



MERIDIAN
LAND SERVICES, INC.

CIVIL ENGINEERING | LAND SURVEYING | PERMITTING | SOIL & WETLAND MAPPING | SEPTIC DESIGN | ENVIRONMENTAL

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www.MeridianLandServices.com

Stormwater Management Report

Hildreth's Farm Subdivision

Tax Map 248 Lot 8

114 West Road

Canterbury, New Hampshire 03224

Prepared for:

114 West Road LLC

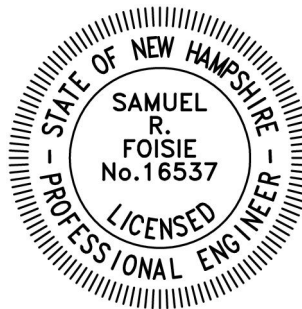
709 Keith Ave

Pembroke, New Hampshire 03275

October 27, 2025

Prepared by: Jasper J. Anderson, EIT

Reviewed by: Samuel R. Foisie, PE



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STORMWATER NARRATIVE

SUBDIVISION PLANS FOR HILDRETH'S FARM

114 West Road
Tax Map 248 Lot 8
Canterbury, New Hampshire 03224

October 27, 2025

I. INTRODUCTION

The following drainage calculations are being provided in support of the proposed condominium development plan located at 114 West Road. The development proposes twenty-six (26) condo lots and three (3) commercial lots. Development of the site also includes 3,246 lf of roadway, driveways, access aisles, and parking areas totaling approximately 195,800 square feet. Ancillary site improvements include a public water supply well, septic systems, electric and communications utility services, stormwater mitigation and landscaping.

II. SITE DESCRIPTION

The site is in western Canterbury on the southern side of West Road and eastern side of Senator Styles Bridges Highway (Interstate 93). The site is vacant land and consists mainly of undeveloped wooded and scrub brush areas. Site topography consists generally of 3-8% slopes and slopes from West Road and Interstate 93 to the western property line and Cold Brook.

The NRCS Web Soil Survey indicates soils onsite consist of Champlain loamy fine sand and Searsport-Chocorua-Naumburg complex, classified as hydrologic soil groups A and D respectively. Further evaluation of the site in the form of test pits and soil borings by Spencer C. Tate, Certified Soil Scientist of this office was performed to prepare a site-specific soil map as required by the New Hampshire Department of Environmental Services (DES) Alteration of Terrain (AoT) Bureau. The results of the subsurface exploration indicate soils onsite consist of the following soil series:

35	Champlain loamy sand	HSG A
116	Finch Sand	HSG C
214	Naumburg loamy fine sand	HSG C
613	Croghan fine sand	HSG B

Test pits onsite indicate seasonal highwater table depths between 10 and >102 inches below existing grade. Please refer to the site-specific soil report for additional information.



Stormwater Narrative - Subdivision Plans Hildreth's Farm
114 West Road, Canterbury, New Hampshire 03224

October 27, 2025

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III. DRAINAGE DESIGN

The proposed development is subject to Town of Canterbury *Land Development Regulations, Section 8.8: Drainage, Appendix A: Typical Construction Standards and Details; Section 3: Storm Water Management, Erosion and Sedimentation Control*, and the NH DES AoT *Env-Wq 1500* requirements. The stormwater mitigation practices have been designed to treat and control runoff generated during the following events: 2-, 25- and 50-year 24-hour storms. Groundwater recharge is provided in accordance with State requirements via the proposed infiltration practices.

The stormwater mitigation system for the site is split between three (3) ponds; Infiltration Basin 'A' (IB-A), Infiltration Basin 'B' (IB-B), and Infiltration Basin 'C' (IB-C). IB-A treats runoff from the commercial lot at the entrance to the site, condominium lots 1-5 and 19-26, just under half of Farmhouse Lane, and the Phase 1 portion of Oakmont Drive. IB-B treats runoff for lots 6-18 and the remainder of Farmhouse Lane. IB-C treats runoff from the Phase 2 portion of Oakmont Drive and the remaining commercial lots.

The roadway is designed with curbing along each side to convey runoff to catch basins, located along the side of the proposed roadways. Stormwater generated will receive pretreatment via sediment forebays before flowing into the main basins. The ponds are designed to maintain a minimum 3-foot separation to the SHWT.

A single observation point is used to compare pre- and post-development runoff rates and volumes. The observation point (OP1) is representative of the total flow from the parcel to Cold Brook.

IV. METHODOLOGY

The quantity of runoff and the conveyance of that flow through the site are determined using the software package HydroCAD 10.20-7a by HydroCAD Software Solutions LLC. HydroCAD is a computer aided design program for modeling storm water hydrology based on the Soil Conservation Service (SCS) TR-55 method combined with standard hydraulics calculations.

V. SUMMARY

The proposed stormwater design provides adequate treatment, mitigation, recharge, and attenuation of stormwater generated because of the proposed site and roadway development. The proposed design achieves the stormwater goals of the Town of Canterbury and meets the requirements of the Alteration of Terrain Bureau. Refer to the summary tables below for calculated peak flow rates and volumes during each analyzed event.



Stormwater Narrative - Subdivision Plans Hildreth's Farm
114 West Road, Canterbury, New Hampshire 03224

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Table 1: 2-, 25-, and 50-year Peak Rate of Stormwater Discharge Summary

Location	Q2 (CFS)			Q25 (CFS)			Q50 (CFS)		
	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
OP-1	0.08	0.08	0.00	6.40	6.28	-0.12	13.33	12.81	-0.52

Table 2: 2-year Peak Volume of Stormwater Discharge Summary

Location	V2 (AF)		
	Pre	Post	Δ
OP-1	0.056	0.056	0.000

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point	
Smoothing	Yes
State	New Hampshire
Location	New Hampshire, United States
Latitude	43.330 degrees North
Longitude	71.601 degrees West
Elevation	100 feet
Date/Time	Wed May 21 2025 09:40:01 GMT-0400 (Eastern Daylight Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1da
1yr	0.26	0.40	0.49	0.65	0.81	1.02	1yr	0.70	0.97	1.17	1.48	1.86	2.35	2.56	1yr	2.08
2yr	0.32	0.49	0.60	0.80	1.00	1.26	2yr	0.87	1.15	1.45	1.81	2.24	2.78	3.10	2yr	2.40
5yr	0.37	0.58	0.73	0.98	1.25	1.58	5yr	1.08	1.46	1.83	2.27	2.80	3.45	3.92	5yr	3.02
10yr	0.42	0.67	0.84	1.14	1.49	1.89	10yr	1.28	1.75	2.19	2.72	3.33	4.06	4.68	10yr	3.60
25yr	0.50	0.80	1.02	1.40	1.86	2.39	25yr	1.61	2.21	2.77	3.42	4.19	5.06	5.92	25yr	4.47
50yr	0.57	0.92	1.18	1.64	2.21	2.85	50yr	1.91	2.65	3.31	4.09	4.97	5.97	7.08	50yr	5.28
100yr	0.65	1.05	1.36	1.92	2.62	3.40	100yr	2.26	3.17	3.96	4.88	5.90	7.05	8.46	100yr	6.24
200yr	0.75	1.22	1.58	2.26	3.11	4.06	200yr	2.69	3.80	4.72	5.81	7.01	8.33	10.13	200yr	7.37
500yr	0.90	1.48	1.93	2.80	3.91	5.12	500yr	3.37	4.83	5.96	7.33	8.80	10.41	12.84	500yr	9.22

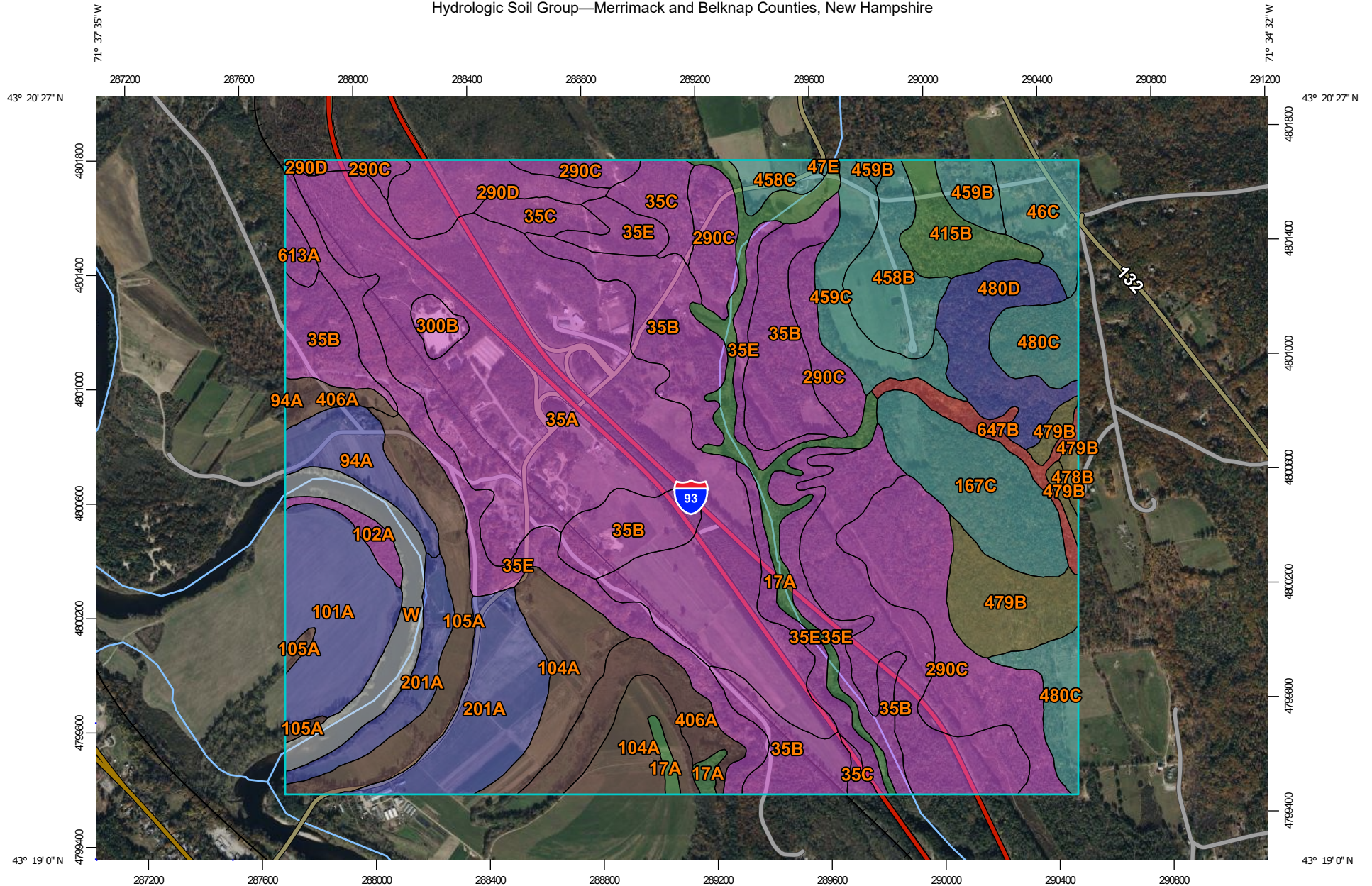
Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1da
1yr	0.24	0.36	0.44	0.60	0.73	0.88	1yr	0.63	0.86	1.00	1.35	1.59	2.10	2.39	1yr	1.86
2yr	0.31	0.47	0.58	0.79	0.97	1.15	2yr	0.84	1.12	1.31	1.71	2.20	2.71	3.02	2yr	2.40
5yr	0.34	0.53	0.66	0.90	1.15	1.37	5yr	0.99	1.34	1.55	1.99	2.58	3.25	3.64	5yr	2.87
10yr	0.38	0.58	0.72	1.01	1.31	1.54	10yr	1.13	1.51	1.75	2.24	2.90	3.74	4.19	10yr	3.33
25yr	0.44	0.66	0.82	1.18	1.55	1.82	25yr	1.34	1.78	2.07	2.60	3.39	4.50	5.03	25yr	3.98
50yr	0.48	0.73	0.91	1.31	1.77	2.06	50yr	1.52	2.01	2.36	2.91	3.81	5.19	5.77	50yr	4.60
100yr	0.53	0.81	1.01	1.46	2.00	2.33	100yr	1.73	2.28	2.68	3.25	4.29	6.00	6.64	100yr	5.33
200yr	0.59	0.89	1.13	1.63	2.27	2.63	200yr	1.96	2.57	3.03	3.64	4.83	6.96	7.65	200yr	6.10
500yr	0.68	1.01	1.30	1.89	2.69	3.07	500yr	2.32	3.00	3.57	4.21	5.67	8.46	9.24	500yr	7.49

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1da
1yr	0.28	0.44	0.54	0.72	0.89	1.08	1yr	0.77	1.06	1.21	1.56	1.94	2.51	2.73	1yr	2.22
2yr	0.33	0.51	0.63	0.85	1.05	1.24	2yr	0.91	1.22	1.40	1.83	2.34	2.85	3.21	2yr	2.52
5yr	0.40	0.62	0.77	1.06	1.35	1.62	5yr	1.17	1.58	1.84	2.38	3.00	3.65	4.18	5yr	3.22
10yr	0.49	0.75	0.93	1.30	1.68	1.98	10yr	1.45	1.93	2.21	2.78	3.50	4.40	5.12	10yr	3.90
25yr	0.63	0.96	1.20	1.71	2.25	2.63	25yr	1.94	2.57	2.89	3.54	4.43	5.64	6.71	25yr	4.99
50yr	0.77	1.17	1.45	2.09	2.82	3.26	50yr	2.43	3.19	3.55	4.26	5.30	6.80	8.25	50yr	6.02
100yr	0.94	1.42	1.78	2.57	3.52	4.06	100yr	3.04	3.97	4.36	5.12	6.34	8.20	10.13	100yr	7.20

Hydrologic Soil Group—Merrimack and Belknap Counties, New Hampshire



Map Scale: 1:18,800 if printed on A landscape (11" x 8.5") sheet.

