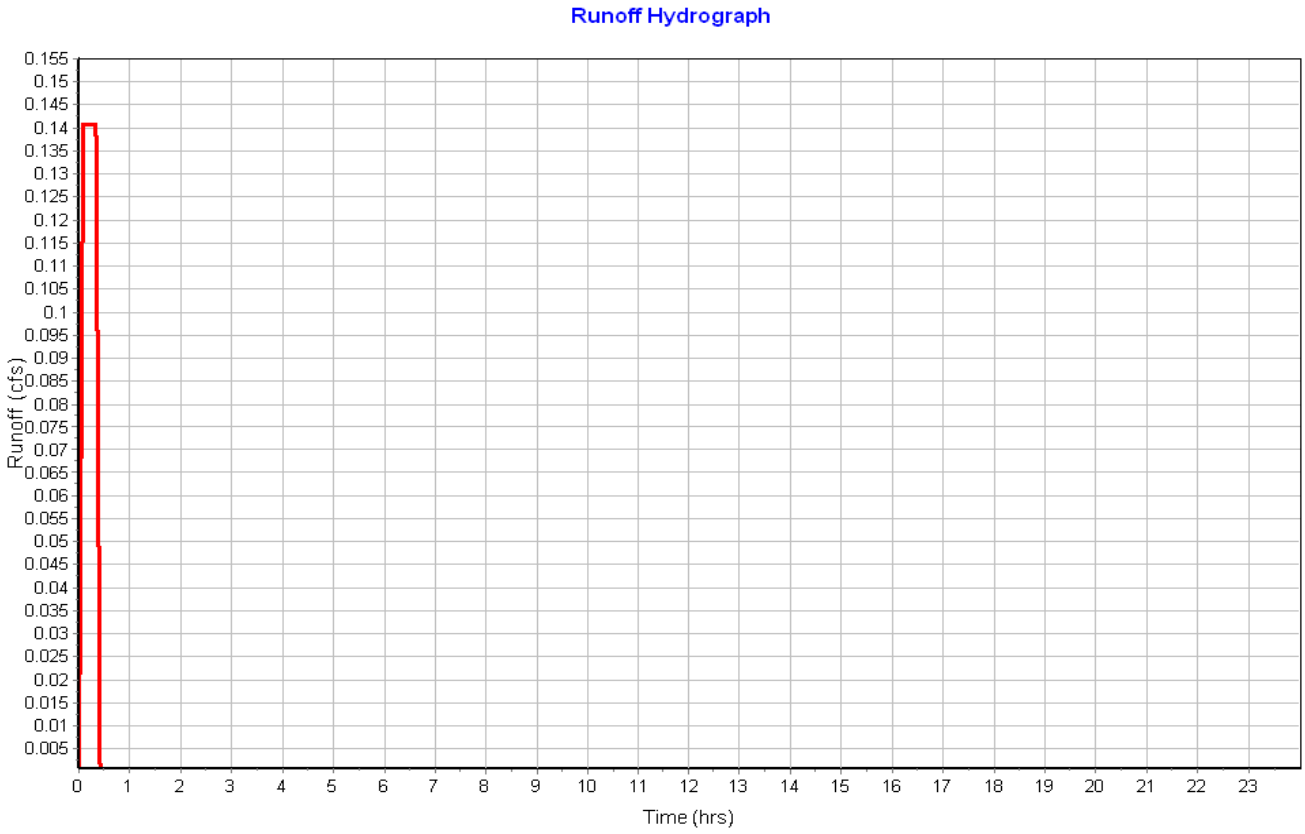
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	0.09	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	0.09		0.34

Subbasin Runoff Results

Total Rainfall (in) 1.53
Total Runoff (in) 0.52
Peak Runoff (cfs) 0.14
Rainfall Intensity 4.600
Weighted Runoff Coefficient 0.3400
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-02



Subbasin : DR-05

Input Data

Area (ac) 0.27
Weighted Runoff Coefficient 0.7200

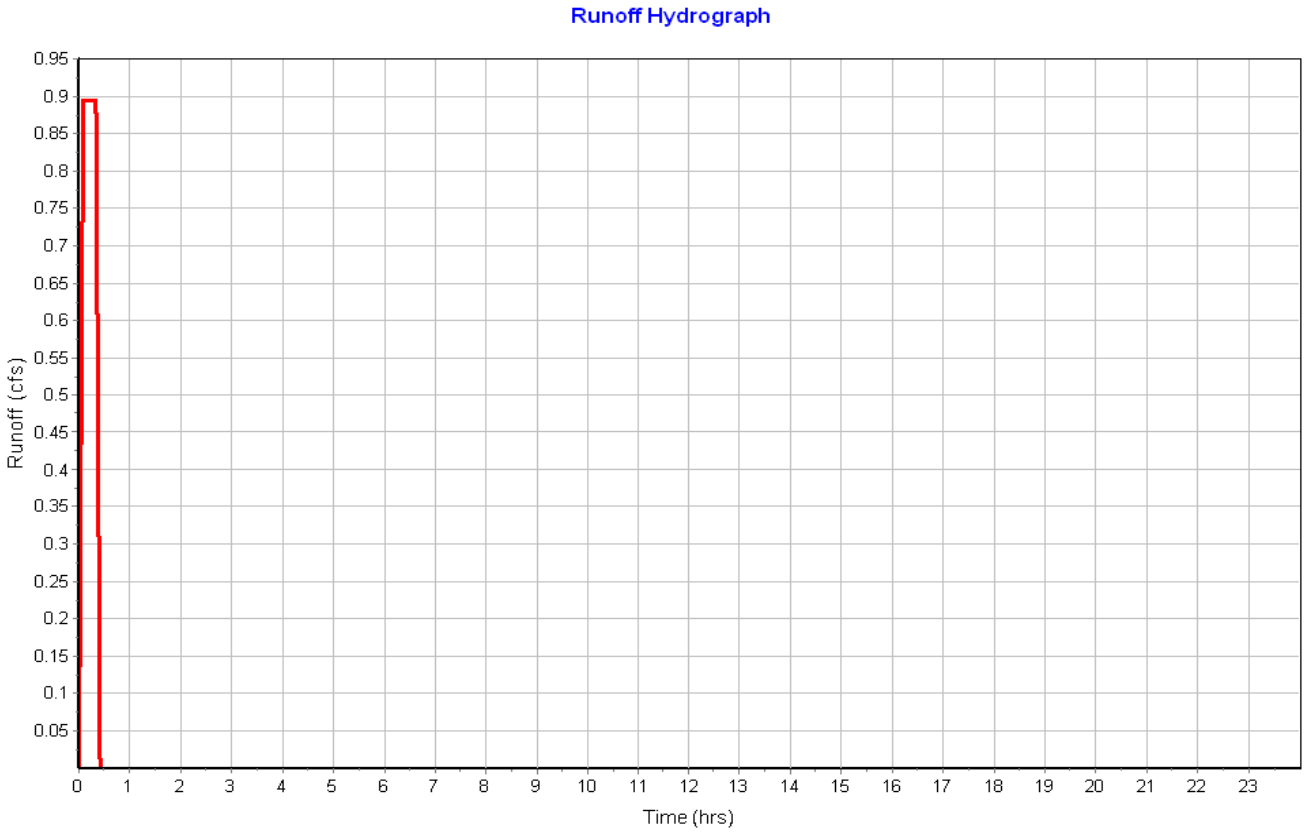
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.27	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.27		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.53
Total Runoff (in) 1.10
Peak Runoff (cfs) 0.89
Rainfall Intensity 4.600
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-05



Subbasin : DR-06

Input Data

Area (ac) 0.12
Weighted Runoff Coefficient 0.7200

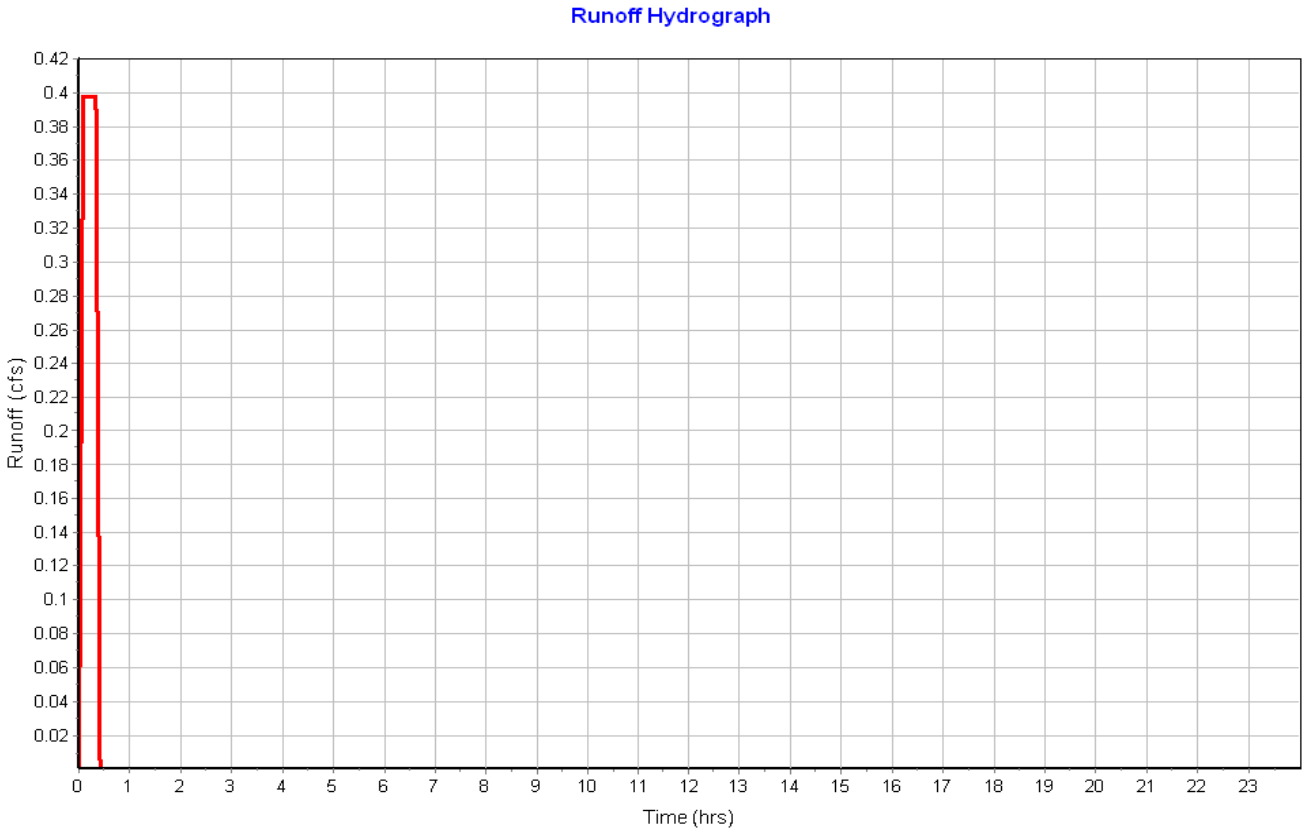
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.12	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.12		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.53
Total Runoff (in) 1.10
Peak Runoff (cfs) 0.40
Rainfall Intensity 4.600
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-06



Subbasin : DR-07

Input Data

Area (ac) 0.15
Weighted Runoff Coefficient 0.7200

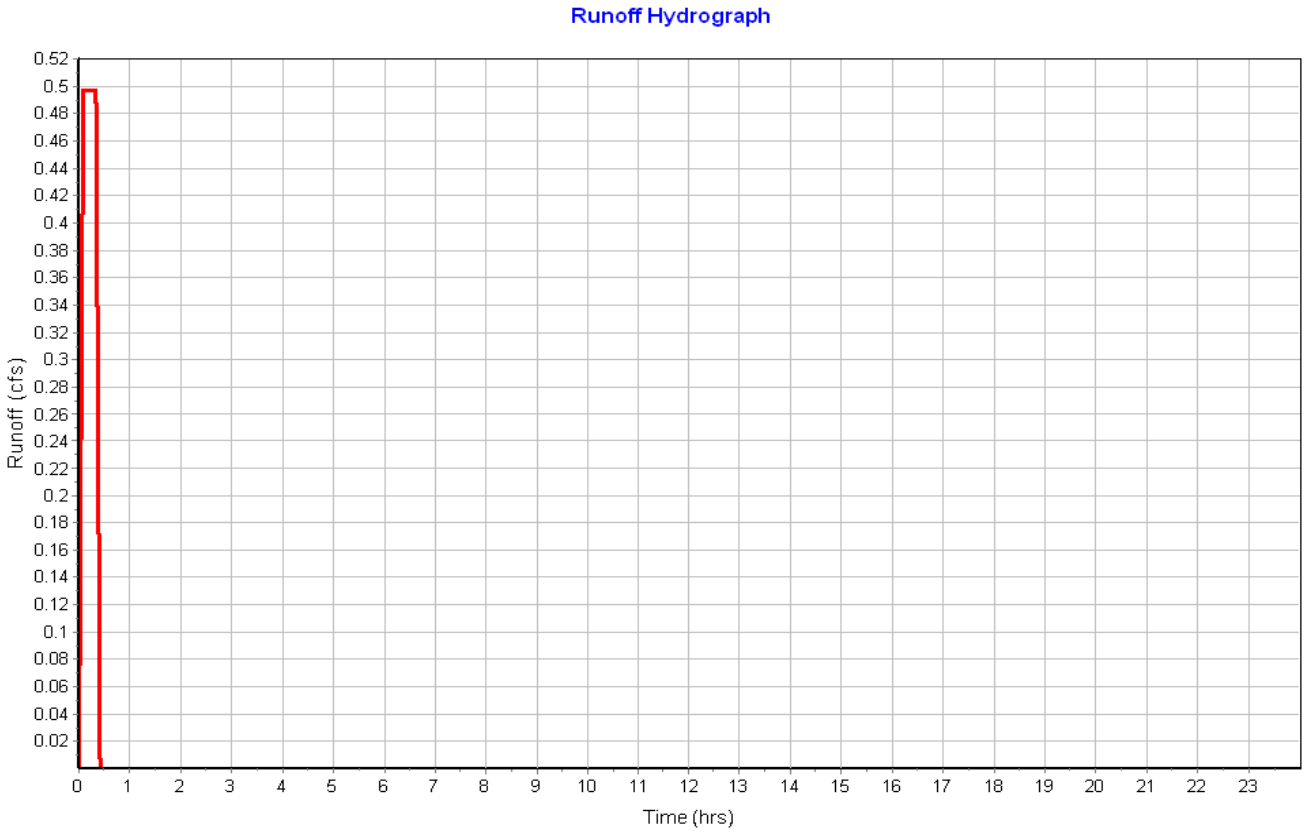
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.15	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.15		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.53
Total Runoff (in) 1.10
Peak Runoff (cfs) 0.50
Rainfall Intensity 4.600
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-07