0 250 500 1000 1500 Meters

0 500 1000 2000 3000 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge ticks: UTM Zone 19N WGS84



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

1/30/2025
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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Merrimack and Belknap Counties, New Hampshire

Survey Area Data: Version 30, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 6, 2022—Oct 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
17A	Searsport-Chocorua-Naumburg complex, 0 to 1 percent slopes	A/D	45.4	3.0%
35A	Champlain loamy fine sand, 0 to 3 percent slopes	A	292.5	19.1%
35B	Champlain loamy fine sand, 3 to 8 percent slopes	A	226.1	14.8%
35C	Champlain loamy fine sand, 8 to 15 percent slopes	A	28.3	1.8%
35E	Champlain loamy fine sand, 15 to 60 percent slopes	A	124.9	8.1%
46C	Henniker fine sandy loam, 8 to 15 percent slopes	C	23.9	1.6%
47E	Henniker fine sandy loam, 25 to 35 percent slopes, very stony	C	0.4	0.0%
94A	Agawam-Ninigret fine sandy loams, 0 to 3 percent slopes	B	24.7	1.6%
101A	Ondawa fine sandy loam, 0 to 3 percent slopes, frequently flooded	B	56.2	3.7%
102A	Sunday loamy fine sand, 0 to 3 percent slopes, occasionally flooded	A	6.8	0.4%
104A	Podunk fine sandy loam, 0 to 3 percent slopes, frequently flooded	B/D	60.1	3.9%
105A	Rumney fine sandy loam, 0 to 3 percent slopes, frequently flooded	B/D	46.4	3.0%
167C	Canterbury fine sandy loam, 8 to 15 percent slopes, very stony	C	52.3	3.4%
201A	Ondawa fine sandy loam, 0 to 3 percent slopes, occasionally flooded	B	71.4	4.7%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
290C	Champlain-Woodstock complex, 8 to 15 percent slopes	A	113.6	7.4%
290D	Champlain-Woodstock complex, 15 to 35 percent slopes	A	28.5	1.9%
300B	Udipsammments, 0 to 6 percent slopes	A	7.0	0.5%
406A	Medomak mucky silt loam, 0 to 2 percent slopes, frequently flooded	B/D	40.5	2.6%
415B	Moosilauke fine sandy loam, 3 to 8 percent slopes, very stony	A/D	22.8	1.5%
458B	Metacomet fine sandy loam, 3 to 8 percent slopes	C	32.8	2.1%
458C	Metacomet fine sandy loam, 8 to 15 percent slopes	C	9.2	0.6%
459B	Metacomet fine sandy loam, 3 to 8 percent slopes, very stony	C	12.2	0.8%
459C	Metacomet fine sandy loam, 8 to 15 percent slopes, very stony	C	31.8	2.1%
478B	Gilmanton fine sandy loam, 3 to 8 percent slopes	C/D	2.4	0.2%
479B	Gilmanton fine sandy loam, 3 to 8 percent slopes, very stony	C/D	40.2	2.6%
480C	Millsite-Woodstock-Henniker complex, 8 to 15 percent slopes, very stony	C	37.0	2.4%
480D	Millsite-Woodstock-Henniker complex, 15 to 25 percent slopes, very stony	B	39.9	2.6%
613A	Croghan loamy fine sand, 0 to 8 percent slopes, wooded	A	4.9	0.3%
647B	Pillsbury fine sandy loam, 0 to 8 percent slopes, very stony	D	14.9	1.0%
W	Water		35.1	2.3%
Totals for Area of Interest			1,532.5	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

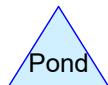
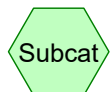
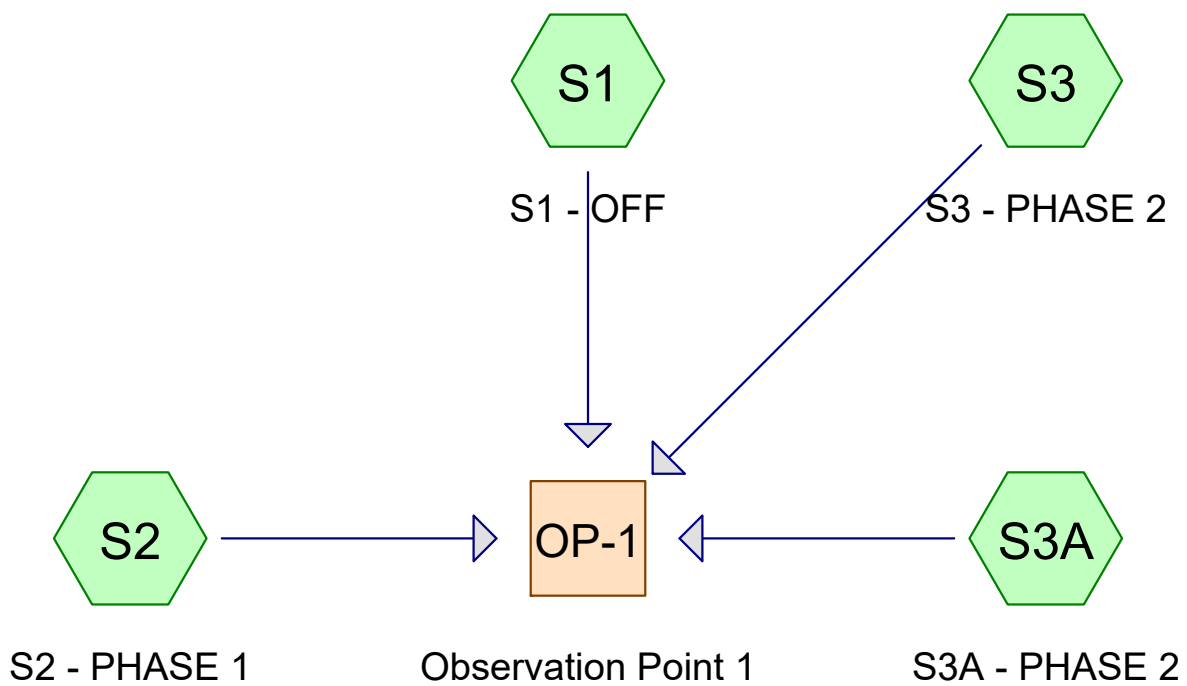
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Section 1.0: Pre-Developed Conditions



Routing Diagram for 12609EX00

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
11.519	39	>75% Grass cover, Good HSG A (S1, S2, S3, S3A)
5.637	61	>75% Grass cover, Good HSG B (S1, S2)
3.735	74	>75% Grass cover, Good HSG C (S1)
0.340	76	Gravel roads HSG A (S1, S2, S3)
0.074	98	Roofs HSG A (S2)
0.003	98	Roofs HSG B (S1)
11.297	30	Woods, Good HSG A (S1, S2, S3)
1.426	55	Woods, Good HSG B (S1, S2)
0.337	70	Woods, Good HSG C (S1, S2)
34.369	45	TOTAL AREA

12609EX00

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
23.230	HSG A	S1, S2, S3, S3A
7.066	HSG B	S1, S2
4.073	HSG C	S1, S2
0.000	HSG D	
0.000	Other	
34.369		TOTAL AREA

12609EX00

Type III 24-hr 2-YR Rainfall=2.78"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S1: S1 - OFF

Runoff Area=887,504 sf 0.01% Impervious Runoff Depth=0.03"
Flow Length=1,047' Slope=0.1489 '/' Tc=20.0 min CN=48 Runoff=0.08 cfs 0.056 af

Subcatchment S2: S2 - PHASE 1

Runoff Area=404,807 sf 0.80% Impervious Runoff Depth=0.00"
Flow Length=732' Slope=0.0661 '/' Tc=26.4 min CN=42 Runoff=0.00 cfs 0.000 af

Subcatchment S3: S3 - PHASE 2

Runoff Area=188,101 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=468' Slope=0.0430 '/' Tc=26.3 min CN=37 Runoff=0.00 cfs 0.000 af

Subcatchment S3A: S3A - PHASE 2

Runoff Area=16,681 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=108' Slope=0.0828 '/' Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af

Reach OP-1: Observation Point 1

Inflow=0.08 cfs 0.056 af
Outflow=0.08 cfs 0.056 af

Total Runoff Area = 34.369 ac Runoff Volume = 0.056 af Average Runoff Depth = 0.02"
99.78% Pervious = 34.291 ac 0.22% Impervious = 0.077 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S1: S1 - OFF Runoff Area=887,504 sf 0.01% Impervious Runoff Depth=0.61"
Flow Length=1,047' Slope=0.1489 '/' Tc=20.0 min CN=48 Runoff=5.88 cfs 1.035 af

Subcatchment S2: S2 - PHASE 1 Runoff Area=404,807 sf 0.80% Impervious Runoff Depth=0.33"
Flow Length=732' Slope=0.0661 '/' Tc=26.4 min CN=42 Runoff=0.80 cfs 0.254 af

Subcatchment S3: S3 - PHASE 2 Runoff Area=188,101 sf 0.00% Impervious Runoff Depth=0.15"
Flow Length=468' Slope=0.0430 '/' Tc=26.3 min CN=37 Runoff=0.08 cfs 0.053 af

Subcatchment S3A: S3A - PHASE 2 Runoff Area=16,681 sf 0.00% Impervious Runoff Depth=0.21"
Flow Length=108' Slope=0.0828 '/' Tc=6.0 min CN=39 Runoff=0.02 cfs 0.007 af

Reach OP-1: Observation Point 1

Inflow=6.40 cfs 1.349 af
Outflow=6.40 cfs 1.349 af

Total Runoff Area = 34.369 ac Runoff Volume = 1.349 af Average Runoff Depth = 0.47"
99.78% Pervious = 34.291 ac 0.22% Impervious = 0.077 ac

12609EX00

Type III 24-hr 50-YR Rainfall=5.97"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S1: S1 - OFF

Runoff Area=887,504 sf 0.01% Impervious Runoff Depth=0.99"
Flow Length=1,047' Slope=0.1489 '/' Tc=20.0 min CN=48 Runoff=11.61 cfs 1.678 af

Subcatchment S2: S2 - PHASE 1

Runoff Area=404,807 sf 0.80% Impervious Runoff Depth=0.60"
Flow Length=732' Slope=0.0661 '/' Tc=26.4 min CN=42 Runoff=2.17 cfs 0.468 af

Subcatchment S3: S3 - PHASE 2

Runoff Area=188,101 sf 0.00% Impervious Runoff Depth=0.34"
Flow Length=468' Slope=0.0430 '/' Tc=26.3 min CN=37 Runoff=0.33 cfs 0.121 af

Subcatchment S3A: S3A - PHASE 2

Runoff Area=16,681 sf 0.00% Impervious Runoff Depth=0.44"
Flow Length=108' Slope=0.0828 '/' Tc=6.0 min CN=39 Runoff=0.07 cfs 0.014 af

Reach OP-1: Observation Point 1

Inflow=13.33 cfs 2.281 af
Outflow=13.33 cfs 2.281 af

Total Runoff Area = 34.369 ac Runoff Volume = 2.281 af Average Runoff Depth = 0.80"
99.78% Pervious = 34.291 ac 0.22% Impervious = 0.077 ac

Section 1.1: Pre-Developed Conditions
25- and 50-year Storm – Full Summary

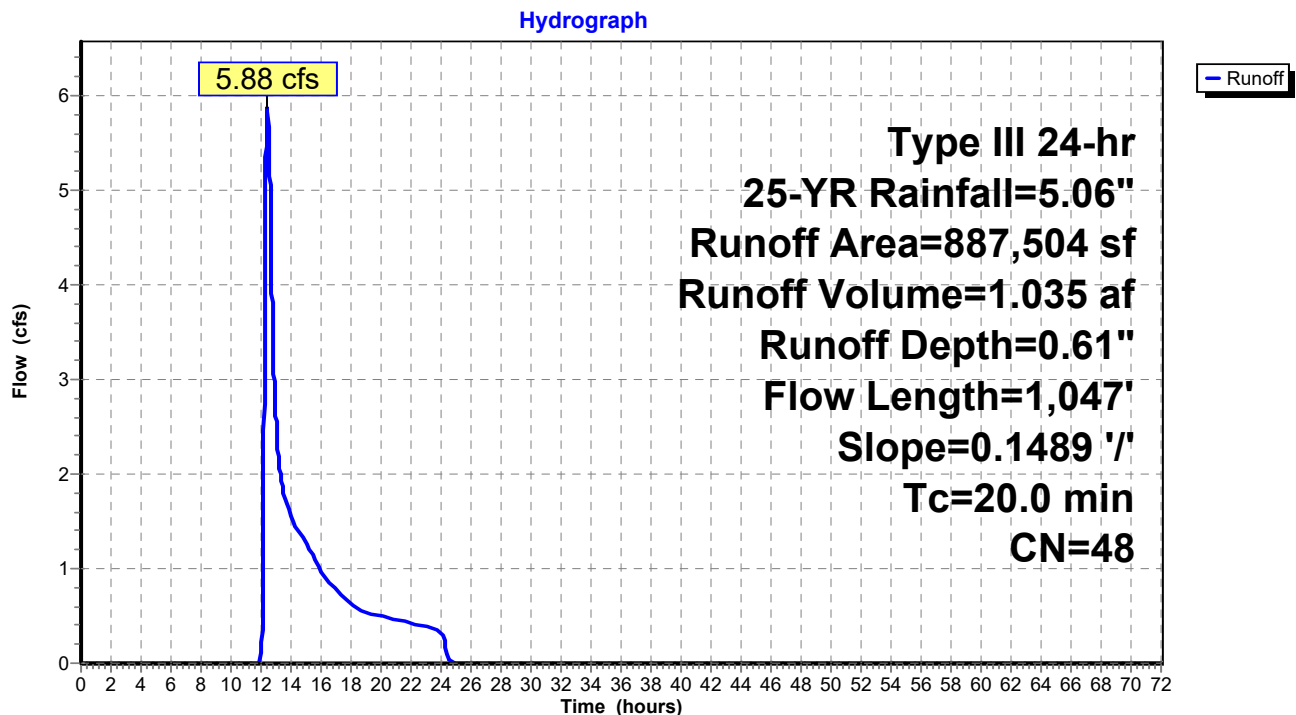
Summary for Subcatchment S1: S1 - OFF

Runoff = 5.88 cfs @ 12.43 hrs, Volume= 1.035 af, Depth= 0.61"
 Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
36,354	55	Woods, Good HSG B
117	98	Roofs HSG B
14,260	70	Woods, Good HSG C
335,019	30	Woods, Good HSG A
448	76	Gravel roads HSG A
149,809	39	>75% Grass cover, Good HSG A
188,787	61	>75% Grass cover, Good HSG B
162,709	74	>75% Grass cover, Good HSG C
887,504	48	Weighted Average
887,387		99.99% Pervious Area
117		0.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	1,047	0.1489	0.87		Lag/CN Method,