Subbasin : DR-09

Input Data

Area (ac) 0.18
Weighted Runoff Coefficient 0.7200

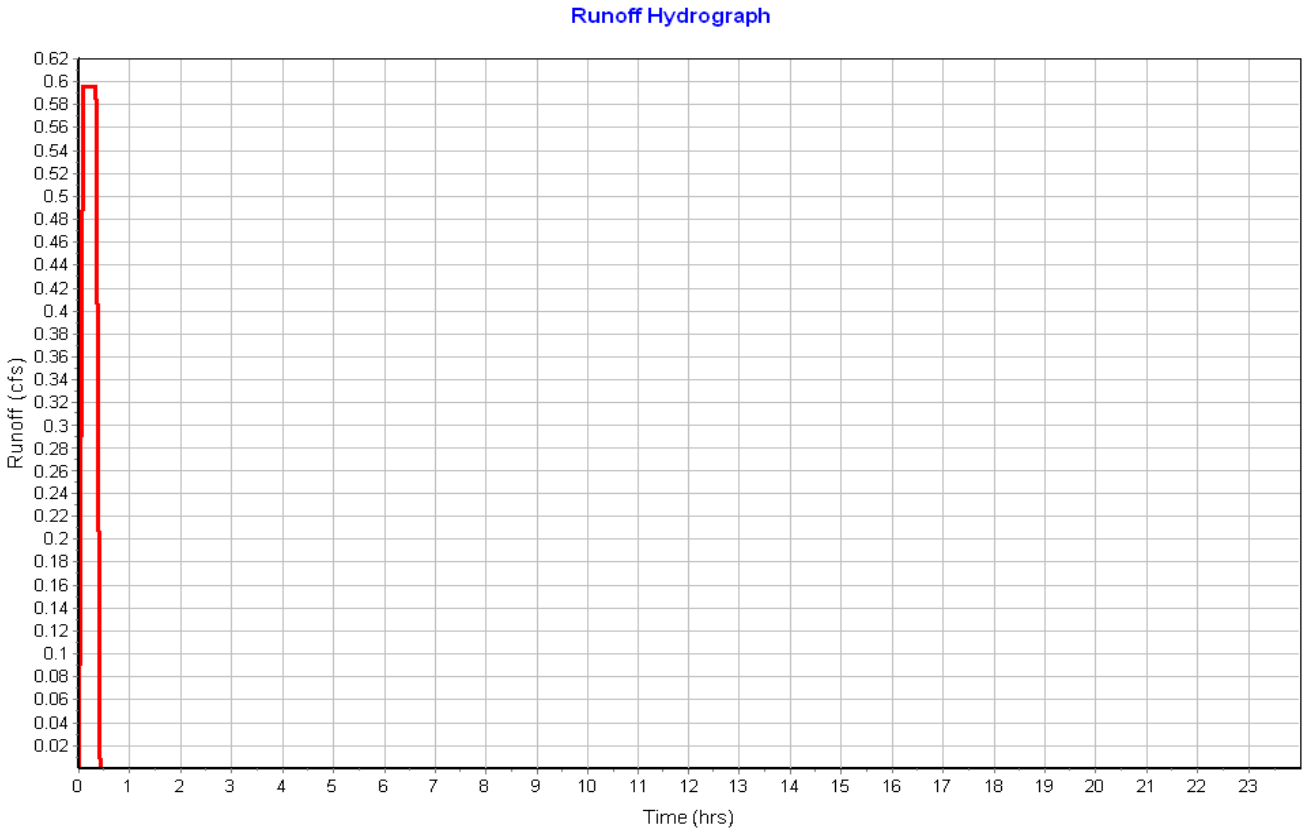
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.18	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.18		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.53
Total Runoff (in) 1.10
Peak Runoff (cfs) 0.60
Rainfall Intensity 4.600
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-09



Subbasin : DR-10

Input Data

Area (ac) 0.15
Weighted Runoff Coefficient 0.7200

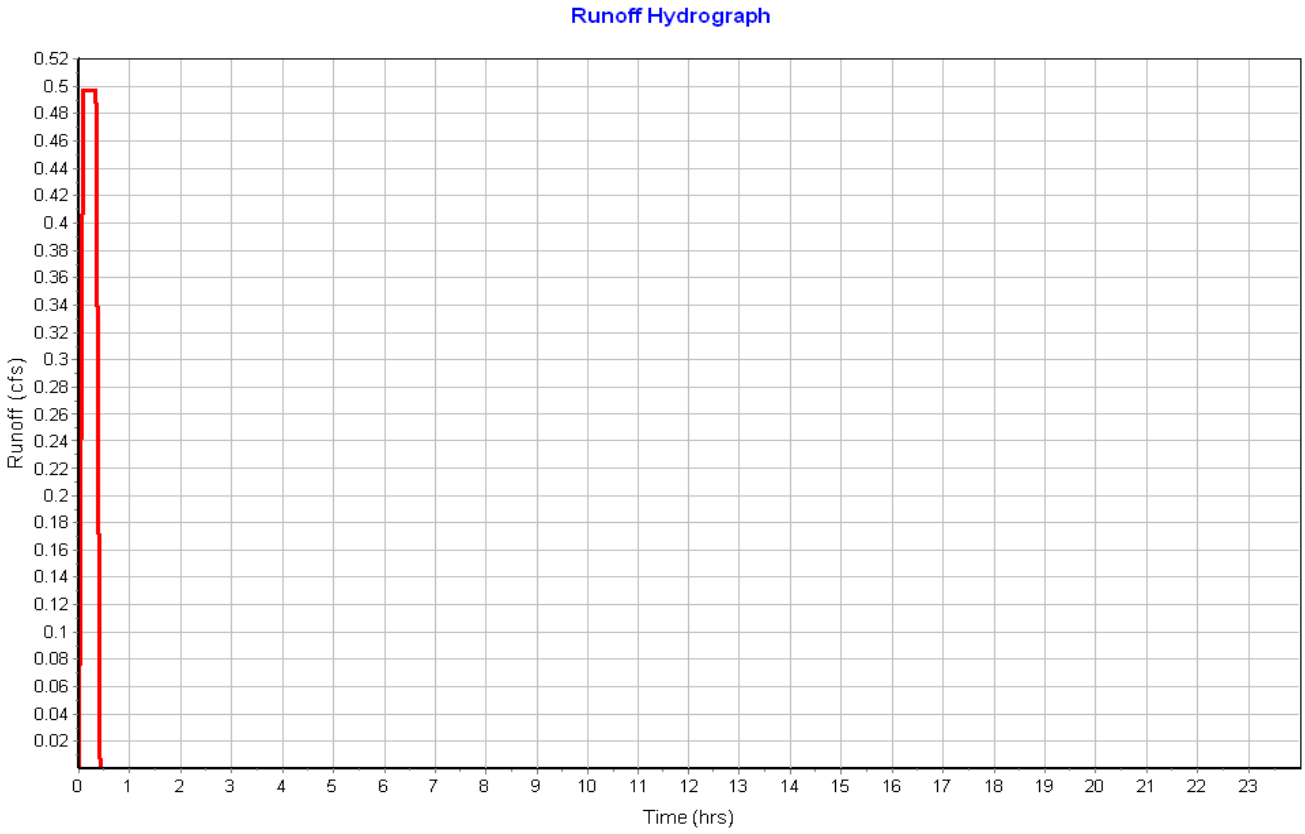
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.15	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.15		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.53
Total Runoff (in) 1.10
Peak Runoff (cfs) 0.50
Rainfall Intensity 4.600
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-10



Subbasin : DR-12

Input Data

Area (ac) 0.21
Weighted Runoff Coefficient 0.3400

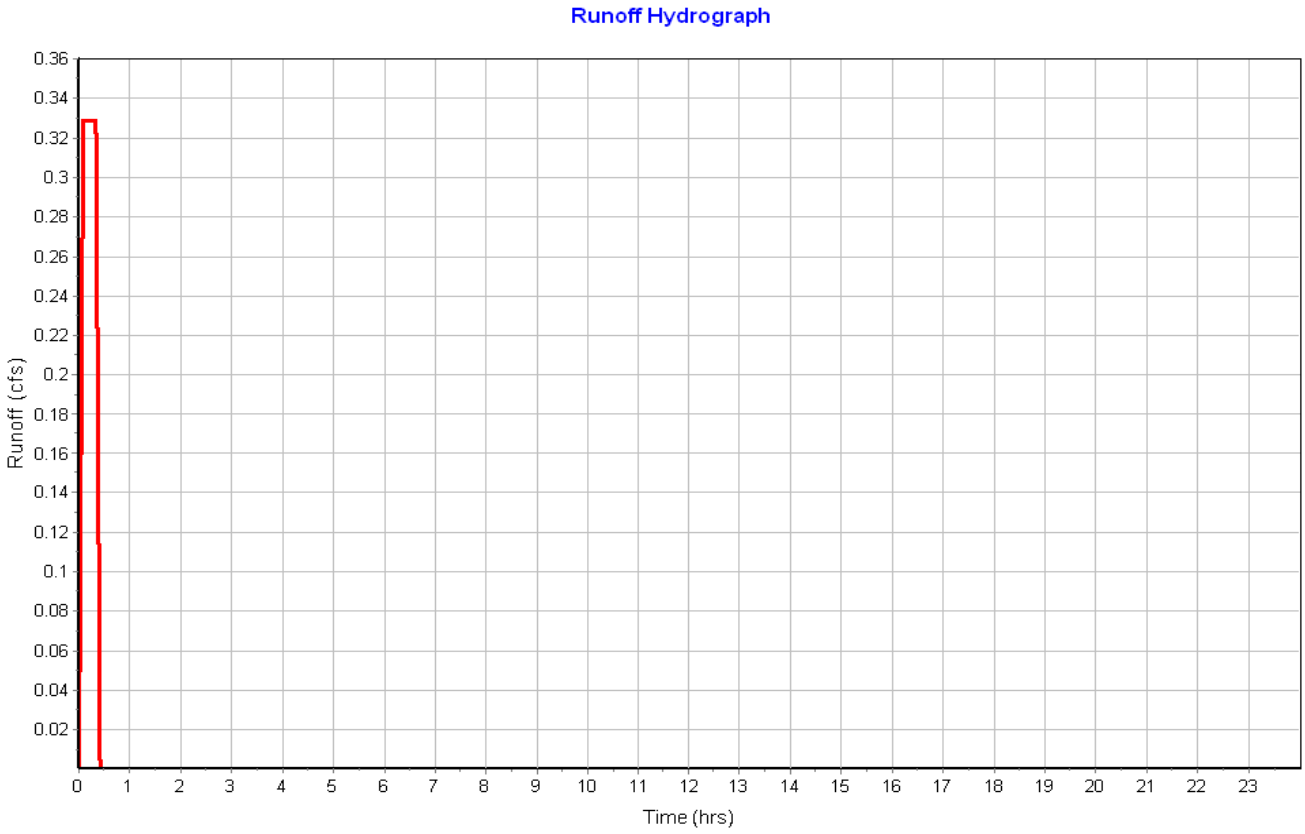
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	0.21	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	0.21		0.34

Subbasin Runoff Results

Total Rainfall (in) 1.53
Total Runoff (in) 0.52
Peak Runoff (cfs) 0.33
Rainfall Intensity 4.600
Weighted Runoff Coefficient 0.3400
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-12



Subbasin : DR-13

Input Data

Area (ac) 0.26
Weighted Runoff Coefficient 0.7200

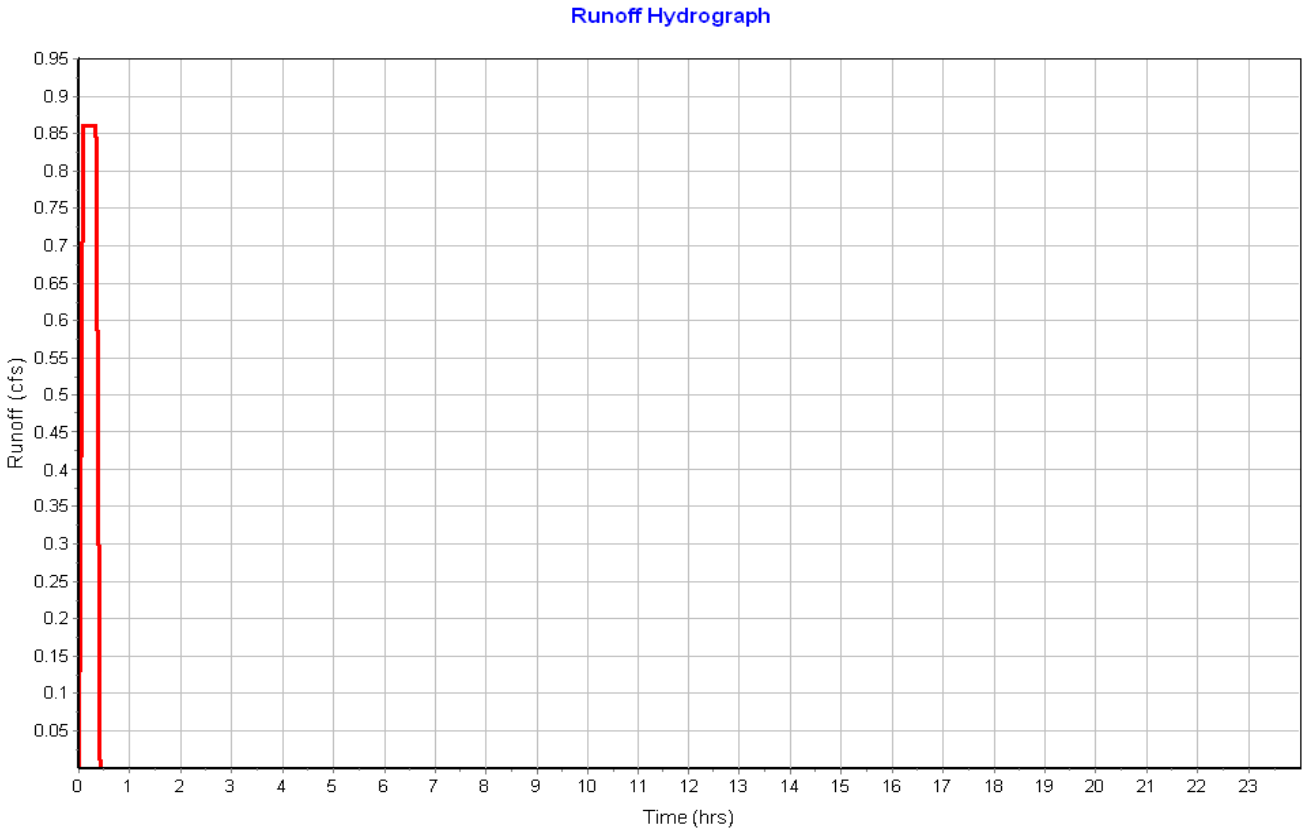
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.26	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.26		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.53
Total Runoff (in) 1.10
Peak Runoff (cfs) 0.86
Rainfall Intensity 4.600
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-13



Subbasin : DR-14

Input Data

Area (ac) 1.80
Weighted Runoff Coefficient 0.7200

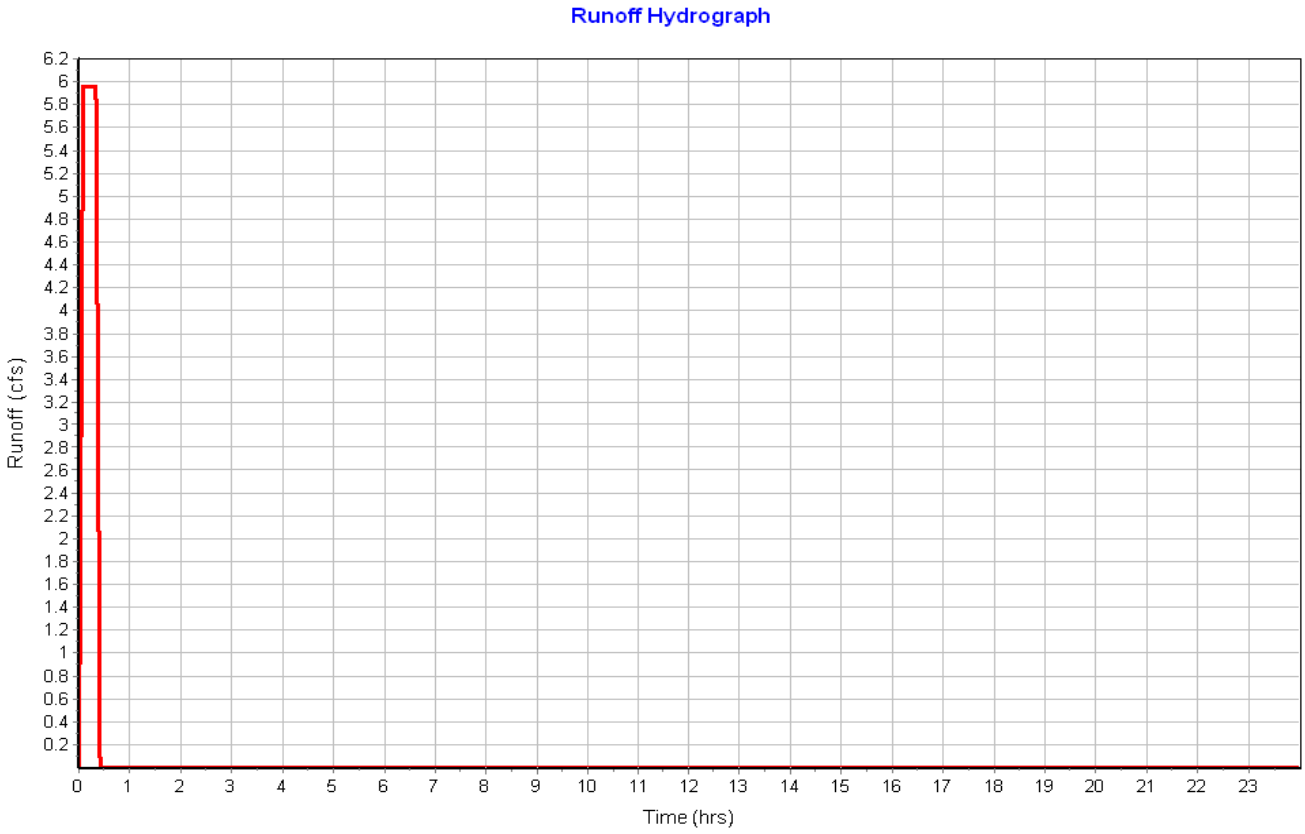
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	1.80	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	1.80		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.53
Total Runoff (in) 1.10
Peak Runoff (cfs) 5.96
Rainfall Intensity 4.600
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-14



Subbasin : PRE-DEVELOPMENT

Input Data

Area (ac) 1.96
Weighted Runoff Coefficient 0.3400

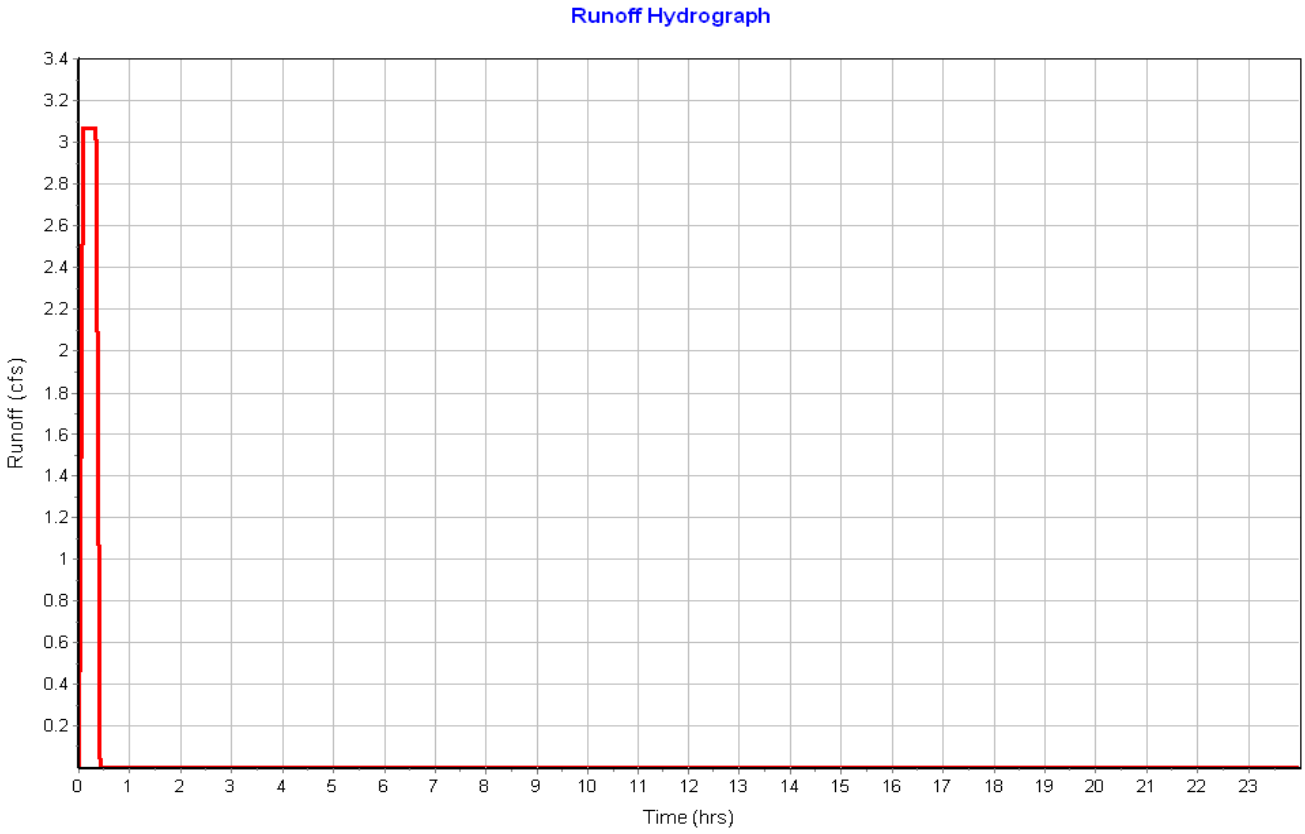
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	1.96	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	1.96		0.34

Subbasin Runoff Results

Total Rainfall (in) 1.53
Total Runoff (in) 0.52
Peak Runoff (cfs) 3.07
Rainfall Intensity 4.600
Weighted Runoff Coefficient 0.3400
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : PRE-DEVELOPMENT



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 (in)
1	AI05	508.11	512.70	4.59	508.11	0.00	512.70	0.00	10.00	43.08
2	AI12	494.50	500.50	6.00	494.50	0.00	500.50	0.00	0.00	58.92
3	AI13	505.61	511.44	5.83	505.61	0.00	511.44	0.00	10.00	58.10
4	FE14	500.60	501.85	1.25	500.60	0.00	501.85	0.00	0.00	3.04
5	GI06	505.16	509.76	4.60	505.16	0.00	509.76	0.00	10.00	42.01
6	GI07	508.36	512.86	4.50	508.36	0.00	512.86	0.00	10.00	42.00
7	GI09	498.44	505.24	6.80	498.44	0.00	505.24	0.00	10.00	42.70
8	GI10	508.46	512.96	4.50	508.46	0.00	512.96	0.00	10.00	42.07
9	Jun-01	497.25	504.00	6.75	497.25	0.00	0.00	-504.00	0.00	0.00
10	MH04	498.18	510.20	12.02	498.18	0.00	510.20	0.00	10.00	53.17
11	PRE-JUNCT	500.00	505.00	5.00	500.00	0.00	0.00	-505.00	0.00	0.00
12	YD01	496.94	498.67	1.73	496.94	0.00	0.00	-498.67	0.00	8.04

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	AI05	0.89	0.89	508.38	0.27	0.00	4.32	508.11	0.00	0 00:05	0 00:00	0.00	0.00
2	AI12	7.16	0.33	495.32	0.82	0.00	5.18	494.51	0.01	0 00:20	0 00:00	0.00	0.00
3	AI13	0.86	0.86	505.83	0.22	0.00	5.61	505.61	0.00	0 00:05	0 00:00	0.00	0.00
4	FE14	5.96	5.96	501.16	0.56	0.00	0.70	500.61	0.01	0 00:05	0 00:00	0.00	0.00
5	GI06	0.89	0.40	505.50	0.34	0.00	4.26	505.26	0.10	0 00:12	0 00:00	0.00	0.00
6	GI07	0.50	0.50	508.57	0.21	0.00	4.29	508.36	0.00	0 00:05	0 00:00	0.00	0.00
7	GI09	1.09	0.60	500.85	2.41	0.00	4.38	500.68	2.24	0 00:20	0 00:00	0.00	0.00
8	GI10	0.50	0.50	508.63	0.17	0.00	4.33	508.46	0.00	0 00:05	0 00:00	0.00	0.00
9	Jun-01	0.61	0.00	497.53	0.28	0.00	6.47	497.28	0.03	0 00:24	0 00:00	0.00	0.00
10	MH04	1.79	0.00	505.11	6.93	0.00	5.09	504.78	6.60	0 00:20	0 00:00	0.00	0.00
11	PRE-JUNCT	3.07	3.07	500.31	0.31	0.00	4.69	500.00	0.00	0 00:05	0 00:00	0.00	0.00
12	YD01	1.01	0.44	497.22	0.28	0.00	1.45	496.97	0.03	0 00:24	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 (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate
1	01-OUT	49.91	496.94	0.00	493.73	0.00	3.21	6.4300	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
2	10-9	172.65	508.45	-0.01	500.68	2.24	7.77	4.5000	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
3	12-EX	58.54	494.34	-0.16	493.26	0.00	1.08	1.8400	CIRCULAR	15.000	15.000	0.0130	0.5000	0.5000	0.0000	0.00	No
4	13-12	236.52	505.60	-0.01	494.50	0.00	11.10	4.6900	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
5	14-12	76.28	500.60	0.00	494.50	0.00	6.10	8.0000	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
6	2-1	30.15	497.25	0.00	496.94	0.00	0.31	1.0300	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
7	4-3	19.97	498.18	0.00	497.25	0.00	0.93	4.6800	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
8	5-4	133.63	508.11	0.00	504.77	6.59	3.34	2.5000	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
9	6-4	38.77	505.16	0.00	504.77	6.59	0.39	1.0100	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
10	7-6	137.50	508.36	0.00	505.26	0.10	3.10	2.2500	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
11	9-8	43.70	498.43	-0.01	498.00	0.75	0.43	0.9800	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
12	PRE-LINK	50.00	500.00	0.00	499.00	0.00	1.00	2.0000	CIRCULAR	60.000	60.000	0.0120	0.5000	0.5000	0.0000	0.00	No