Subcatchment S1: S1 - OFF

Summary for Subcatchment S2: S2 - PHASE 1

Runoff = 0.80 cfs @ 12.68 hrs, Volume= 0.254 af, Depth= 0.33"
 Routed to Reach OP-1 : Observation Point 1

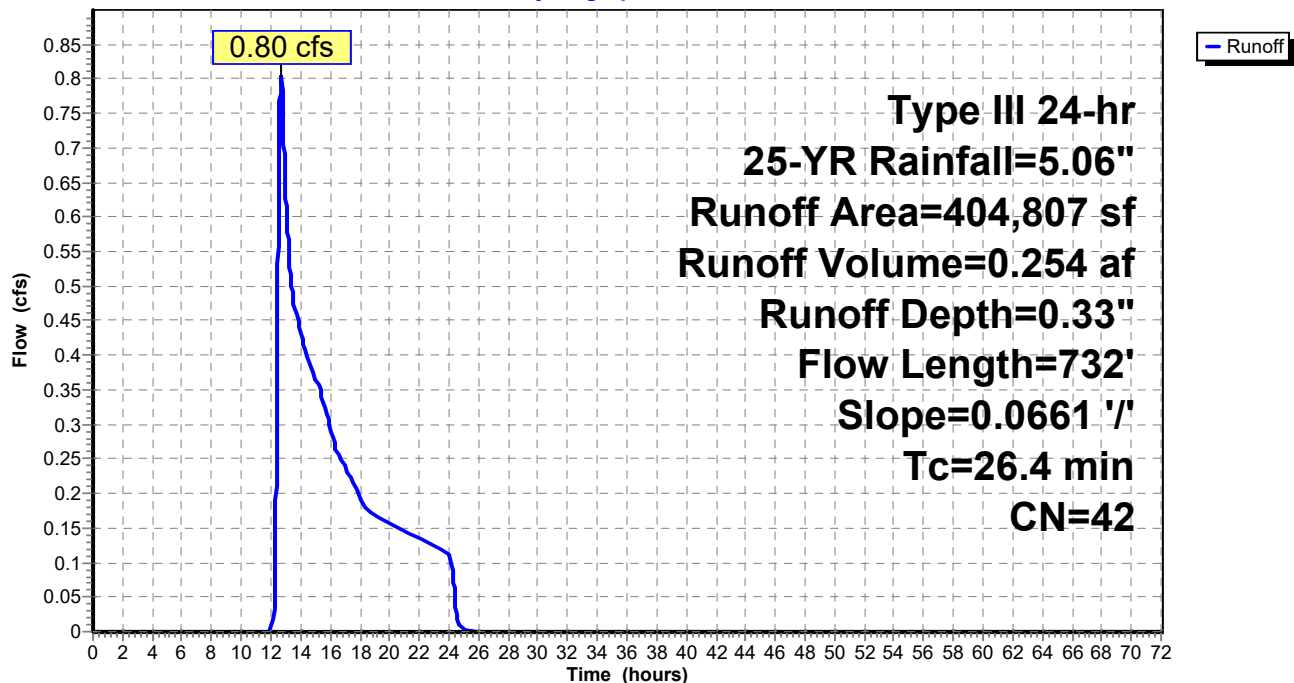
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
432	70	Woods, Good HSG C
25,773	55	Woods, Good HSG B
114,111	30	Woods, Good HSG A
11,713	76	Gravel roads HSG A
3,242	98	Roofs HSG A
192,763	39	>75% Grass cover, Good HSG A
56,773	61	>75% Grass cover, Good HSG B
404,807	42	Weighted Average
401,566		99.20% Pervious Area
3,242		0.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.4	732	0.0661	0.46		Lag/CN Method,

Subcatchment S2: S2 - PHASE 1

Hydrograph



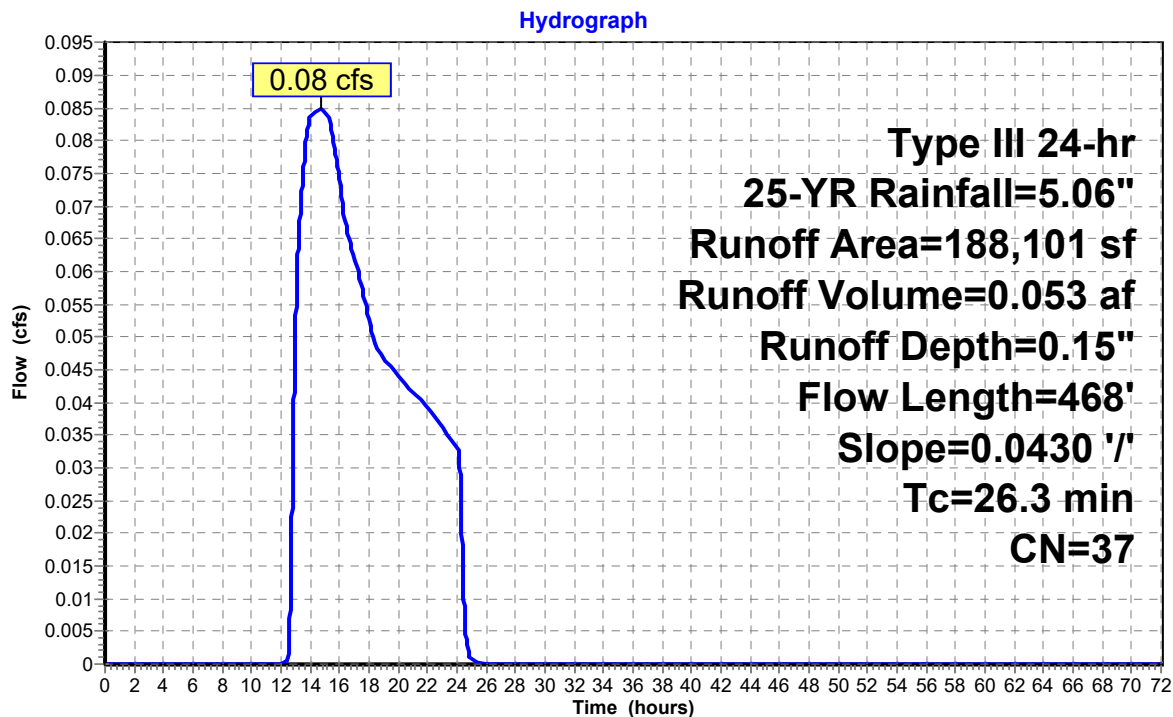
Summary for Subcatchment S3: S3 - PHASE 2

Runoff = 0.08 cfs @ 14.76 hrs, Volume= 0.053 af, Depth= 0.15"
 Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
42,945	30	Woods, Good HSG A
2,635	76	Gravel roads HSG A
142,521	39	>75% Grass cover, Good HSG A
188,101	37	Weighted Average
188,101		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.3	468	0.0430	0.30		Lag/CN Method,

Subcatchment S3: S3 - PHASE 2

Summary for Subcatchment S3A: S3A - PHASE 2

Runoff = 0.02 cfs @ 12.46 hrs, Volume= 0.007 af, Depth= 0.21"
 Routed to Reach OP-1 : Observation Point 1

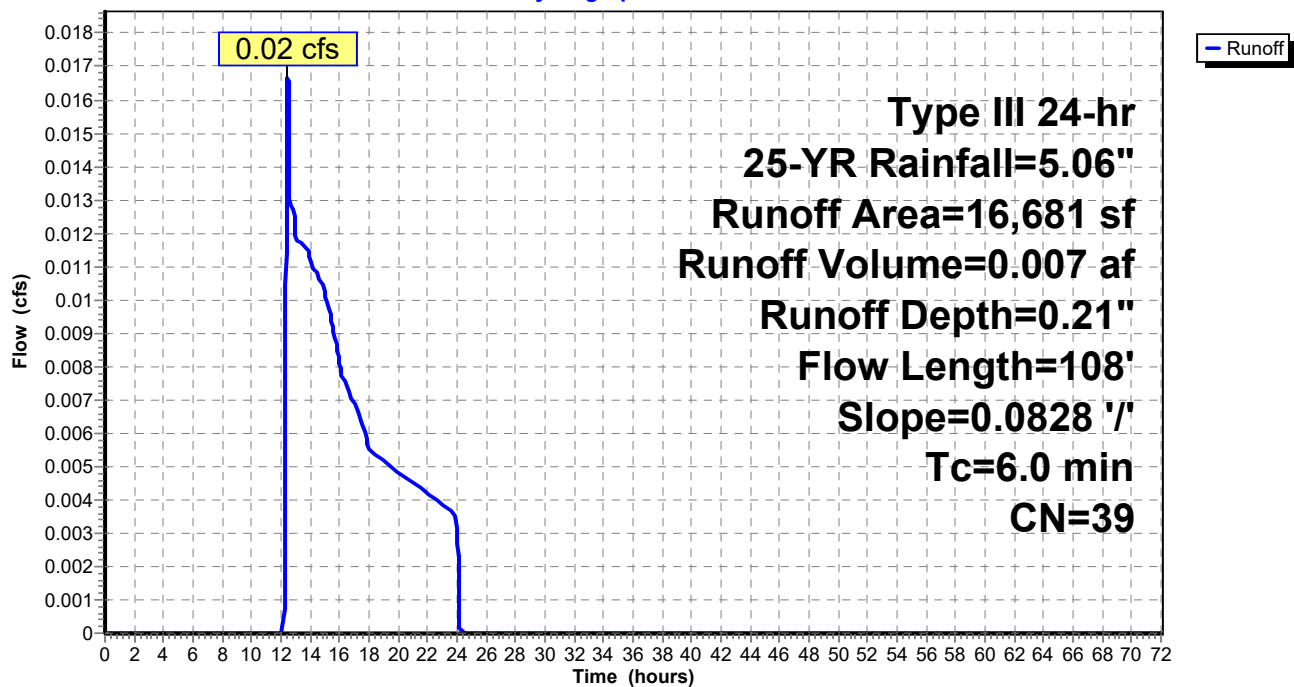
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
16,681	39	>75% Grass cover, Good HSG A
16,681		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	108	0.0828	0.32		Lag/CN Method,
5.6	108	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S3A: S3A - PHASE 2

Hydrograph



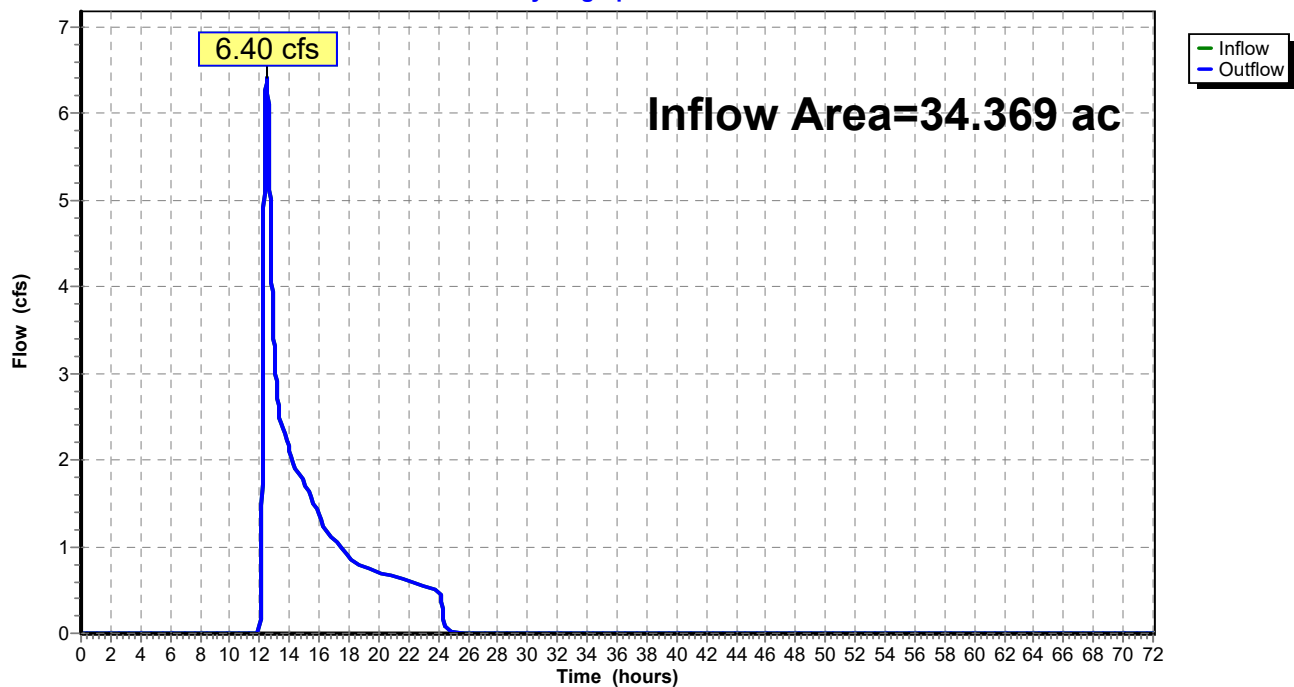
Summary for Reach OP-1: Observation Point 1