No. of Barrels
1
1
1
1
1
1
1
1
1
1
1
1

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	01-OUT	1.01	0 00:20	9.04	0.11	7.61	0.11	0.23	0.23	0.00		Calculated
2	10-9	0.50	0 00:20	7.56	0.07	8.70	0.33	0.17	0.17	0.00		Calculated
3	12-EX	7.16	0 00:20	9.40	0.76	8.47	0.12	0.82	0.65	0.00		Calculated
4	13-12	0.87	0 00:20	7.72	0.11	10.77	0.37	0.23	0.23	0.00		Calculated
5	14-12	5.97	0 00:20	10.08	0.59	14.68	0.09	0.55	0.55	0.00		Calculated
6	2-1	0.61	0 00:24	3.61	0.17	3.43	0.15	0.28	0.28	0.00		Calculated
7	4-3	1.79	0 00:20	7.70	0.23	7.99	0.04	0.33	0.33	0.00		Calculated
8	5-4	0.90	0 00:20	5.63	0.16	8.02	0.28	0.27	0.27	0.00		Calculated
9	6-4	0.89	0 00:20	3.57	0.25	3.79	0.17	0.34	0.34	0.00		Calculated
10	7-6	0.50	0 00:20	5.35	0.09	6.81	0.34	0.21	0.21	0.00		Calculated
11	9-8	1.09	0 00:20	3.56	0.31	4.00	0.18	0.38	0.38	0.00		Calculated
12	PRE-LINK	3.07	0 00:20	399.01	0.01	6.10	0.14	0.31	0.06	0.00		Calculated

Storage Nodes

Storage Node : OS02

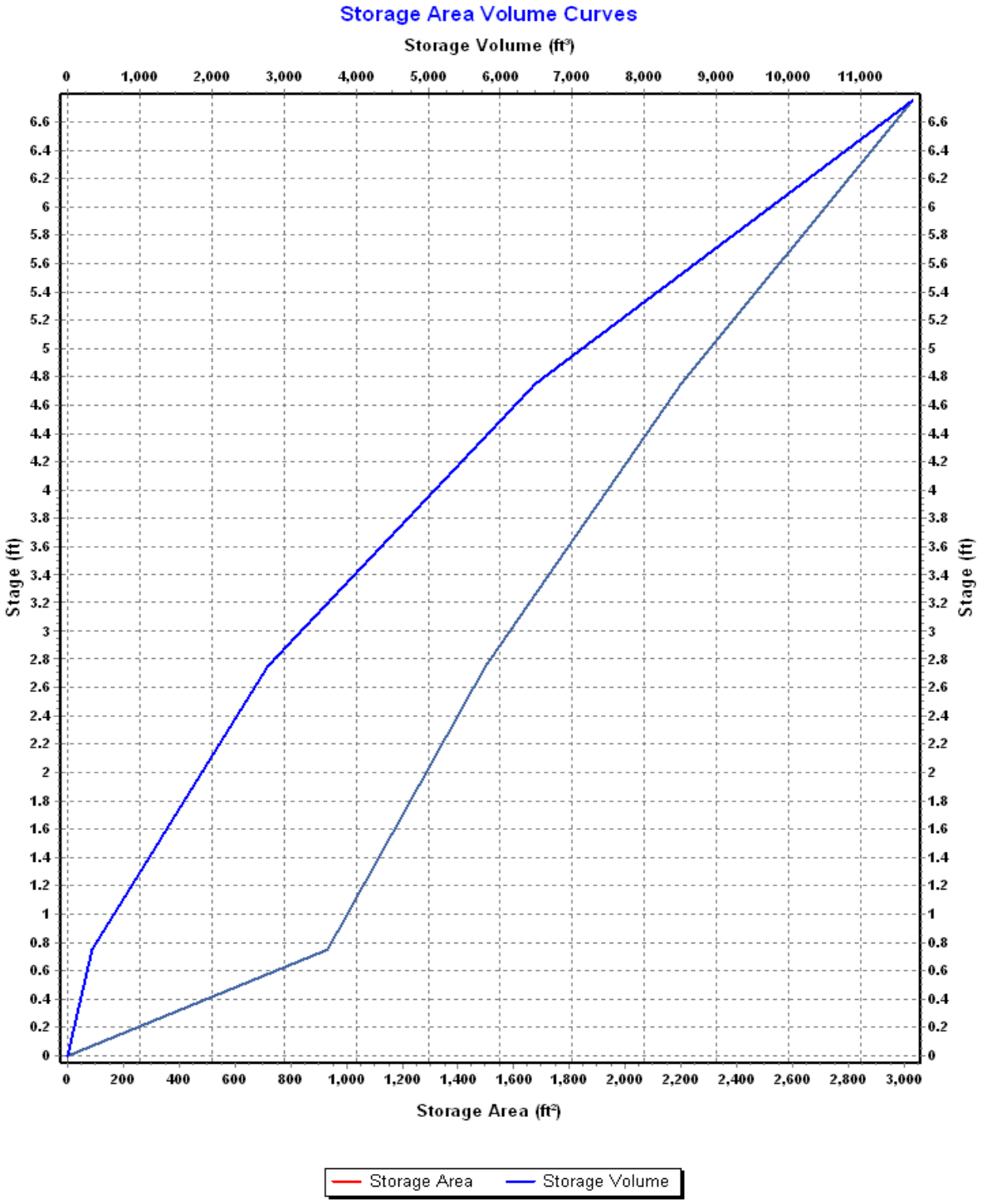
Input Data

Invert Elevation (ft)	497.25
Max (Rim) Elevation (ft)	504.00
Max (Rim) Offset (ft)	6.75
Initial Water Elevation (ft)	497.25
Initial Water Depth (ft)	0.00
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : Storage-01

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	0	0.000
0.75	930	348.75
2.75	1500	2778.75
4.75	2200	6478.75
6.75	3030	11708.75


Storage Area Volume Curves
Storage Volume (ft³)
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
11,000
Stage (ft)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3
3.2
3.4
3.6
3.8
4
4.2
4.4
4.6
4.8
5
5.2
5.4
5.6
5.8
6
6.2
6.4
6.6
Storage Area (ft²)
0
200
400
600
800
1,000
1,200
1,400
1,600
1,800
2,000
2,200
2,400
2,600
2,800
3,000
Storage Area
Storage Volume

Storage Node : OS02 (continued)

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	501.50	4.25	12.00	1.00	3.33

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	Orifice-01	Side	CIRCULAR	No	4.00			498.00	0.61

Output Summary Results

Peak Inflow (cfs)	3.02
Peak Lateral Inflow (cfs)	0.14
Peak Outflow (cfs)	0.61
Peak Exfiltration Flow Rate (cfm)	0.00
Max HGL Elevation Attained (ft)	500.20
Max HGL Depth Attained (ft)	2.95
Average HGL Elevation Attained (ft)	498.11
Average HGL Depth Attained (ft)	0.86
Time of Max HGL Occurrence (days hh:mm)	0 00:24
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	SSA - GALAXY-Mod.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Modified Rational
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Kinematic Wave
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	NO

Analysis Options

Start Analysis On	Feb 01, 2022	00:00:00
End Analysis On	Feb 02, 2022	00:00:00
Start Reporting On	Feb 01, 2022	00:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	0
Subbasins	11
Nodes	16
Junctions	12
Outfalls	3
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	14
Channels	0
Pipes	12
Pumps	0
Orifices	1
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

Rainfall Intensity	3.1 in/hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Weighted Runoff Coefficient	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DR-01	0.28	0.3400	1.03	0.35	0.10	0.30	0 00:05:00
2	DR-02	0.09	0.3400	1.03	0.35	0.03	0.10	0 00:05:00
3	DR-05	0.27	0.7200	1.03	0.74	0.20	0.60	0 00:05:00
4	DR-06	0.12	0.7200	1.03	0.74	0.09	0.27	0 00:05:00
5	DR-07	0.15	0.7200	1.03	0.74	0.11	0.34	0 00:05:00
6	DR-09	0.18	0.7200	1.03	0.74	0.13	0.40	0 00:05:00
7	DR-10	0.15	0.7200	1.03	0.74	0.11	0.34	0 00:05:00
8	DR-12	0.21	0.3400	1.03	0.35	0.07	0.22	0 00:05:00
9	DR-13	0.26	0.7200	1.03	0.74	0.19	0.58	0 00:05:00
10	DR-14	1.80	0.7200	1.03	0.74	1.34	4.02	0 00:05:00
11	PRE-DEVELOPMENT	1.96	0.3400	1.03	0.35	0.69	2.07	0 00:05:00

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	AI05	Junction	508.11	512.70	508.11	512.70	10.00	0.60	508.33	0.00	4.37	0 00:00	0.00	0.00
2	AI12	Junction	494.50	500.50	494.50	500.50	0.00	4.82	495.13	0.00	5.37	0 00:00	0.00	0.00
3	AI13	Junction	505.61	511.44	505.61	511.44	10.00	0.58	505.79	0.00	5.65	0 00:00	0.00	0.00
4	FE14	Junction	500.60	501.85	500.60	501.85	0.00	4.02	501.04	0.00	0.81	0 00:00	0.00	0.00
5	GI06	Junction	505.16	509.76	505.16	509.76	10.00	0.60	505.44	0.00	4.32	0 00:00	0.00	0.00
6	GI07	Junction	508.36	512.86	508.36	512.86	10.00	0.33	508.53	0.00	4.33	0 00:00	0.00	0.00
7	GI09	Junction	498.44	505.24	498.44	505.24	10.00	0.74	500.82	0.00	4.41	0 00:00	0.00	0.00
8	GI10	Junction	508.46	512.96	508.46	512.96	10.00	0.33	508.60	0.00	4.36	0 00:00	0.00	0.00
9	Jun-01	Junction	497.25	504.00	497.25	0.00	0.00	0.49	497.50	0.00	6.50	0 00:00	0.00	0.00
10	MH04	Junction	498.18	510.20	498.18	510.20	10.00	1.21	505.05	0.00	5.15	0 00:00	0.00	0.00
11	PRE-JUNCT	Junction	500.00	505.00	500.00	0.00	0.00	2.07	500.26	0.00	4.74	0 00:00	0.00	0.00
12	YD01	Junction	496.94	498.67	496.94	0.00	0.00	0.76	497.19	0.00	1.48	0 00:00	0.00	0.00
13	EX-NE	Outfall	493.26					4.82	493.89					
14	Outfall	Outfall	493.73					0.76	493.93					
15	PRE-OUT	Outfall	499.00					2.07	499.26					
16	OS02	Storage Node	497.25	504.00	497.25		0.00	2.04	499.48				0.00	0.00

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 Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	01-OUT	Pipe	YD01	Outfall	49.91	496.94	493.73	6.4300	12.000	0.0130	0.76	9.04	0.08	6.99	0.20	0.20	0.00	Calculated
2	10-9	Pipe	GI10	GI09	172.65	508.45	500.68	4.5000	12.000	0.0130	0.34	7.56	0.04	7.94	0.14	0.14	0.00	Calculated
3	12-EX	Pipe	AI12	EX-NE	58.54	494.34	493.26	1.8400	15.000	0.0130	4.82	9.40	0.51	7.74	0.63	0.51	0.00	Calculated
4	13-12	Pipe	AI13	AI12	236.52	505.60	494.50	4.6900	12.000	0.0130	0.59	7.72	0.08	9.76	0.19	0.19	0.00	Calculated
5	14-12	Pipe	FE14	AI12	76.28	500.60	494.50	8.0000	12.000	0.0130	4.02	10.08	0.40	13.50	0.44	0.44	0.00	Calculated
6	2-1	Pipe	Jun-01	YD01	30.15	497.25	496.94	1.0300	12.000	0.0130	0.49	3.61	0.14	3.22	0.25	0.25	0.00	Calculated
7	4-3	Pipe	MH04	OS02	19.97	498.18	497.25	4.6800	12.000	0.0130	1.21	7.70	0.16	7.15	0.27	0.27	0.00	Calculated
8	5-4	Pipe	AI05	MH04	133.63	508.11	504.77	2.5000	12.000	0.0130	0.61	5.63	0.11	7.30	0.22	0.22	0.00	Calculated
9	6-4	Pipe	GI06	MH04	38.77	505.16	504.77	1.0100	12.000	0.0130	0.60	3.57	0.17	3.39	0.28	0.28	0.00	Calculated
10	7-6	Pipe	GI07	GI06	137.50	508.36	505.26	2.2500	12.000	0.0130	0.34	5.35	0.06	6.26	0.17	0.17	0.00	Calculated
11	9-8	Pipe	GI09	OS02	43.70	498.43	498.00	0.9800	12.000	0.0130	0.74	3.56	0.21	3.59	0.31	0.31	0.00	Calculated
12	PRE-LINK	Pipe	PRE-JUNCT	PRE-OUT	50.00	500.00	499.00	2.0000	60.000	0.0120	2.07	399.01	0.01	5.35	0.26	0.05	0.00	Calculated
13	Orifice-01	Orifice	OS02	Jun-01		497.25	497.25		4.000		0.49							
14	Weir-01	Weir	OS02	Jun-01		497.25	497.25				0.00							