Inflow Area = 34.369 ac, 0.22% Impervious, Inflow Depth = 0.47" for 25-YR event
Inflow = 6.40 cfs @ 12.47 hrs, Volume= 1.349 af
Outflow = 6.40 cfs @ 12.47 hrs, Volume= 1.349 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node OP-T

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach OP-1: Observation Point 1

Hydrograph



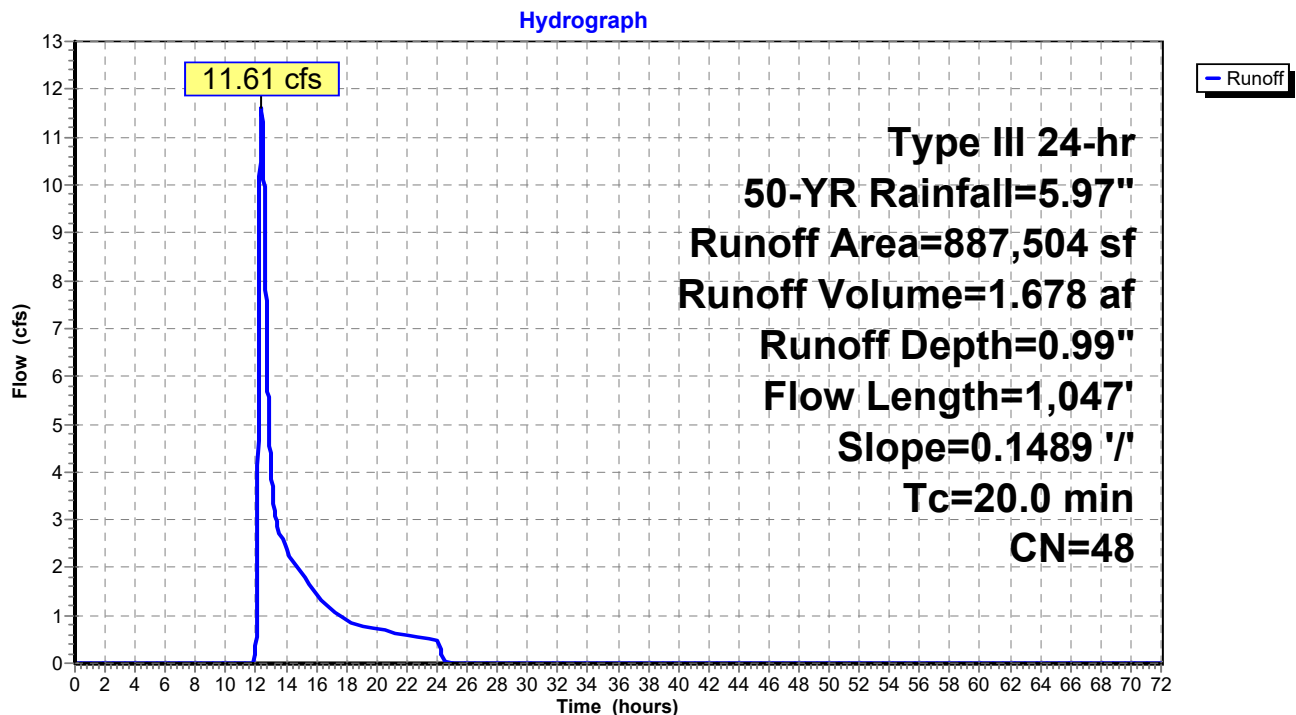
Summary for Subcatchment S1: S1 - OFF

Runoff = 11.61 cfs @ 12.36 hrs, Volume= 1.678 af, Depth= 0.99"
 Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
36,354	55	Woods, Good HSG B
117	98	Roofs HSG B
14,260	70	Woods, Good HSG C
335,019	30	Woods, Good HSG A
448	76	Gravel roads HSG A
149,809	39	>75% Grass cover, Good HSG A
188,787	61	>75% Grass cover, Good HSG B
162,709	74	>75% Grass cover, Good HSG C
887,504	48	Weighted Average
887,387		99.99% Pervious Area
117		0.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	1,047	0.1489	0.87		Lag/CN Method,

Subcatchment S1: S1 - OFF

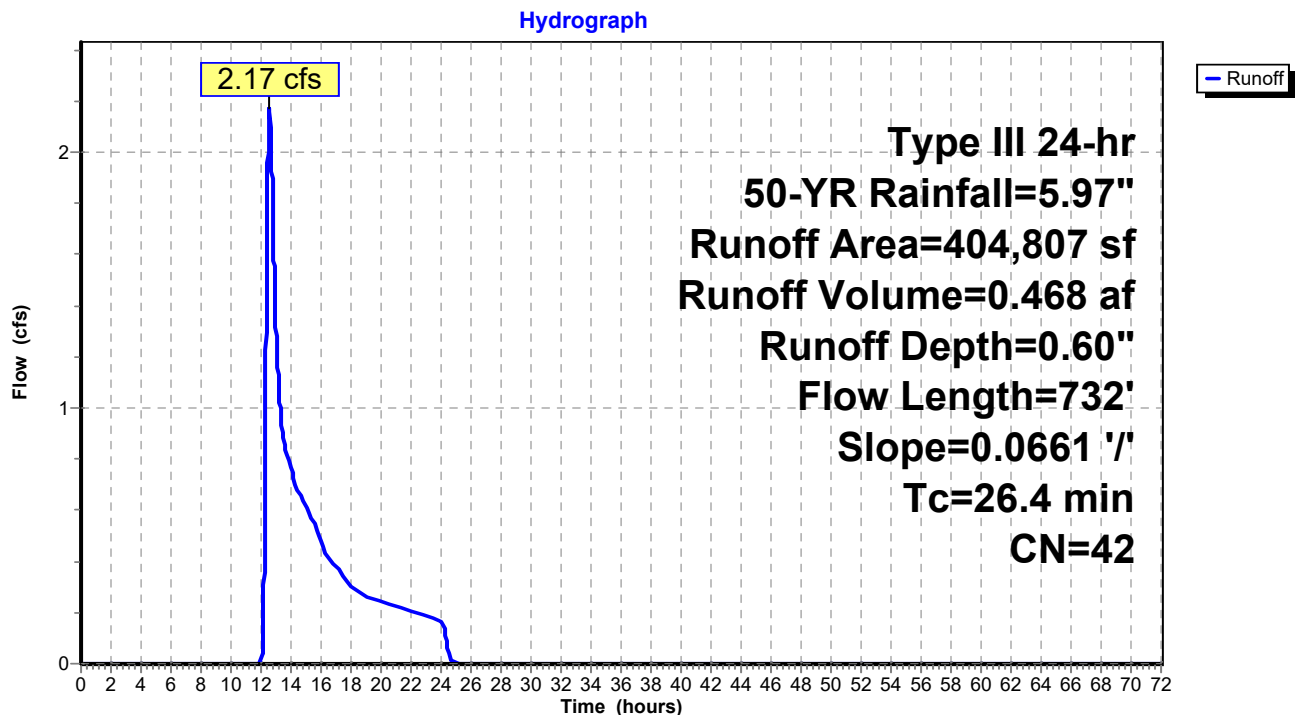
Summary for Subcatchment S2: S2 - PHASE 1

Runoff = 2.17 cfs @ 12.58 hrs, Volume= 0.468 af, Depth= 0.60"
 Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
432	70	Woods, Good HSG C
25,773	55	Woods, Good HSG B
114,111	30	Woods, Good HSG A
11,713	76	Gravel roads HSG A
3,242	98	Roofs HSG A
192,763	39	>75% Grass cover, Good HSG A
56,773	61	>75% Grass cover, Good HSG B
404,807	42	Weighted Average
401,566		99.20% Pervious Area
3,242		0.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.4	732	0.0661	0.46		Lag/CN Method,

Subcatchment S2: S2 - PHASE 1

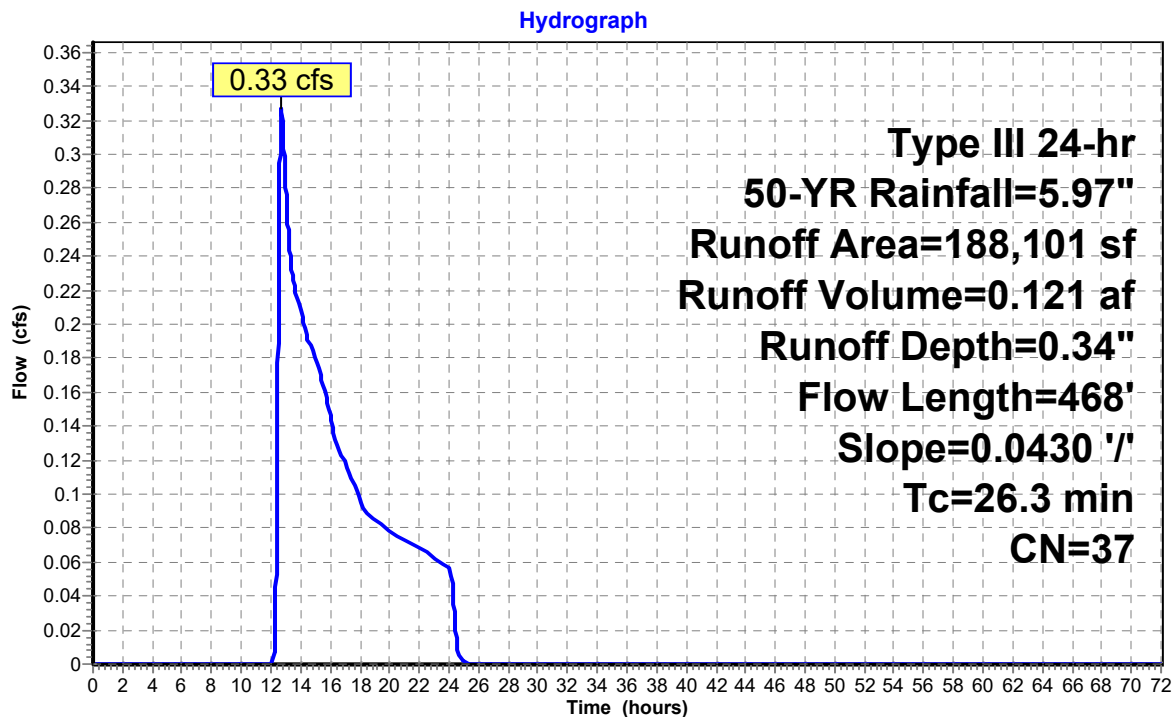
Summary for Subcatchment S3: S3 - PHASE 2

Runoff = 0.33 cfs @ 12.71 hrs, Volume= 0.121 af, Depth= 0.34"
 Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
42,945	30	Woods, Good HSG A
2,635	76	Gravel roads HSG A
142,521	39	>75% Grass cover, Good HSG A
188,101	37	Weighted Average
188,101		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.3	468	0.0430	0.30		Lag/CN Method,

Subcatchment S3: S3 - PHASE 2

Summary for Subcatchment S3A: S3A - PHASE 2

Runoff = 0.07 cfs @ 12.35 hrs, Volume= 0.014 af, Depth= 0.44"
 Routed to Reach OP-1 : Observation Point 1

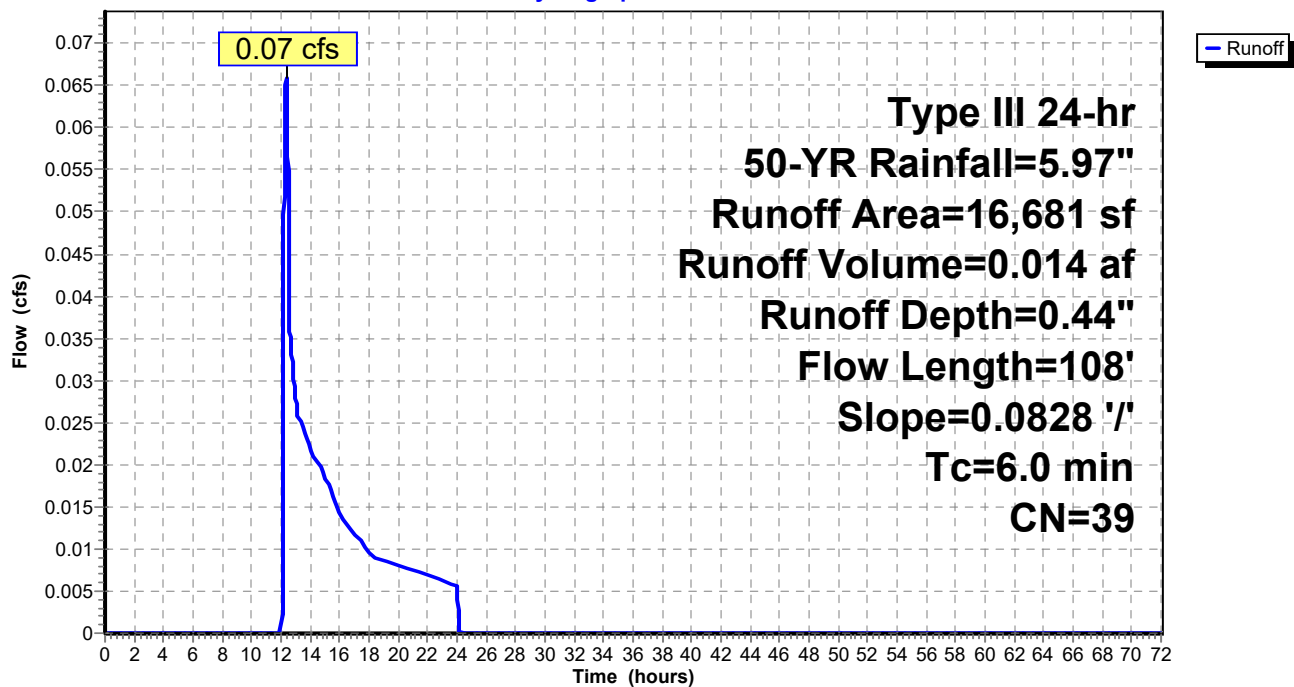
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
16,681	39	>75% Grass cover, Good HSG A
16,681		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	108	0.0828	0.32		Lag/CN Method,
5.6	108	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S3A: S3A - PHASE 2

Hydrograph



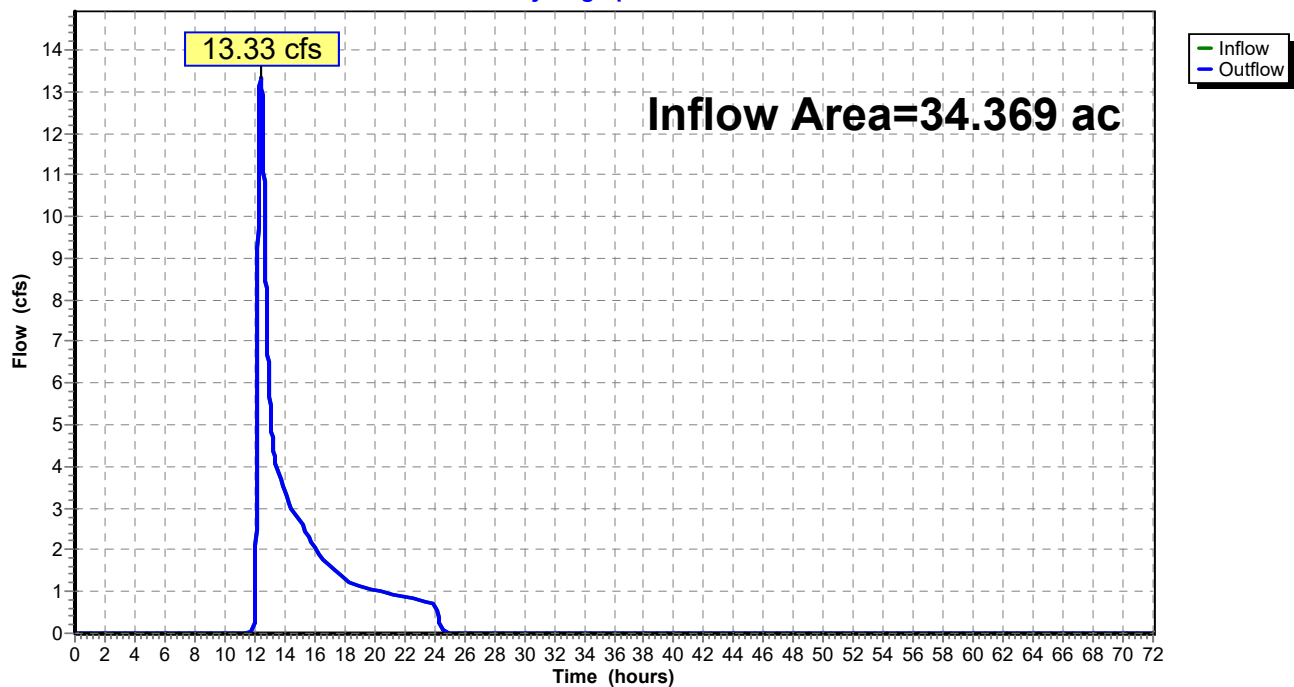
Summary for Reach OP-1: Observation Point 1

Inflow Area = 34.369 ac, 0.22% Impervious, Inflow Depth = 0.80" for 50-YR event
Inflow = 13.33 cfs @ 12.41 hrs, Volume= 2.281 af
Outflow = 13.33 cfs @ 12.41 hrs, Volume= 2.281 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node OP-T

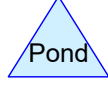
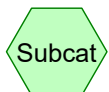
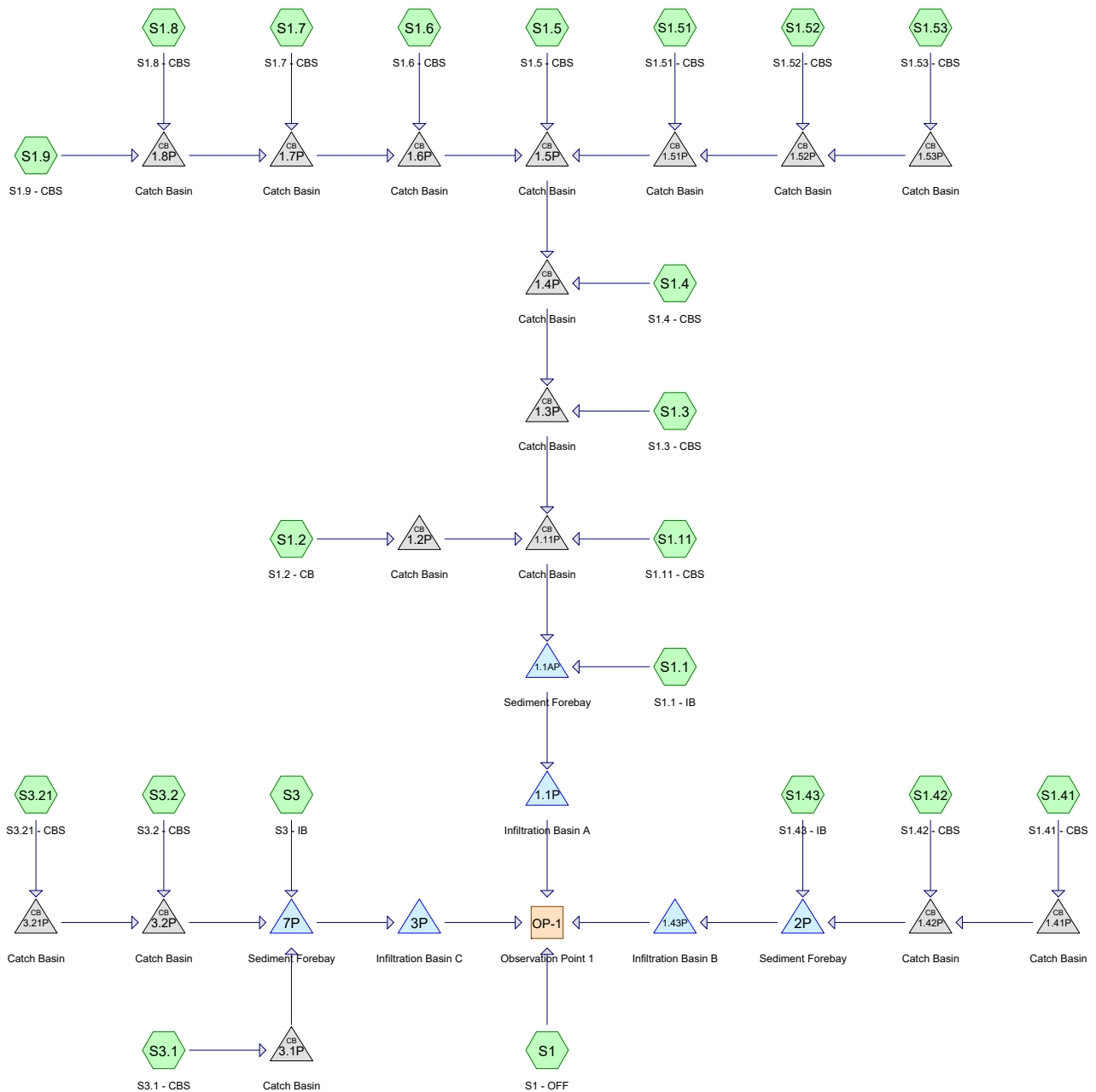
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach OP-1: Observation Point 1

Hydrograph



Section 2.0: Post-Developed Conditions



Routing Diagram for 12609DV00B
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
8.341	39	>75% Grass cover, Good HSG A (S1, S1.1, S1.11, S1.2, S1.4, S1.41, S1.42, S1.43, S1.5, S1.51, S1.52, S1.53, S1.6, S1.7, S1.8, S1.9, S3, S3.1, S3.2, S3.21)
5.732	61	>75% Grass cover, Good HSG B (S1, S1.1, S1.11, S1.2, S1.41, S1.42, S1.43, S1.51, S1.52, S1.53)
3.769	74	>75% Grass cover, Good HSG C (S1)
0.083	76	Gravel roads HSG A (S1, S1.42)
0.020	85	Gravel roads HSG B (S1)
0.008	89	Gravel roads HSG C (S1)
4.186	98	Paved parking HSG A (S1.11, S1.2, S1.3, S1.4, S1.41, S1.42, S1.5, S1.51, S1.52, S1.53, S1.6, S1.7, S1.8, S1.9, S3.1, S3.2, S3.21)
0.309	98	Paved parking HSG B (S1.11, S1.2, S1.41, S1.42, S1.52, S1.53)
2.341	98	Roofs HSG A (S1.2, S1.4, S1.41, S1.42, S1.43, S1.5, S1.51, S1.53, S1.8, S1.9, S3.1)
0.368	98	Roofs HSG B (S1, S1.41, S1.42, S1.51, S1.52, S1.53)
0.010	98	Roofs HSG C (S1.42)
8.279	30	Woods, Good HSG A (S1, S1.2, S1.7, S1.9, S3.21)
0.638	55	Woods, Good HSG B (S1)
0.285	70	Woods, Good HSG C (S1)
34.369	57	TOTAL AREA

12609DV00B

Prepared by Meridian Land Services Inc

Printed 10/27/2025

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
23.230	HSG A	S1, S1.1, S1.11, S1.2, S1.3, S1.4, S1.41, S1.42, S1.43, S1.5, S1.51, S1.52, S1.53, S1.6, S1.7, S1.8, S1.9, S3, S3.1, S3.2, S3.21
7.066	HSG B	S1, S1.1, S1.11, S1.2, S1.41, S1.42, S1.43, S1.51, S1.52, S1.53
4.073	HSG C	S1, S1.42
0.000	HSG D	
0.000	Other	
34.369		TOTAL AREA

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentS1: S1 - OFF	Runoff Area=887,504 sf 0.07% Impervious Runoff Depth=0.03"
Flow Length=1,134'	Slope=0.3077 '/' Tc=14.9 min CN=48 Runoff=0.08 cfs 0.056 af
SubcatchmentS1.1: S1.1 - IB	Runoff Area=14,980 sf 0.00% Impervious Runoff Depth=0.12"
Flow Length=22'	Slope=0.1534 '/' Tc=6.0 min CN=54 Runoff=0.01 cfs 0.003 af
SubcatchmentS1.11: S1.11 - CBS	Runoff Area=6,080 sf 96.26% Impervious Runoff Depth=2.34"
Flow Length=271'	Slope=0.0691 '/' Tc=6.0 min CN=96 Runoff=0.36 cfs 0.027 af
SubcatchmentS1.2: S1.2 - CB	Runoff Area=76,797 sf 22.17% Impervious Runoff Depth=0.03"
Flow Length=475'	Slope=0.1685 '/' Tc=10.0 min CN=48 Runoff=0.01 cfs 0.005 af
SubcatchmentS1.3: S1.3 - CBS	Runoff Area=183 sf 100.00% Impervious Runoff Depth=2.55"
Flow Length=19'	Slope=0.0238 '/' Tc=6.0 min CN=98 Runoff=0.01 cfs 0.001 af
SubcatchmentS1.4: S1.4 - CBS	Runoff Area=16,150 sf 28.68% Impervious Runoff Depth=0.16"
Flow Length=235'	Slope=0.0469 '/' Tc=8.8 min CN=56 Runoff=0.02 cfs 0.005 af
SubcatchmentS1.41: S1.41 - CBS	Runoff Area=72,779 sf 34.57% Impervious Runoff Depth=0.34"
Flow Length=465'	Slope=0.0844 '/' Tc=9.5 min CN=63 Runoff=0.33 cfs 0.048 af
SubcatchmentS1.42: S1.42 - CBS	Runoff Area=44,581 sf 59.28% Impervious Runoff Depth=1.15"
Flow Length=557'	Slope=0.0400 '/' Tc=9.6 min CN=81 Runoff=1.19 cfs 0.098 af
SubcatchmentS1.43: S1.43 - IB	Runoff Area=18,825 sf 11.16% Impervious Runoff Depth=0.12"
Flow Length=89'	Slope=0.1187 '/' Tc=6.0 min CN=54 Runoff=0.01 cfs 0.004 af
SubcatchmentS1.5: S1.5 - CBS	Runoff Area=61,830 sf 33.61% Impervious Runoff Depth=0.23"
Flow Length=263'	Slope=0.0327 '/' Tc=10.7 min CN=59 Runoff=0.14 cfs 0.027 af
SubcatchmentS1.51: S1.51 - CBS	Runoff Area=35,983 sf 28.96% Impervious Runoff Depth=0.21"
Flow Length=432'	Slope=0.0163 '/' Tc=23.2 min CN=58 Runoff=0.05 cfs 0.014 af
SubcatchmentS1.52: S1.52 - CBS	Runoff Area=7,297 sf 55.68% Impervious Runoff Depth=1.03"
Flow Length=123'	Slope=0.0249 '/' Tc=6.0 min CN=79 Runoff=0.20 cfs 0.014 af
SubcatchmentS1.53: S1.53 - CBS	Runoff Area=11,189 sf 35.92% Impervious Runoff Depth=0.64"
Flow Length=192'	Slope=0.0184 '/' Tc=8.1 min CN=71 Runoff=0.15 cfs 0.014 af
SubcatchmentS1.6: S1.6 - CBS	Runoff Area=1,489 sf 75.73% Impervious Runoff Depth=1.34"
Flow Length=129'	Slope=0.0754 '/' Tc=6.0 min CN=84 Runoff=0.05 cfs 0.004 af
SubcatchmentS1.7: S1.7 - CBS	Runoff Area=5,359 sf 34.57% Impervious Runoff Depth=0.14"
Flow Length=95'	Slope=0.1101 '/' Tc=6.0 min CN=55 Runoff=0.00 cfs 0.001 af
SubcatchmentS1.8: S1.8 - CBS	Runoff Area=11,325 sf 72.84% Impervious Runoff Depth=1.21"
Flow Length=260'	Slope=0.0172 '/' Tc=7.7 min CN=82 Runoff=0.34 cfs 0.026 af