Subbasin Hydrology

Subbasin : DR-01

Input Data

Area (ac) 0.28
Weighted Runoff Coefficient 0.3400

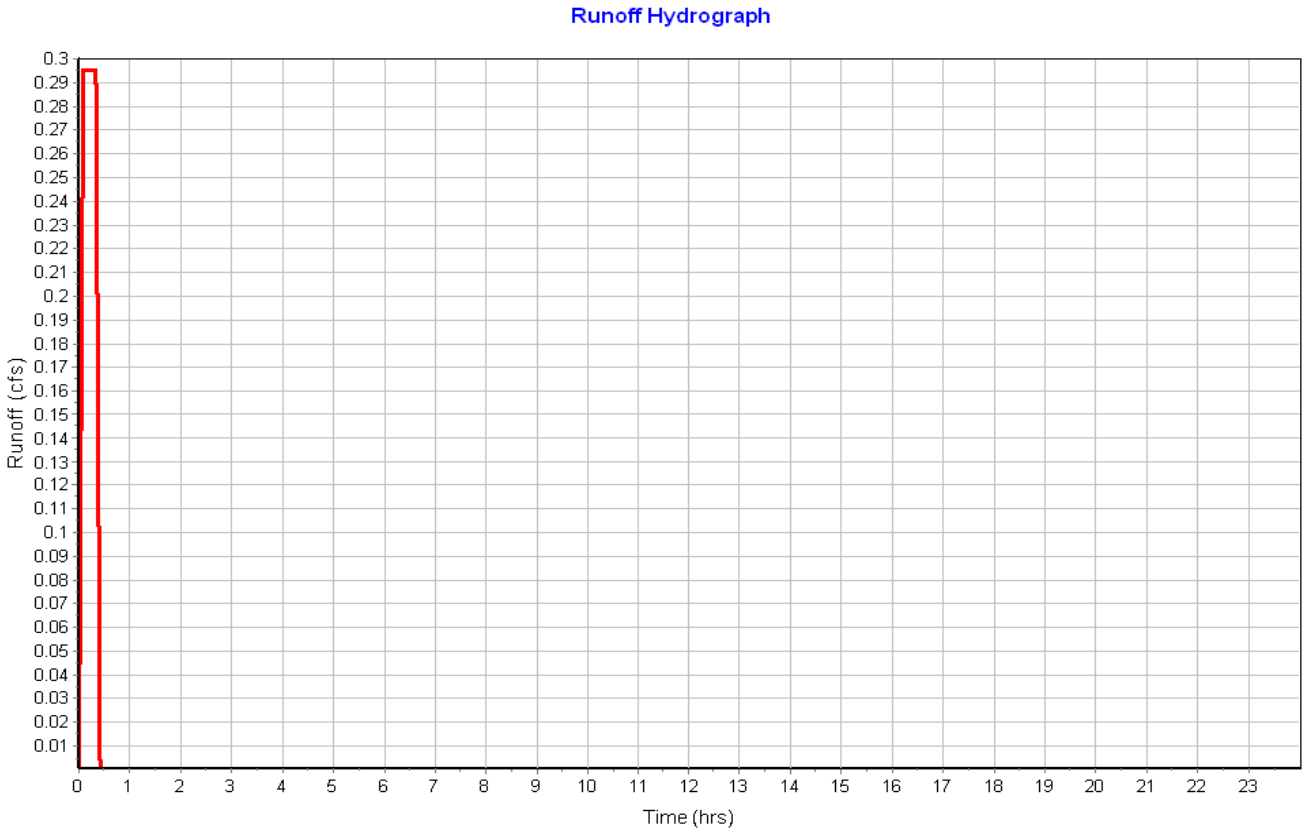
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	0.28	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	0.28		0.34

Subbasin Runoff Results

Total Rainfall (in) 1.03
Total Runoff (in) 0.35
Peak Runoff (cfs) 0.30
Rainfall Intensity 3.100
Weighted Runoff Coefficient 0.3400
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-01



Subbasin : DR-02

Input Data

Area (ac)	0.09
Weighted Runoff Coefficient	0.3400

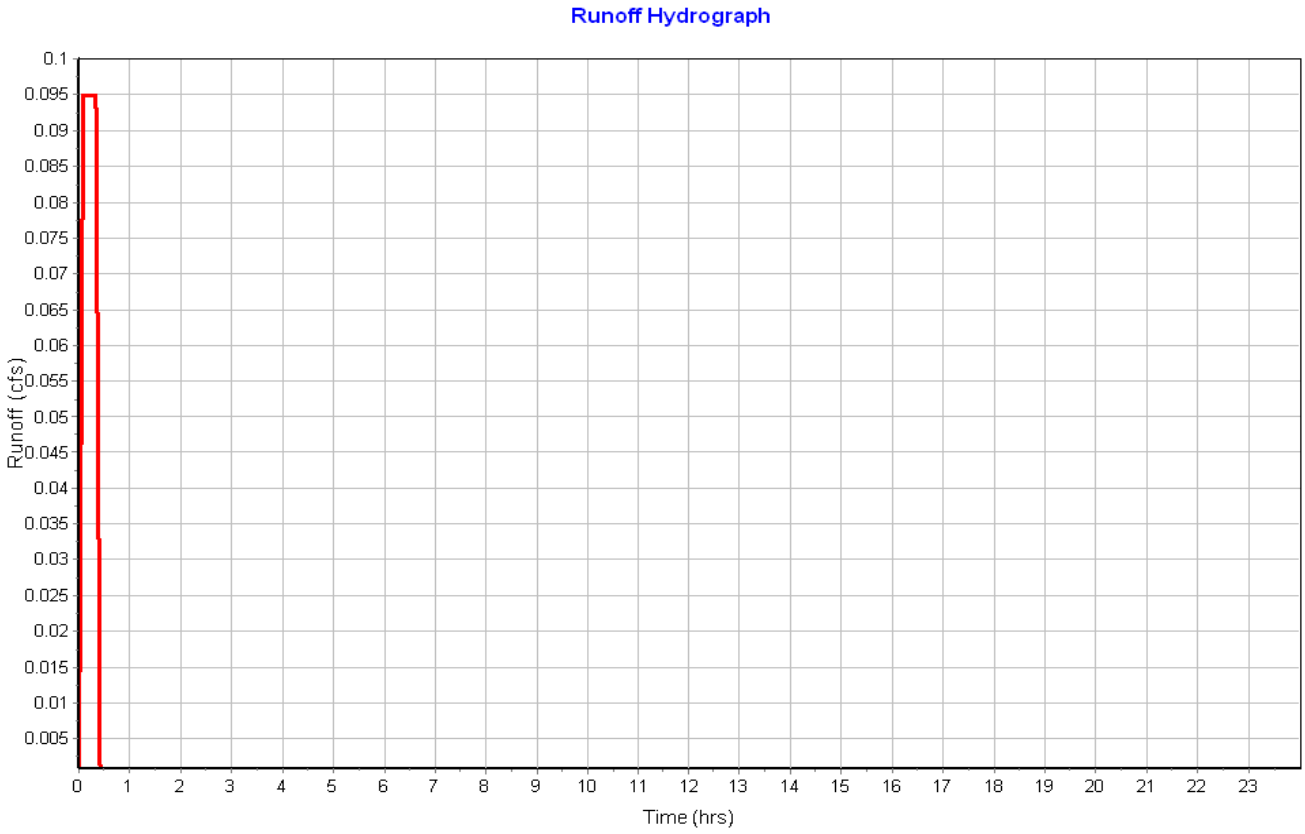
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	0.09	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	0.09		0.34

Subbasin Runoff Results

Total Rainfall (in)	1.03
Total Runoff (in)	0.35
Peak Runoff (cfs)	0.10
Rainfall Intensity	3.100
Weighted Runoff Coefficient	0.3400
Time of Concentration (days hh:mm:ss)	0 00:05:00

Subbasin : DR-02



Subbasin : DR-05

Input Data

Area (ac) 0.27
Weighted Runoff Coefficient 0.7200

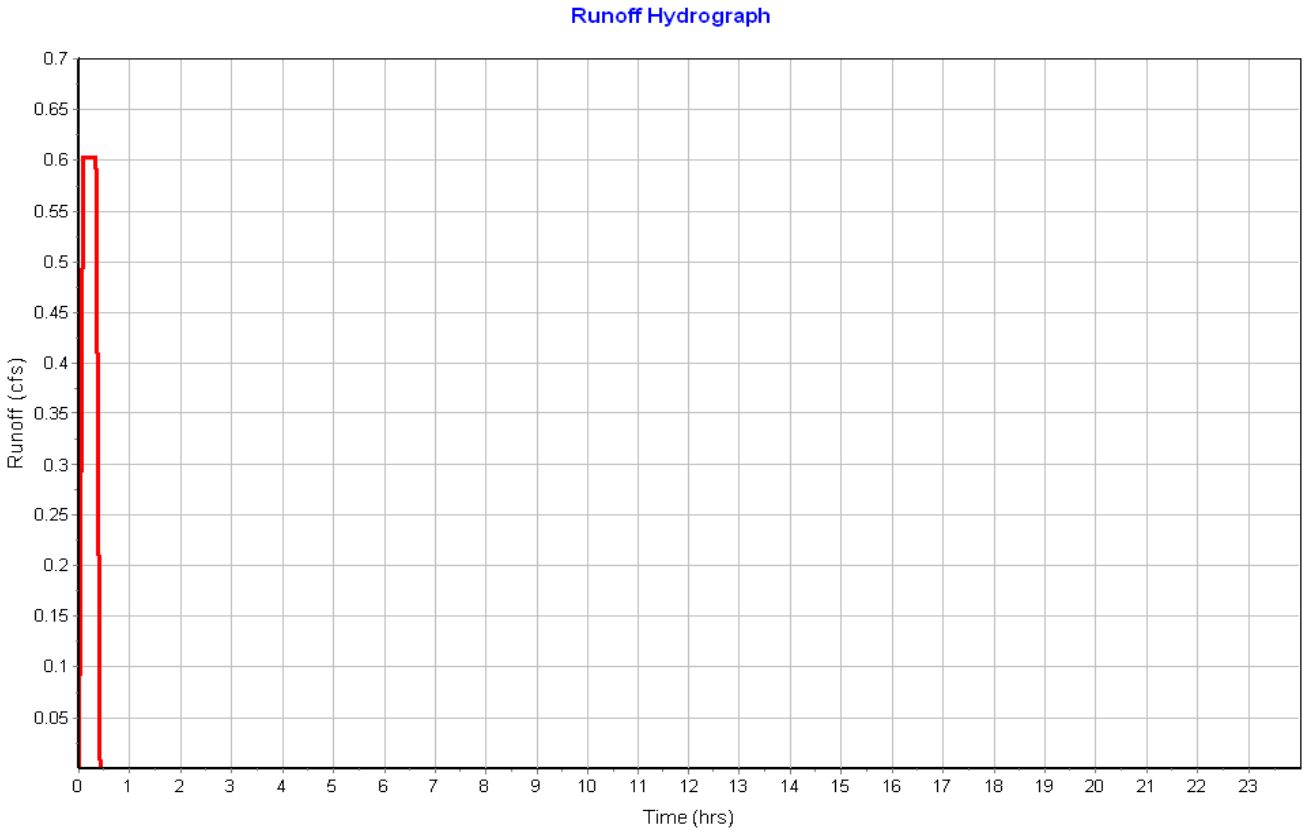
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.27	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.27		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.03
Total Runoff (in) 0.74
Peak Runoff (cfs) 0.60
Rainfall Intensity 3.100
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-05