Subcatchment S1.9: S1.9 - CBS Runoff Area=19,911 sf 70.97% Impervious Runoff Depth=1.15"
Flow Length=207' Slope=0.0066 '/' Tc=10.7 min CN=81 Runoff=0.51 cfs 0.044 af

Subcatchment S3: S3 - IB Runoff Area=16,681 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=12' Slope=0.0980 '/' Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af

Subcatchment S3.1: S3.1 - CBS Runoff Area=145,755 sf 99.48% Impervious Runoff Depth=2.55"
Flow Length=488' Slope=0.0231 '/' Tc=6.0 min CN=98 Runoff=8.99 cfs 0.711 af

Subcatchment S3.2: S3.2 - CBS Runoff Area=11,785 sf 95.99% Impervious Runoff Depth=2.34"
Flow Length=706' Slope=0.0613 '/' Tc=6.0 min CN=96 Runoff=0.70 cfs 0.053 af

Subcatchment S3.21: S3.21 - CBS Runoff Area=30,610 sf 36.87% Impervious Runoff Depth=0.18"
Flow Length=727' Slope=0.1637 '/' Tc=11.4 min CN=57 Runoff=0.04 cfs 0.011 af

Reach OP-1: Observation Point 1 Inflow=0.08 cfs 0.056 af
Outflow=0.08 cfs 0.056 af

Pond 1.11P: Catch Basin Peak Elev=359.10' Inflow=1.58 cfs 0.183 af
24.0" Round Culvert n=0.013 L=18.7' S=0.0080 '/' Outflow=1.58 cfs 0.183 af

Pond 1.1AP: Sediment Forebay Peak Elev=359.09' Storage=2,581 cf Inflow=1.58 cfs 0.186 af
Outflow=0.78 cfs 0.132 af

Pond 1.1P: Infiltration Basin A Peak Elev=357.02' Storage=69 cf Inflow=0.78 cfs 0.132 af
Discarded=0.64 cfs 0.132 af Primary=0.00 cfs 0.000 af Outflow=0.64 cfs 0.132 af

Pond 1.2P: Catch Basin Peak Elev=359.05' Inflow=0.01 cfs 0.005 af
24.0" Round Culvert n=0.013 L=18.0' S=0.0111 '/' Outflow=0.01 cfs 0.005 af

Pond 1.3P: Catch Basin Peak Elev=359.14' Inflow=1.26 cfs 0.151 af
18.0" Round Culvert n=0.013 L=135.2' S=0.0063 '/' Outflow=1.26 cfs 0.151 af

Pond 1.41P: Catch Basin Peak Elev=356.03' Inflow=0.33 cfs 0.048 af
18.0" Round Culvert n=0.013 L=18.0' S=0.0000 '/' Outflow=0.34 cfs 0.048 af

Pond 1.42P: Catch Basin Peak Elev=356.03' Inflow=1.50 cfs 0.146 af
18.0" Round Culvert n=0.013 L=21.0' S=0.0071 '/' Outflow=1.50 cfs 0.146 af

Pond 1.43P: Infiltration Basin B Peak Elev=353.00' Storage=0 cf Inflow=0.13 cfs 0.053 af
Discarded=0.13 cfs 0.053 af Primary=0.00 cfs 0.000 af Outflow=0.13 cfs 0.053 af

Pond 1.4P: Catch Basin Peak Elev=359.18' Inflow=1.25 cfs 0.150 af
18.0" Round Culvert n=0.013 L=32.5' S=0.0062 '/' Outflow=1.25 cfs 0.150 af

Pond 1.51P: Catch Basin Peak Elev=364.24' Inflow=0.34 cfs 0.042 af
15.0" Round Culvert n=0.013 L=120.9' S=0.0058 '/' Outflow=0.34 cfs 0.042 af

Pond 1.52P: Catch Basin Peak Elev=365.71' Inflow=0.34 cfs 0.028 af
15.0" Round Culvert n=0.013 L=282.6' S=0.0053 '/' Outflow=0.34 cfs 0.028 af

Pond 1.53P: Catch Basin Peak Elev=365.78' Inflow=0.15 cfs 0.014 af
15.0" Round Culvert n=0.013 L=20.9' S=0.0048 '/' Outflow=0.15 cfs 0.014 af

Pond 1.5P: Catch Basin

Peak Elev=363.77' Inflow=1.25 cfs 0.145 af
 18.0" Round Culvert n=0.013 L=175.3' S=0.0280 '/' Outflow=1.25 cfs 0.145 af

Pond 1.6P: Catch Basin

Peak Elev=363.98' Inflow=0.89 cfs 0.075 af
 18.0" Round Culvert n=0.013 L=36.2' S=0.0055 '/' Outflow=0.89 cfs 0.075 af

Pond 1.7P: Catch Basin

Peak Elev=365.86' Inflow=0.84 cfs 0.071 af
 18.0" Round Culvert n=0.013 L=205.8' S=0.0097 '/' Outflow=0.84 cfs 0.071 af

Pond 1.8P: Catch Basin

Peak Elev=366.10' Inflow=0.84 cfs 0.070 af
 18.0" Round Culvert n=0.013 L=19.0' S=0.0105 '/' Outflow=0.84 cfs 0.070 af

Pond 2P: Sediment Forebay

Peak Elev=356.03' Storage=4,320 cf Inflow=1.50 cfs 0.150 af
 Outflow=0.13 cfs 0.053 af

Pond 3.1P: Catch Basin

Peak Elev=362.18' Inflow=8.99 cfs 0.711 af
 24.0" Round Culvert n=0.013 L=121.7' S=0.0378 '/' Outflow=8.99 cfs 0.711 af

Pond 3.21P: Catch Basin

Peak Elev=359.21' Inflow=0.04 cfs 0.011 af
 18.0" Round Culvert n=0.013 L=18.0' S=0.0111 '/' Outflow=0.04 cfs 0.011 af

Pond 3.2P: Catch Basin

Peak Elev=359.22' Inflow=0.70 cfs 0.063 af
 18.0" Round Culvert n=0.013 L=70.4' S=0.0398 '/' Outflow=0.70 cfs 0.063 af

Pond 3P: Infiltration Basin C

Peak Elev=353.46' Storage=10,251 cf Inflow=8.93 cfs 0.380 af
 Discarded=0.90 cfs 0.380 af Primary=0.00 cfs 0.000 af Outflow=0.90 cfs 0.380 af

Pond 7P: Sediment Forebay

Peak Elev=355.46' Storage=5,277 cf Inflow=9.69 cfs 0.774 af
 Discarded=0.35 cfs 0.394 af Primary=8.93 cfs 0.380 af Outflow=9.28 cfs 0.774 af

Total Runoff Area = 34.369 ac Runoff Volume = 1.166 af Average Runoff Depth = 0.41"
79.01% Pervious = 27.155 ac 20.99% Impervious = 7.214 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentS1: S1 - OFF	Runoff Area=887,504 sf 0.07% Impervious Runoff Depth=0.61"
Flow Length=1,134'	Slope=0.3077 '/' Tc=14.9 min CN=48 Runoff=6.28 cfs 1.035 af
SubcatchmentS1.1: S1.1 - IB	Runoff Area=14,980 sf 0.00% Impervious Runoff Depth=0.95"
Flow Length=22'	Slope=0.1534 '/' Tc=6.0 min CN=54 Runoff=0.30 cfs 0.027 af
SubcatchmentS1.11: S1.11 - CBS	Runoff Area=6,080 sf 96.26% Impervious Runoff Depth=4.59"
Flow Length=271'	Slope=0.0691 '/' Tc=6.0 min CN=96 Runoff=0.68 cfs 0.053 af
SubcatchmentS1.2: S1.2 - CB	Runoff Area=76,797 sf 22.17% Impervious Runoff Depth=0.61"
Flow Length=475'	Slope=0.1685 '/' Tc=10.0 min CN=48 Runoff=0.59 cfs 0.090 af
SubcatchmentS1.3: S1.3 - CBS	Runoff Area=183 sf 100.00% Impervious Runoff Depth=4.82"
Flow Length=19'	Slope=0.0238 '/' Tc=6.0 min CN=98 Runoff=0.02 cfs 0.002 af
SubcatchmentS1.4: S1.4 - CBS	Runoff Area=16,150 sf 28.68% Impervious Runoff Depth=1.07"
Flow Length=235'	Slope=0.0469 '/' Tc=8.8 min CN=56 Runoff=0.35 cfs 0.033 af
SubcatchmentS1.41: S1.41 - CBS	Runoff Area=72,779 sf 34.57% Impervious Runoff Depth=1.55"
Flow Length=465'	Slope=0.0844 '/' Tc=9.5 min CN=63 Runoff=2.50 cfs 0.215 af
SubcatchmentS1.42: S1.42 - CBS	Runoff Area=44,581 sf 59.28% Impervious Runoff Depth=3.04"
Flow Length=557'	Slope=0.0400 '/' Tc=9.6 min CN=81 Runoff=3.22 cfs 0.259 af
SubcatchmentS1.43: S1.43 - IB	Runoff Area=18,825 sf 11.16% Impervious Runoff Depth=0.95"
Flow Length=89'	Slope=0.1187 '/' Tc=6.0 min CN=54 Runoff=0.38 cfs 0.034 af
SubcatchmentS1.5: S1.5 - CBS	Runoff Area=61,830 sf 33.61% Impervious Runoff Depth=1.27"
Flow Length=263'	Slope=0.0327 '/' Tc=10.7 min CN=59 Runoff=1.58 cfs 0.150 af
SubcatchmentS1.51: S1.51 - CBS	Runoff Area=35,983 sf 28.96% Impervious Runoff Depth=1.20"
Flow Length=432'	Slope=0.0163 '/' Tc=23.2 min CN=58 Runoff=0.64 cfs 0.083 af
SubcatchmentS1.52: S1.52 - CBS	Runoff Area=7,297 sf 55.68% Impervious Runoff Depth=2.85"
Flow Length=123'	Slope=0.0249 '/' Tc=6.0 min CN=79 Runoff=0.56 cfs 0.040 af
SubcatchmentS1.53: S1.53 - CBS	Runoff Area=11,189 sf 35.92% Impervious Runoff Depth=2.16"
Flow Length=192'	Slope=0.0184 '/' Tc=8.1 min CN=71 Runoff=0.60 cfs 0.046 af
SubcatchmentS1.6: S1.6 - CBS	Runoff Area=1,489 sf 75.73% Impervious Runoff Depth=3.33"
Flow Length=129'	Slope=0.0754 '/' Tc=6.0 min CN=84 Runoff=0.13 cfs 0.009 af
SubcatchmentS1.7: S1.7 - CBS	Runoff Area=5,359 sf 34.57% Impervious Runoff Depth=1.01"
Flow Length=95'	Slope=0.1101 '/' Tc=6.0 min CN=55 Runoff=0.12 cfs 0.010 af
SubcatchmentS1.8: S1.8 - CBS	Runoff Area=11,325 sf 72.84% Impervious Runoff Depth=3.13"
Flow Length=260'	Slope=0.0172 '/' Tc=7.7 min CN=82 Runoff=0.90 cfs 0.068 af

Subcatchment S1.9: S1.9 - CBS	Runoff Area=19,911 sf 70.97% Impervious Runoff Depth=3.04"
Flow Length=207'	Slope=0.0066 '/' Tc=10.7 min CN=81 Runoff=1.39 cfs 0.116 af
Subcatchment S3: S3 - IB	Runoff Area=16,681 sf 0.00% Impervious Runoff Depth=0.21"
Flow Length=12'	Slope=0.0980 '/' Tc=6.0 min CN=39 Runoff=0.02 cfs 0.007 af
Subcatchment S3.1: S3.1 - CBS	Runoff Area=145,755 sf 99.48% Impervious Runoff Depth=4.82"
Flow Length=488'	Slope=0.0231 '/' Tc=6.0 min CN=98 Runoff=16.57 cfs 1.345 af
Subcatchment S3.2: S3.2 - CBS	Runoff Area=11,785 sf 95.99% Impervious Runoff Depth=4.59"
Flow Length=706'	Slope=0.0613 '/' Tc=6.0 min CN=96 Runoff=1.32 cfs 0.104 af
Subcatchment S3.21: S3.21 - CBS	Runoff Area=30,610 sf 36.87% Impervious Runoff Depth=1.14"
Flow Length=727'	Slope=0.1637 '/' Tc=11.4 min CN=57 Runoff=0.66 cfs 0.067 af
Reach OP-1: Observation Point 1	Inflow=6.28 cfs 1.035 af
	Outflow=6.28 cfs 1.035 af
Pond 1.11P: Catch Basin	Peak Elev=359.69' Inflow=6.75 cfs 0.700 af
24.0" Round Culvert n=0.013 L=18.7' S=0.0080 '/'	Outflow=6.75 cfs 0.700 af
Pond 1.1AP: Sediment Forebay	Peak Elev=359.38' Storage=3,323 cf Inflow=7.03 cfs 0.727 af
	Outflow=6.83 cfs 0.673 af
Pond 1.1P: Infiltration Basin A	Peak Elev=359.27' Storage=9,632 cf Inflow=6.83 cfs 0.673 af
Discarded=1.06 cfs 0.673 af Primary=0.00 cfs 0.000 af	Outflow=1.06 cfs 0.673 af
Pond 1.2P: Catch Basin	Peak Elev=359.69' Inflow=0.59 cfs 0.090 af
24.0" Round Culvert n=0.013 L=18.0' S=0.0111 '/'	Outflow=0.59 cfs 0.090 af
Pond 1.3P: Catch Basin	Peak Elev=360.40' Inflow=5.71 cfs 0.557 af
18.0" Round Culvert n=0.013 L=135.2' S=0.0063 '/'	Outflow=5.71 cfs 0.557 af
Pond 1.41P: Catch Basin	Peak Elev=357.12' Inflow=2.50 cfs 0.215 af
18.0" Round Culvert n=0.013 L=18.0' S=0.0000 '/'	Outflow=2.51 cfs 0.215 af
Pond 1.42P: Catch Basin	Peak Elev=356.99' Inflow=5.73 cfs 0.475 af
18.0" Round Culvert n=0.013 L=21.0' S=0.0071 '/'	Outflow=5.73 cfs 0.475 af
Pond 1.43P: Infiltration Basin B	Peak Elev=355.77' Storage=7,202 cf Inflow=5.21 cfs 0.412 af
Discarded=0.50 cfs 0.412 af Primary=0.00 cfs 0.000 af	Outflow=0.50 cfs 0.412 af
Pond 1.4P: Catch Basin	Peak Elev=361.11' Inflow=5.69 cfs 0.555 af
18.0" Round Culvert n=0.013 L=32.5' S=0.0062 '/'	Outflow=5.69 cfs 0.555 af
Pond 1.51P: Catch Basin	Peak Elev=364.83' Inflow=1.37 cfs 0.169 af
15.0" Round Culvert n=0.013 L=120.9' S=0.0058 '/'	Outflow=1.37 cfs 0.169 af
Pond 1.52P: Catch Basin	Peak Elev=366.02' Inflow=1.14 cfs 0.086 af
15.0" Round Culvert n=0.013 L=282.6' S=0.0053 '/'	Outflow=1.14 cfs 0.086 af
Pond 1.53P: Catch Basin	Peak Elev=366.11' Inflow=0.60 cfs 0.046 af
15.0" Round Culvert n=0.013 L=20.9' S=0.0048 '/'	Outflow=0.60 cfs 0.046 af

Pond 1.5P: Catch Basin

Peak Elev=364.57' Inflow=5.34 cfs 0.522 af
 18.0" Round Culvert n=0.013 L=175.3' S=0.0280 ' ' Outflow=5.34 cfs 0.522 af

Pond 1.6P: Catch Basin

Peak Elev=364.72' Inflow=2.48 cfs 0.203 af
 18.0" Round Culvert n=0.013 L=36.2' S=0.0055 ' ' Outflow=2.48 cfs 0.203 af

Pond 1.7P: Catch Basin

Peak Elev=366.21' Inflow=2.36 cfs 0.194 af
 18.0" Round Culvert n=0.013 L=205.8' S=0.0097 ' ' Outflow=2.36 cfs 0.194 af

Pond 1.8P: Catch Basin

Peak Elev=366.51' Inflow=2.25 cfs 0.184 af
 18.0" Round Culvert n=0.013 L=19.0' S=0.0105 ' ' Outflow=2.25 cfs 0.184 af

Pond 2P: Sediment Forebay

Peak Elev=356.34' Storage=5,244 cf Inflow=6.08 cfs 0.509 af
 Outflow=5.21 cfs 0.412 af

Pond 3.1P: Catch Basin

Peak Elev=363.52' Inflow=16.57 cfs 1.345 af
 24.0" Round Culvert n=0.013 L=121.7' S=0.0378 ' ' Outflow=16.57 cfs 1.345 af

Pond 3.21P: Catch Basin

Peak Elev=359.57' Inflow=0.66 cfs 0.067 af
 18.0" Round Culvert n=0.013 L=18.0' S=0.0111 ' ' Outflow=0.66 cfs 0.067 af

Pond 3.2P: Catch Basin

Peak Elev=359.49' Inflow=1.79 cfs 0.170 af
 18.0" Round Culvert n=0.013 L=70.4' S=0.0398 ' ' Outflow=1.79 cfs 0.170 af

Pond 3P: Infiltration Basin C

Peak Elev=355.16' Storage=25,246 cf Inflow=17.37 cfs 0.990 af
 Discarded=1.14 cfs 0.990 af Primary=0.00 cfs 0.000 af Outflow=1.14 cfs 0.990 af

Pond 7P: Sediment Forebay

Peak Elev=355.68' Storage=5,958 cf Inflow=18.31 cfs 1.522 af
 Discarded=0.38 cfs 0.532 af Primary=17.37 cfs 0.990 af Outflow=17.75 cfs 1.522 af

Total Runoff Area = 34.369 ac Runoff Volume = 3.793 af Average Runoff Depth = 1.32"
79.01% Pervious = 27.155 ac 20.99% Impervious = 7.214 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentS1: S1 - OFF	Runoff Area=887,504 sf 0.07% Impervious Runoff Depth=0.99"
Flow Length=1,134'	Slope=0.3077 '/' Tc=14.9 min CN=48 Runoff=12.81 cfs 1.678 af
SubcatchmentS1.1: S1.1 - IB	Runoff Area=14,980 sf 0.00% Impervious Runoff Depth=1.42"
Flow Length=22'	Slope=0.1534 '/' Tc=6.0 min CN=54 Runoff=0.50 cfs 0.041 af
SubcatchmentS1.11: S1.11 - CBS	Runoff Area=6,080 sf 96.26% Impervious Runoff Depth=5.50"
Flow Length=271'	Slope=0.0691 '/' Tc=6.0 min CN=96 Runoff=0.81 cfs 0.064 af
SubcatchmentS1.2: S1.2 - CB	Runoff Area=76,797 sf 22.17% Impervious Runoff Depth=0.99"
Flow Length=475'	Slope=0.1685 '/' Tc=10.0 min CN=48 Runoff=1.27 cfs 0.145 af
SubcatchmentS1.3: S1.3 - CBS	Runoff Area=183 sf 100.00% Impervious Runoff Depth=5.73"
Flow Length=19'	Slope=0.0238 '/' Tc=6.0 min CN=98 Runoff=0.02 cfs 0.002 af
SubcatchmentS1.4: S1.4 - CBS	Runoff Area=16,150 sf 28.68% Impervious Runoff Depth=1.58"
Flow Length=235'	Slope=0.0469 '/' Tc=8.8 min CN=56 Runoff=0.56 cfs 0.049 af
SubcatchmentS1.41: S1.41 - CBS	Runoff Area=72,779 sf 34.57% Impervious Runoff Depth=2.16"
Flow Length=465'	Slope=0.0844 '/' Tc=9.5 min CN=63 Runoff=3.61 cfs 0.300 af
SubcatchmentS1.42: S1.42 - CBS	Runoff Area=44,581 sf 59.28% Impervious Runoff Depth=3.86"
Flow Length=557'	Slope=0.0400 '/' Tc=9.6 min CN=81 Runoff=4.08 cfs 0.329 af
SubcatchmentS1.43: S1.43 - IB	Runoff Area=18,825 sf 11.16% Impervious Runoff Depth=1.42"
Flow Length=89'	Slope=0.1187 '/' Tc=6.0 min CN=54 Runoff=0.63 cfs 0.051 af
SubcatchmentS1.5: S1.5 - CBS	Runoff Area=61,830 sf 33.61% Impervious Runoff Depth=1.82"
Flow Length=263'	Slope=0.0327 '/' Tc=10.7 min CN=59 Runoff=2.40 cfs 0.215 af
SubcatchmentS1.51: S1.51 - CBS	Runoff Area=35,983 sf 28.96% Impervious Runoff Depth=1.74"
Flow Length=432'	Slope=0.0163 '/' Tc=23.2 min CN=58 Runoff=0.98 cfs 0.120 af
SubcatchmentS1.52: S1.52 - CBS	Runoff Area=7,297 sf 55.68% Impervious Runoff Depth=3.65"
Flow Length=123'	Slope=0.0249 '/' Tc=6.0 min CN=79 Runoff=0.72 cfs 0.051 af
SubcatchmentS1.53: S1.53 - CBS	Runoff Area=11,189 sf 35.92% Impervious Runoff Depth=2.87"
Flow Length=192'	Slope=0.0184 '/' Tc=8.1 min CN=71 Runoff=0.80 cfs 0.062 af
SubcatchmentS1.6: S1.6 - CBS	Runoff Area=1,489 sf 75.73% Impervious Runoff Depth=4.17"
Flow Length=129'	Slope=0.0754 '/' Tc=6.0 min CN=84 Runoff=0.16 cfs 0.012 af
SubcatchmentS1.7: S1.7 - CBS	Runoff Area=5,359 sf 34.57% Impervious Runoff Depth=1.50"
Flow Length=95'	Slope=0.1101 '/' Tc=6.0 min CN=55 Runoff=0.19 cfs 0.015 af
SubcatchmentS1.8: S1.8 - CBS	Runoff Area=11,325 sf 72.84% Impervious Runoff Depth=3.96"
Flow Length=260'	Slope=0.0172 '/' Tc=7.7 min CN=82 Runoff=1.13 cfs 0.086 af

Subcatchment S1.9: S1.9 - CBS Runoff Area=19,911 sf 70.97% Impervious Runoff Depth=3.86"
Flow Length=207' Slope=0.0066 '/' Tc=10.7 min CN=81 Runoff=1.76 cfs 0.147 af

Subcatchment S3: S3 - IB Runoff Area=16,681 sf 0.00% Impervious Runoff Depth=0.44"
Flow Length=12' Slope=0.0980 '/' Tc=6.0 min CN=39 Runoff=0.07 cfs 0.014 af

Subcatchment S3.1: S3.1 - CBS Runoff Area=145,755 sf 99.48% Impervious Runoff Depth=5.73"
Flow Length=488' Slope=0.0231 '/' Tc=6.0 min CN=98 Runoff=19.58 cfs 1.598 af

Subcatchment S3.2: S3.2 - CBS Runoff Area=11,785 sf 95.99% Impervious Runoff Depth=5.50"
Flow Length=706' Slope=0.0613 '/' Tc=6.0 min CN=96 Runoff=1.56 cfs 0.124 af

Subcatchment S3.21: S3.21 - CBS Runoff Area=30,610 sf 36.87% Impervious Runoff Depth=1.66"
Flow Length=727' Slope=0.1637 '/' Tc=11.4 min CN=57 Runoff=1.03 cfs 0.097 af

Reach OP-1: Observation Point 1 Inflow=12.81 cfs 1.748 af
Outflow=12.81 cfs 1.748 af

Pond 1.11P: Catch Basin Peak Elev=360.15' Inflow=9.82 cfs 0.967 af
24.0" Round Culvert n=0.013 L=18.7' S=0.0080 '/' Outflow=9.82 cfs 0.967 af

Pond 1.1AP: Sediment Forebay Peak Elev=360.00' Storage=5,214 cf Inflow=10.28 cfs 1.008 af
Outflow=10.05 cfs 0.954 af

Pond 1.1P: Infiltration Basin A Peak Elev=360.00' Storage=13,769 cf Inflow=10.05 cfs 0.954 af
Discarded=1.21 cfs 0.941 af Primary=0.08 cfs 0.013 af Outflow=1.29 cfs 0.954 af

Pond 1.2P: Catch Basin Peak Elev=360.16' Inflow=1.27 cfs 0.145 af
24.0" Round Culvert n=0.013 L=18.0' S=0.0111 '/' Outflow=1.27 cfs 0.145 af

Pond 1.3P: Catch Basin Peak Elev=361.54' Inflow=7.96 cfs 0.758 af
18.0" Round Culvert n=0.013 L=135.2' S=0.0063 '/' Outflow=7.96 cfs 0.758 af

Pond 1.41P: Catch Basin Peak Elev=358.00' Inflow=3.61 cfs 0.300 af
18.0" Round Culvert n=0.013 L=18.0' S=0.0000 '/' Outflow=3.61 cfs 0.300 af

Pond 1.42P: Catch Basin Peak Elev=357.71' Inflow=7.69 cfs 0.629 af
18.0" Round Culvert n=0.013 L=21.0' S=0.0071 '/' Outflow=7.69 cfs 0.629 af