Subbasin : DR-06

Input Data

Area (ac) 0.12
Weighted Runoff Coefficient 0.7200

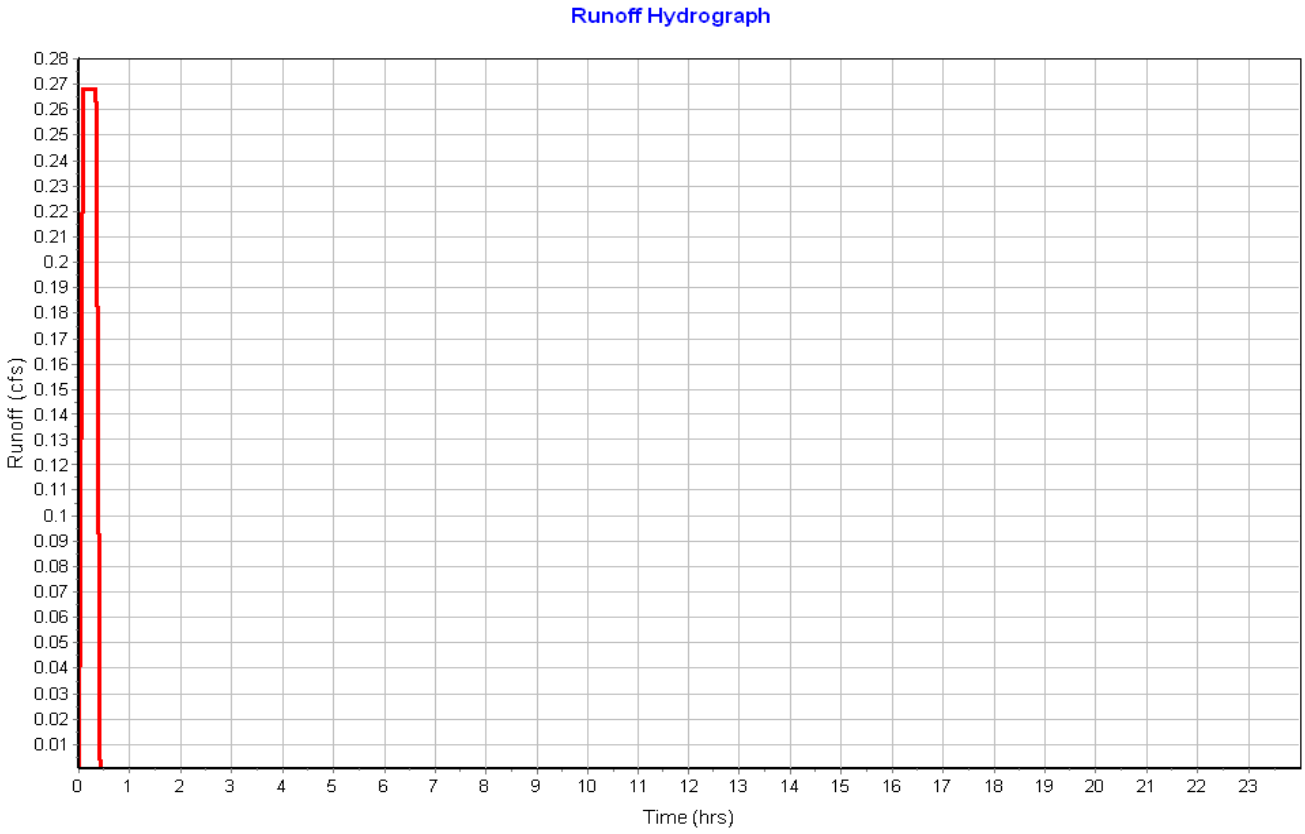
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.12	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.12		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.03
Total Runoff (in) 0.74
Peak Runoff (cfs) 0.27
Rainfall Intensity 3.100
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-06



Subbasin : DR-07

Input Data

Area (ac) 0.15
Weighted Runoff Coefficient 0.7200

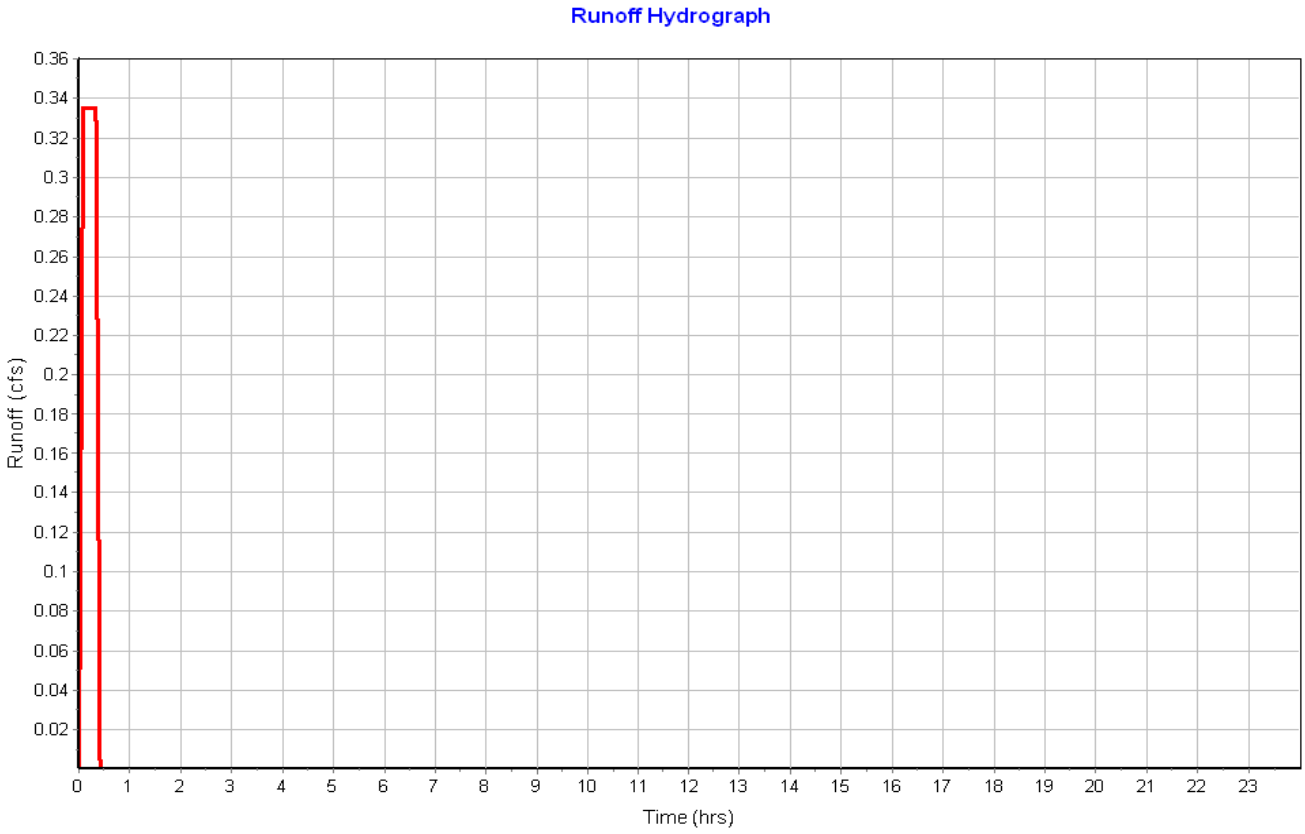
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.15	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.15		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.03
Total Runoff (in) 0.74
Peak Runoff (cfs) 0.34
Rainfall Intensity 3.100
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-07



Subbasin : DR-09

Input Data

Area (ac) 0.18
Weighted Runoff Coefficient 0.7200

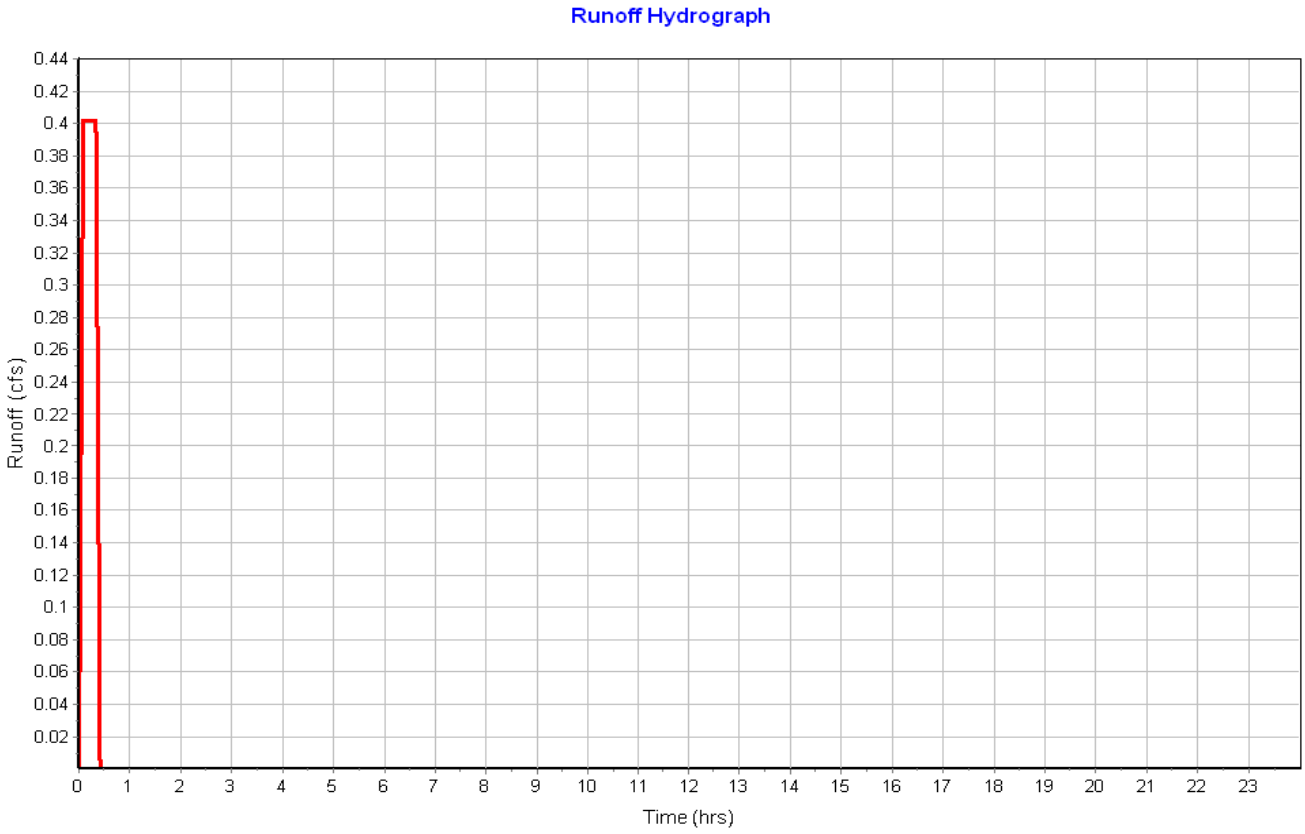
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.18	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.18		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.03
Total Runoff (in) 0.74
Peak Runoff (cfs) 0.40
Rainfall Intensity 3.100
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-09



Subbasin : DR-10

Input Data

Area (ac) 0.15
Weighted Runoff Coefficient 0.7200

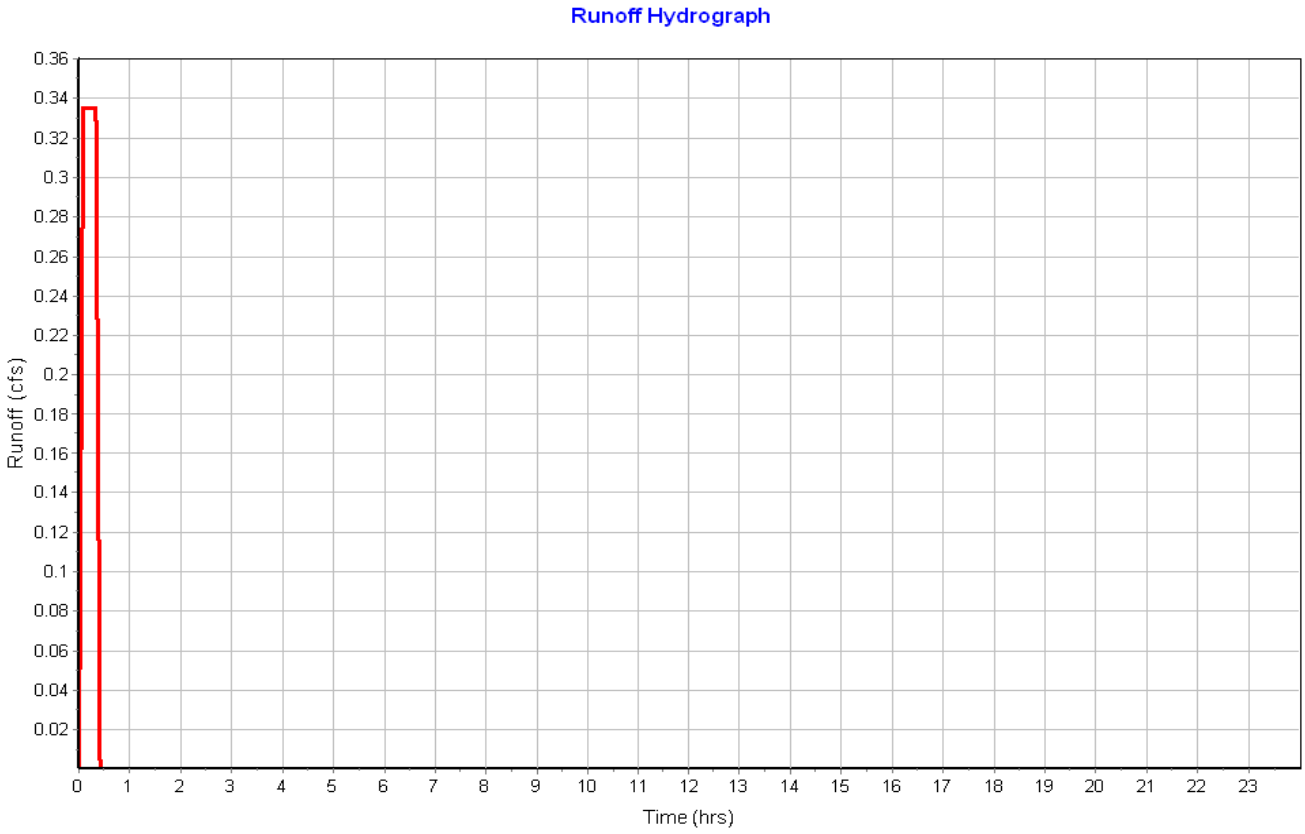
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.15	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.15		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.03
Total Runoff (in) 0.74
Peak Runoff (cfs) 0.34
Rainfall Intensity 3.100
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-10



Subbasin : DR-12

Input Data

Area (ac) 0.21
Weighted Runoff Coefficient 0.3400

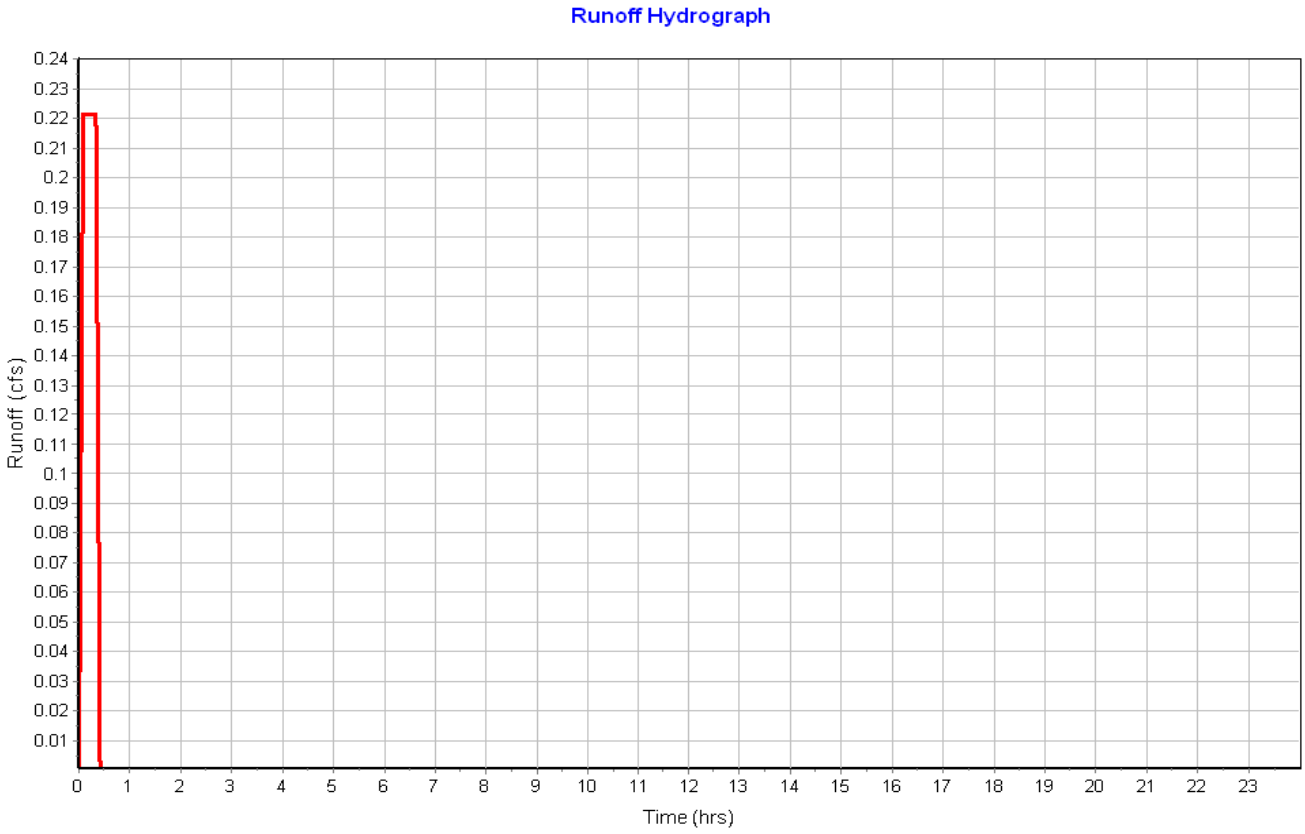
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	0.21	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	0.21		0.34

Subbasin Runoff Results

Total Rainfall (in) 1.03
Total Runoff (in) 0.35
Peak Runoff (cfs) 0.22
Rainfall Intensity 3.100
Weighted Runoff Coefficient 0.3400
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-12



Subbasin : DR-13

Input Data

Area (ac) 0.26
Weighted Runoff Coefficient 0.7200

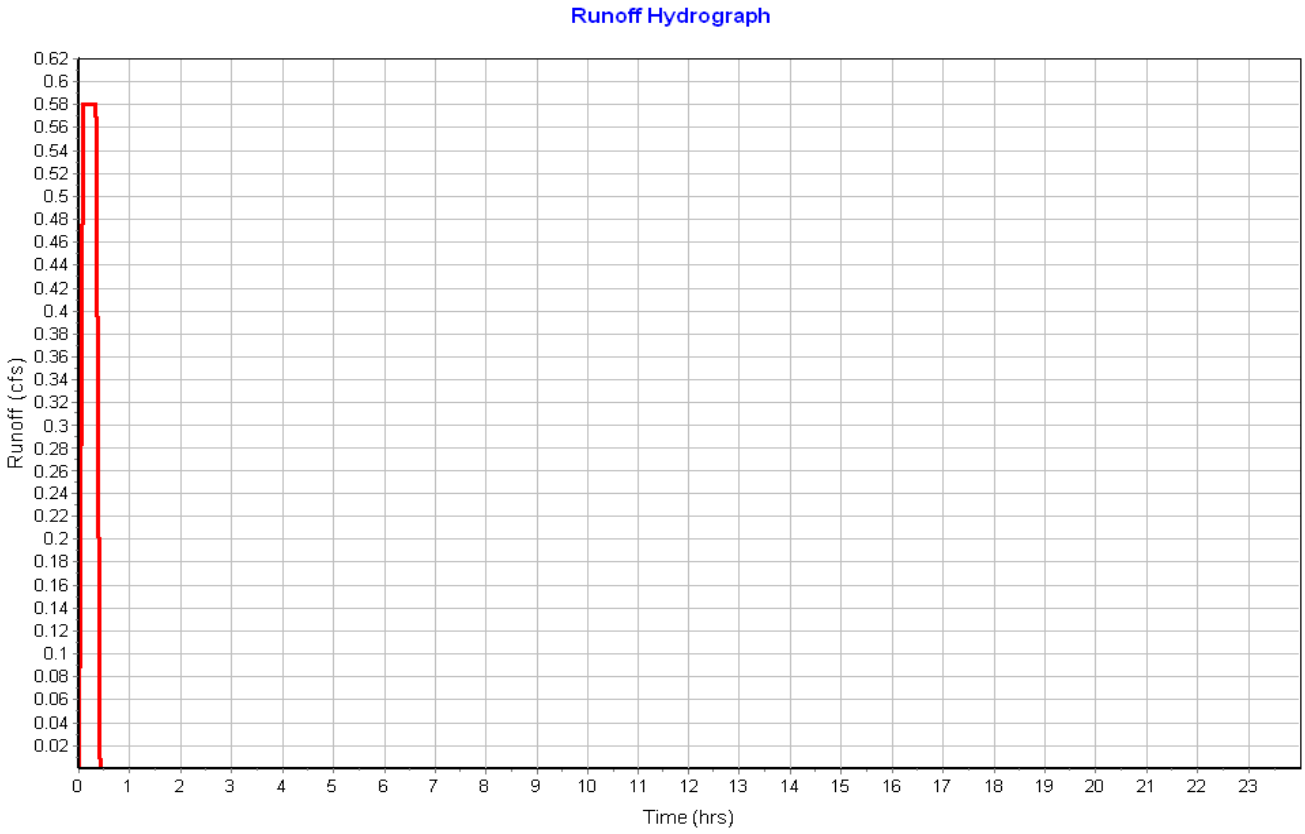
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	0.26	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	0.26		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.03
Total Runoff (in) 0.74
Peak Runoff (cfs) 0.58
Rainfall Intensity 3.100
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-13



Subbasin : DR-14

Input Data

Area (ac) 1.80
Weighted Runoff Coefficient 0.7200

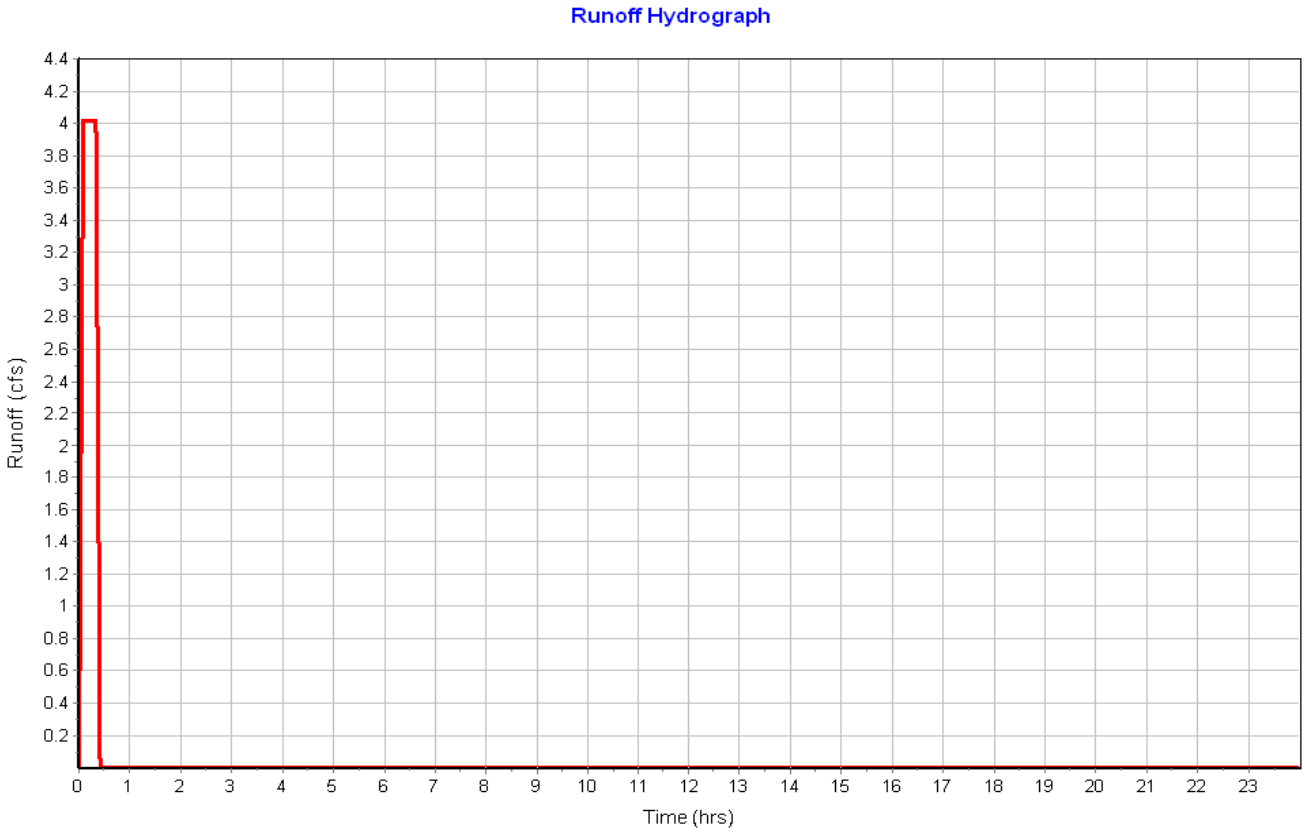
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Commercial, less than 25 years	1.80	C (0-2%)	0.72
Composite Area & Weighted Runoff Coeff.	1.80		0.72

Subbasin Runoff Results

Total Rainfall (in) 1.03
Total Runoff (in) 0.74
Peak Runoff (cfs) 4.02
Rainfall Intensity 3.100
Weighted Runoff Coefficient 0.7200
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : DR-14



Subbasin : PRE-DEVELOPMENT

Input Data

Area (ac) 1.96
Weighted Runoff Coefficient 0.3400

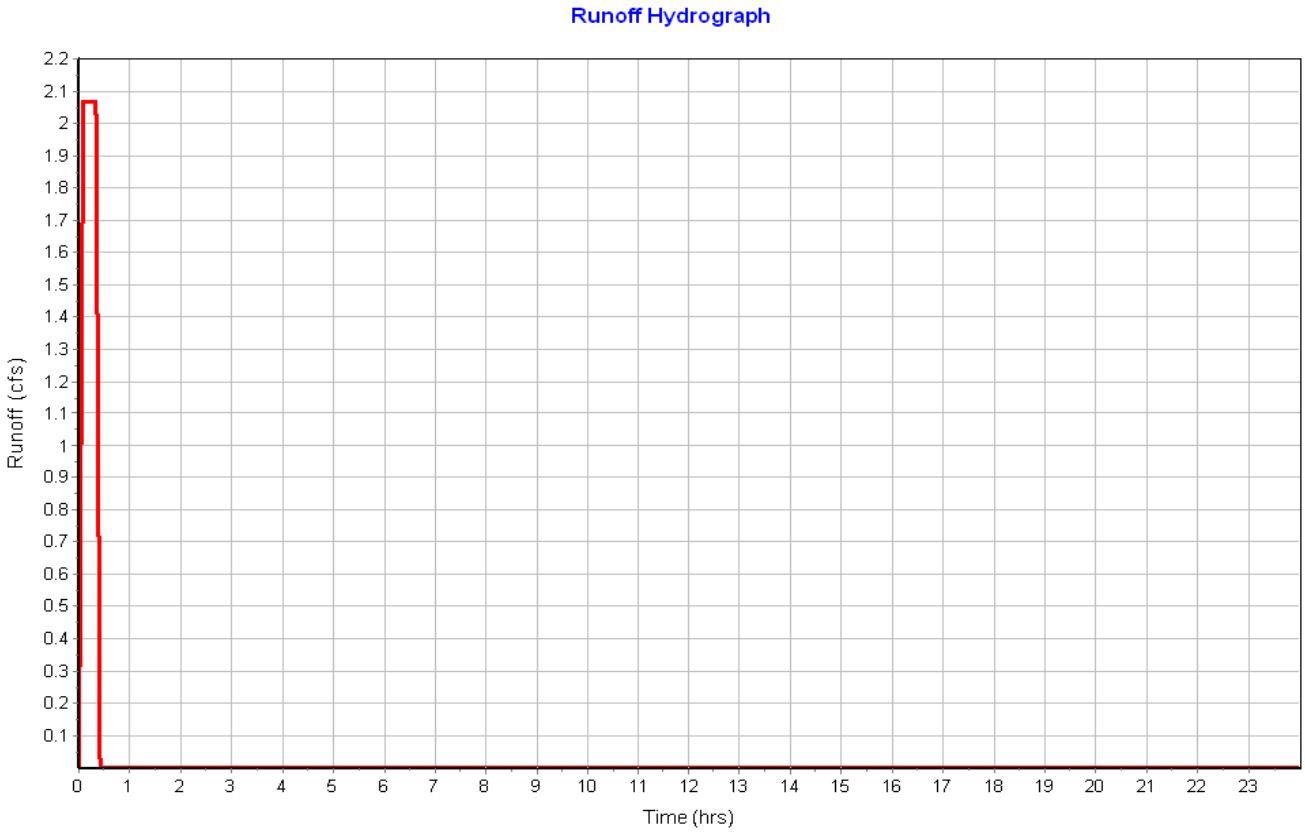
Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
Pasture, less than 25 years	1.96	C (2-6%)	0.34
Composite Area & Weighted Runoff Coeff.	1.96		0.34

Subbasin Runoff Results

Total Rainfall (in) 1.03
Total Runoff (in) 0.35
Peak Runoff (cfs) 2.07
Rainfall Intensity 3.100
Weighted Runoff Coefficient 0.3400
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : PRE-DEVELOPMENT



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 (in)
1	AI05	508.11	512.70	4.59	508.11	0.00	512.70	0.00	10.00	43.08
2	AI12	494.50	500.50	6.00	494.50	0.00	500.50	0.00	0.00	58.92
3	AI13	505.61	511.44	5.83	505.61	0.00	511.44	0.00	10.00	58.10
4	FE14	500.60	501.85	1.25	500.60	0.00	501.85	0.00	0.00	3.04
5	GI06	505.16	509.76	4.60	505.16	0.00	509.76	0.00	10.00	42.01
6	GI07	508.36	512.86	4.50	508.36	0.00	512.86	0.00	10.00	42.00
7	GI09	498.44	505.24	6.80	498.44	0.00	505.24	0.00	10.00	42.70
8	GI10	508.46	512.96	4.50	508.46	0.00	512.96	0.00	10.00	42.07
9	Jun-01	497.25	504.00	6.75	497.25	0.00	0.00	-504.00	0.00	0.00
10	MH04	498.18	510.20	12.02	498.18	0.00	510.20	0.00	10.00	53.17
11	PRE-JUNCT	500.00	505.00	5.00	500.00	0.00	0.00	-505.00	0.00	0.00
12	YD01	496.94	498.67	1.73	496.94	0.00	0.00	-498.67	0.00	8.04

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	AI05	0.60	0.60	508.33	0.22	0.00	4.37	508.11	0.00	0 00:05	0 00:00	0.00	0.00
2	AI12	4.82	0.22	495.13	0.63	0.00	5.37	494.51	0.01	0 00:20	0 00:00	0.00	0.00
3	AI13	0.58	0.58	505.79	0.18	0.00	5.65	505.61	0.00	0 00:05	0 00:00	0.00	0.00
4	FE14	4.02	4.02	501.04	0.44	0.00	0.81	500.61	0.01	0 00:05	0 00:00	0.00	0.00
5	GI06	0.60	0.27	505.44	0.28	0.00	4.32	505.26	0.10	0 00:13	0 00:00	0.00	0.00
6	GI07	0.33	0.33	508.53	0.17	0.00	4.33	508.36	0.00	0 00:05	0 00:00	0.00	0.00
7	GI09	0.74	0.40	500.82	2.38	0.00	4.41	500.68	2.24	0 00:20	0 00:00	0.00	0.00
8	GI10	0.33	0.33	508.60	0.14	0.00	4.36	508.46	0.00	0 00:05	0 00:00	0.00	0.00
9	Jun-01	0.49	0.00	497.50	0.25	0.00	6.50	497.27	0.02	0 00:24	0 00:00	0.00	0.00
10	MH04	1.21	0.00	505.05	6.87	0.00	5.15	504.77	6.59	0 00:20	0 00:00	0.00	0.00
11	PRE-JUNCT	2.07	2.07	500.26	0.26	0.00	4.74	500.00	0.00	0 00:05	0 00:00	0.00	0.00
12	YD01	0.76	0.30	497.19	0.25	0.00	1.48	496.96	0.02	0 00:24	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 (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate
1	01-OUT	49.91	496.94	0.00	493.73	0.00	3.21	6.4300	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
2	10-9	172.65	508.45	-0.01	500.68	2.24	7.77	4.5000	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
3	12-EX	58.54	494.34	-0.16	493.26	0.00	1.08	1.8400	CIRCULAR	15.000	15.000	0.0130	0.5000	0.5000	0.0000	0.00	No
4	13-12	236.52	505.60	-0.01	494.50	0.00	11.10	4.6900	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
5	14-12	76.28	500.60	0.00	494.50	0.00	6.10	8.0000	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
6	2-1	30.15	497.25	0.00	496.94	0.00	0.31	1.0300	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
7	4-3	19.97	498.18	0.00	497.25	0.00	0.93	4.6800	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
8	5-4	133.63	508.11	0.00	504.77	6.59	3.34	2.5000	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
9	6-4	38.77	505.16	0.00	504.77	6.59	0.39	1.0100	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
10	7-6	137.50	508.36	0.00	505.26	0.10	3.10	2.2500	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
11	9-8	43.70	498.43	-0.01	498.00	0.75	0.43	0.9800	CIRCULAR	12.000	12.000	0.0130	0.5000	0.5000	0.0000	0.00	No
12	PRE-LINK	50.00	500.00	0.00	499.00	0.00	1.00	2.0000	CIRCULAR	60.000	60.000	0.0120	0.5000	0.5000	0.0000	0.00	No

No. of Barrels
1
1
1
1
1
1
1
1
1
1
1
1

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	01-OUT	0.76	0 00:20	9.04	0.08	6.99	0.12	0.20	0.20	0.00		Calculated
2	10-9	0.34	0 00:20	7.56	0.04	7.94	0.36	0.14	0.14	0.00		Calculated
3	12-EX	4.82	0 00:20	9.40	0.51	7.74	0.13	0.63	0.51	0.00		Calculated
4	13-12	0.59	0 00:20	7.72	0.08	9.76	0.40	0.19	0.19	0.00		Calculated
5	14-12	4.02	0 00:20	10.08	0.40	13.50	0.09	0.44	0.44	0.00		Calculated
6	2-1	0.49	0 00:24	3.61	0.14	3.22	0.16	0.25	0.25	0.00		Calculated
7	4-3	1.21	0 00:20	7.70	0.16	7.15	0.05	0.27	0.27	0.00		Calculated
8	5-4	0.61	0 00:20	5.63	0.11	7.30	0.31	0.22	0.22	0.00		Calculated
9	6-4	0.60	0 00:20	3.57	0.17	3.39	0.19	0.28	0.28	0.00		Calculated
10	7-6	0.34	0 00:20	5.35	0.06	6.26	0.37	0.17	0.17	0.00		Calculated
11	9-8	0.74	0 00:20	3.56	0.21	3.59	0.20	0.31	0.31	0.00		Calculated
12	PRE-LINK	2.07	0 00:20	399.01	0.01	5.35	0.16	0.26	0.05	0.00		Calculated

Storage Nodes

Storage Node : OS02

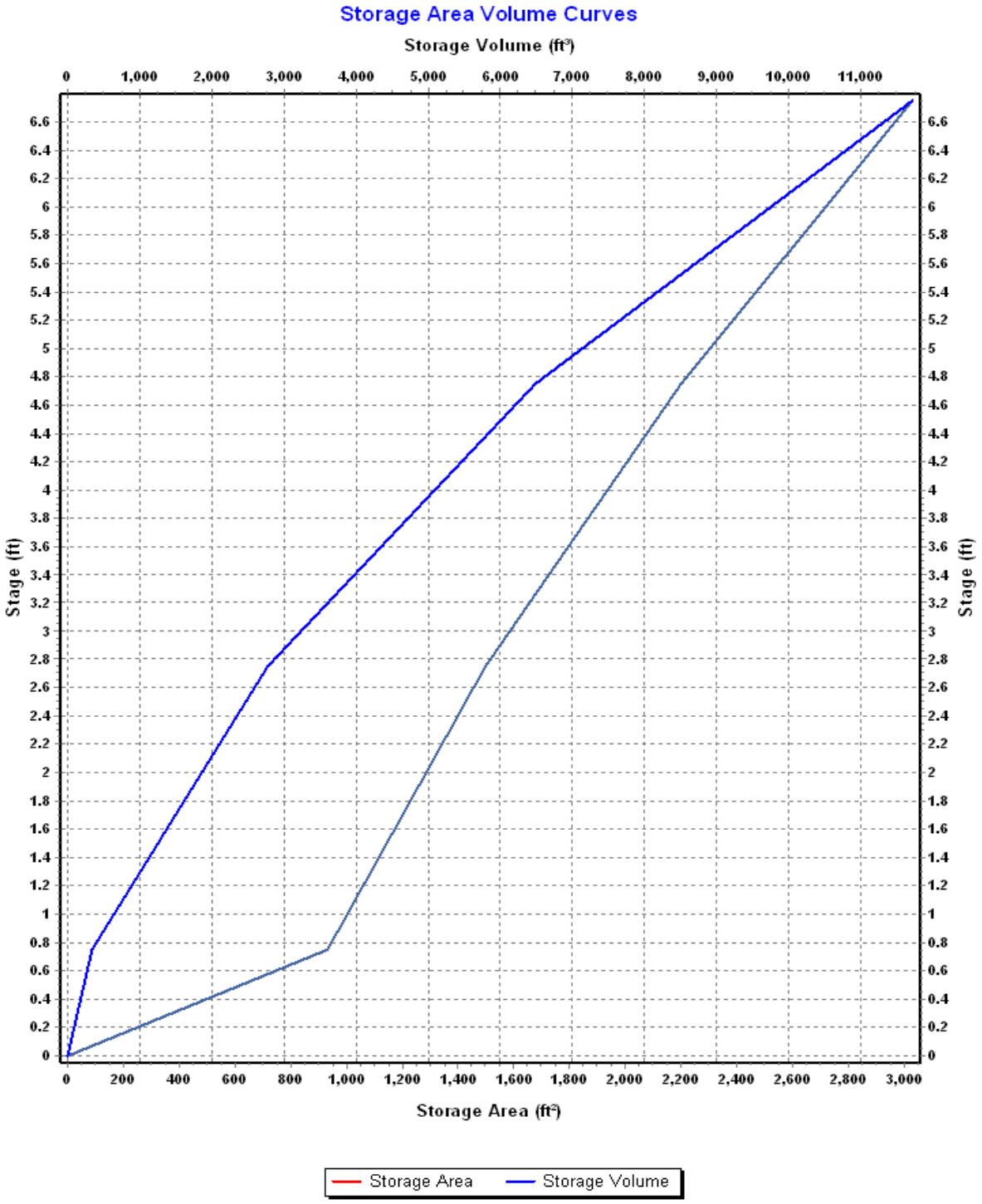
Input Data

Invert Elevation (ft)	497.25
Max (Rim) Elevation (ft)	504.00
Max (Rim) Offset (ft)	6.75
Initial Water Elevation (ft)	497.25
Initial Water Depth (ft)	0.00
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : Storage-01

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	0	0.000
0.75	930	348.75
2.75	1500	2778.75
4.75	2200	6478.75
6.75	3030	11708.75


Storage Area Volume Curves
Storage Volume (ft³)
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
11,000
Stage (ft)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3
3.2
3.4
3.6
3.8
4
4.2
4.4
4.6
4.8
5
5.2
5.4
5.6
5.8
6
6.2
6.4
6.6
Storage Area (ft²)
0
200
400
600
800
1,000
1,200
1,400
1,600
1,800
2,000
2,200
2,400
2,600
2,800
3,000
Storage Area
Storage Volume

Storage Node : OS02 (continued)

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	501.50	4.25	12.00	1.00	3.33

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	Orifice-01	Side	CIRCULAR	No	4.00			498.00	0.61

Output Summary Results

Peak Inflow (cfs)	2.04
Peak Lateral Inflow (cfs)	0.09
Peak Outflow (cfs)	0.49
Peak Exfiltration Flow Rate (cfm)	0.00
Max HGL Elevation Attained (ft)	499.48
Max HGL Depth Attained (ft)	2.23
Average HGL Elevation Attained (ft)	498.06
Average HGL Depth Attained (ft)	0.81
Time of Max HGL Occurrence (days hh:mm)	0 00:24
Total Exfiltration Volume (1000-ft³)	0.000
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0.00