Pond 1.43P: Infiltration Basin B Peak Elev=356.52' Storage=10,421 cf Inflow=7.90 cfs 0.583 af
Discarded=0.59 cfs 0.581 af Primary=0.03 cfs 0.002 af Outflow=0.62 cfs 0.583 af

Pond 1.4P: Catch Basin Peak Elev=362.92' Inflow=7.94 cfs 0.756 af
18.0" Round Culvert n=0.013 L=32.5' S=0.0062 '/' Outflow=7.94 cfs 0.756 af

Pond 1.51P: Catch Basin Peak Elev=365.33' Inflow=1.91 cfs 0.232 af
15.0" Round Culvert n=0.013 L=120.9' S=0.0058 '/' Outflow=1.91 cfs 0.232 af

Pond 1.52P: Catch Basin Peak Elev=366.18' Inflow=1.49 cfs 0.113 af
15.0" Round Culvert n=0.013 L=282.6' S=0.0053 '/' Outflow=1.49 cfs 0.113 af

Pond 1.53P: Catch Basin Peak Elev=366.26' Inflow=0.80 cfs 0.062 af
15.0" Round Culvert n=0.013 L=20.9' S=0.0048 '/' Outflow=0.80 cfs 0.062 af

Pond 1.5P: Catch Basin	Peak Elev=365.16' Inflow=7.38 cfs 0.707 af 18.0" Round Culvert n=0.013 L=175.3' S=0.0280 '/' Outflow=7.38 cfs 0.707 af
Pond 1.6P: Catch Basin	Peak Elev=365.37' Inflow=3.16 cfs 0.260 af 18.0" Round Culvert n=0.013 L=36.2' S=0.0055 '/' Outflow=3.16 cfs 0.260 af
Pond 1.7P: Catch Basin	Peak Elev=366.39' Inflow=3.02 cfs 0.248 af 18.0" Round Culvert n=0.013 L=205.8' S=0.0097 '/' Outflow=3.02 cfs 0.248 af
Pond 1.8P: Catch Basin	Peak Elev=366.68' Inflow=2.83 cfs 0.233 af 18.0" Round Culvert n=0.013 L=19.0' S=0.0105 '/' Outflow=2.83 cfs 0.233 af
Pond 2P: Sediment Forebay	Peak Elev=356.52' Storage=5,843 cf Inflow=8.27 cfs 0.680 af Outflow=7.90 cfs 0.583 af
Pond 3.1P: Catch Basin	Peak Elev=364.29' Inflow=19.58 cfs 1.598 af 24.0" Round Culvert n=0.013 L=121.7' S=0.0378 '/' Outflow=19.58 cfs 1.598 af
Pond 3.21P: Catch Basin	Peak Elev=359.71' Inflow=1.03 cfs 0.097 af 18.0" Round Culvert n=0.013 L=18.0' S=0.0111 '/' Outflow=1.03 cfs 0.097 af
Pond 3.2P: Catch Basin	Peak Elev=359.61' Inflow=2.36 cfs 0.221 af 18.0" Round Culvert n=0.013 L=70.4' S=0.0398 '/' Outflow=2.36 cfs 0.221 af
Pond 3P: Infiltration Basin C	Peak Elev=355.61' Storage=29,758 cf Inflow=20.86 cfs 1.256 af Discarded=1.20 cfs 1.201 af Primary=0.84 cfs 0.055 af Outflow=2.04 cfs 1.256 af
Pond 7P: Sediment Forebay	Peak Elev=355.76' Storage=6,225 cf Inflow=21.88 cfs 1.833 af Discarded=0.39 cfs 0.577 af Primary=20.86 cfs 1.256 af Outflow=21.25 cfs 1.833 af

Total Runoff Area = 34.369 ac Runoff Volume = 5.200 af Average Runoff Depth = 1.82"
79.01% Pervious = 27.155 ac 20.99% Impervious = 7.214 ac

Section 2.1: Post-Developed Conditions
25- and 50-year Storm – Full Summary

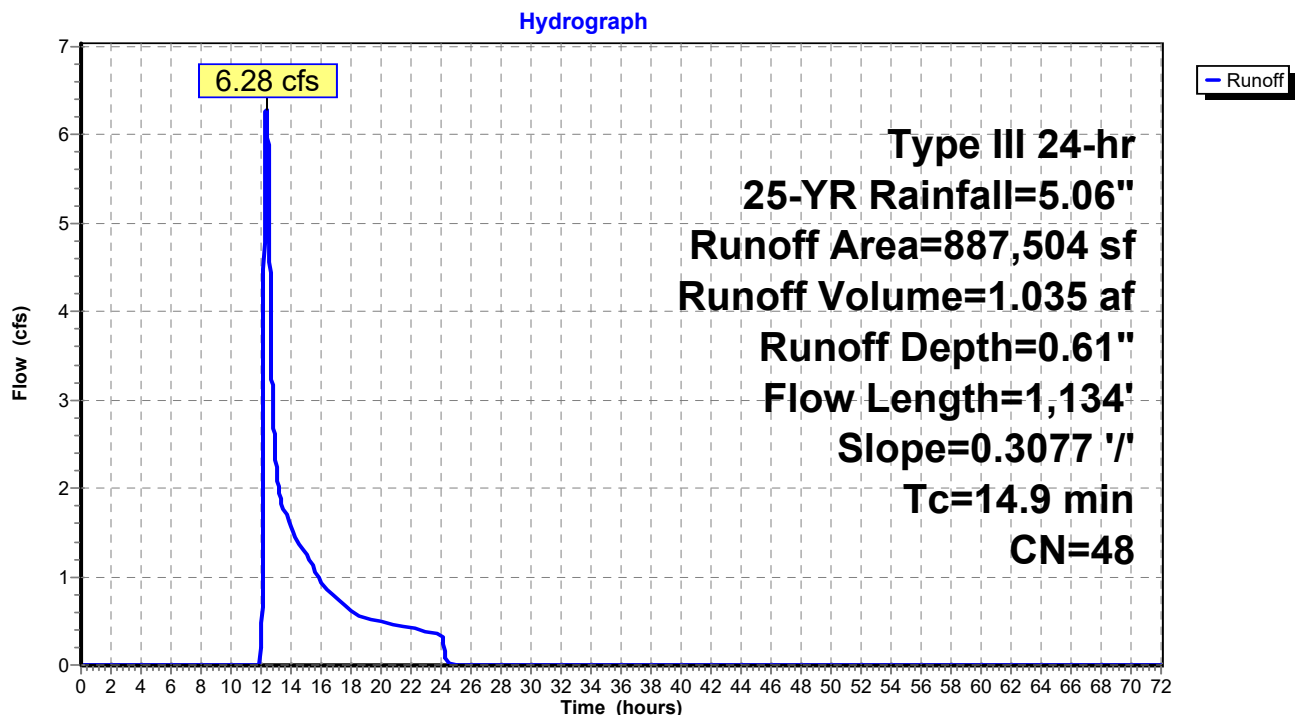
Summary for Subcatchment S1: S1 - OFF

Runoff = 6.28 cfs @ 12.34 hrs, Volume= 1.035 af, Depth= 0.61"
 Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
853	85	Gravel roads HSG B
3,192	76	Gravel roads HSG A
27,779	55	Woods, Good HSG B
12,435	70	Woods, Good HSG C
311,163	30	Woods, Good HSG A
600	98	Roofs HSG B
357	89	Gravel roads HSG C
170,922	39	>75% Grass cover, Good HSG A
196,027	61	>75% Grass cover, Good HSG B
164,177	74	>75% Grass cover, Good HSG C
887,504	48	Weighted Average
886,904		99.93% Pervious Area
600		0.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	1,134	0.3077	1.27		Lag/CN Method,

Subcatchment S1: S1 - OFF

Summary for Subcatchment S1.1: S1.1 - IB

Runoff = 0.30 cfs @ 12.11 hrs, Volume= 0.027 af, Depth= 0.95"
 Routed to Pond 1.1AP : Sediment Forebay

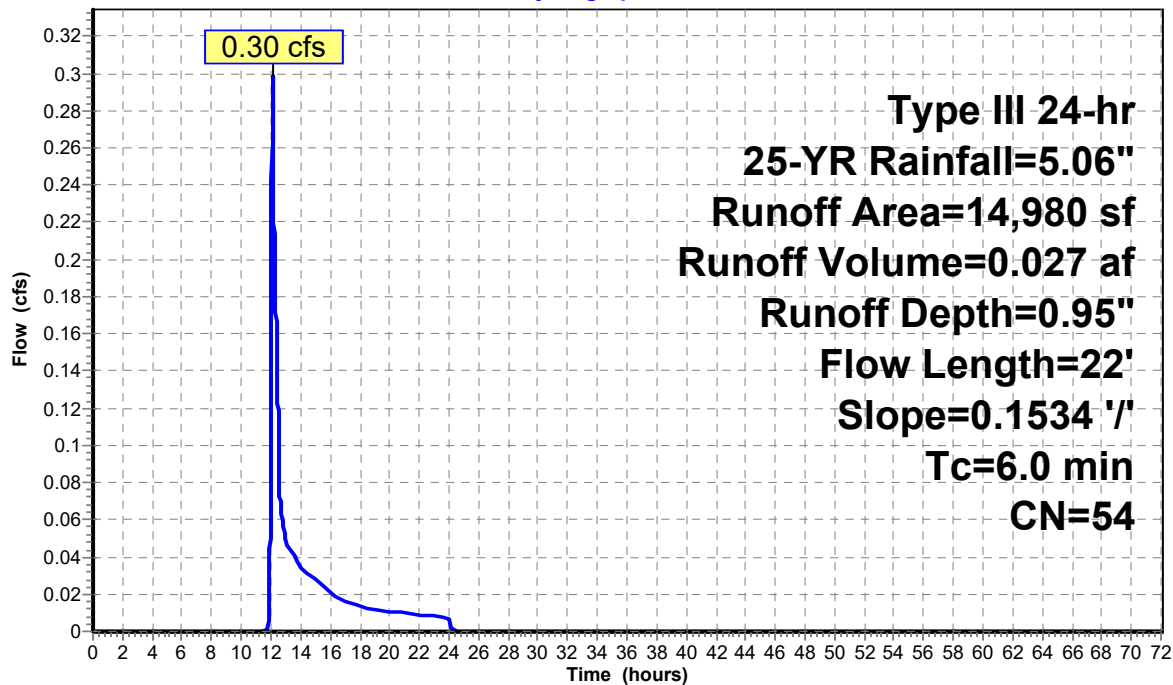
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
5,057	39	>75% Grass cover, Good HSG A
9,923	61	>75% Grass cover, Good HSG B
14,980	54	Weighted Average
14,980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	22	0.1534	0.47		Lag/CN Method,
0.8	22	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.1: S1.1 - IB

Hydrograph



Summary for Subcatchment S1.11: S1.11 - CBS

Runoff = 0.68 cfs @ 12.08 hrs, Volume= 0.053 af, Depth= 4.59"
 Routed to Pond 1.11P : Catch Basin

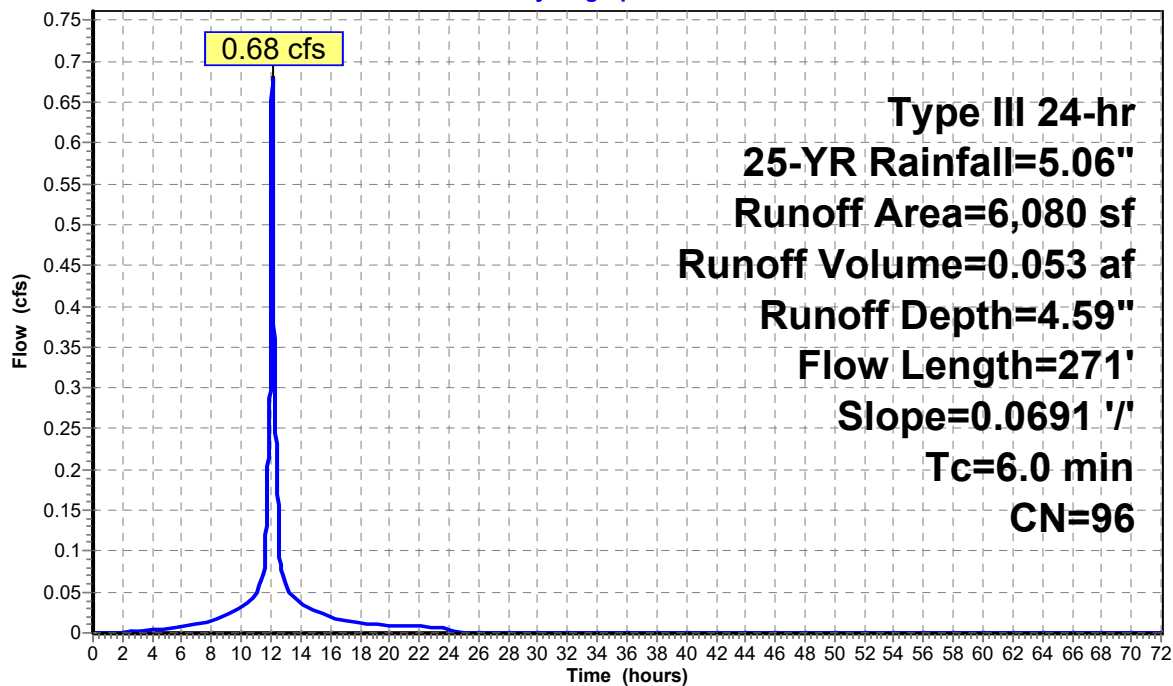
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
694	98	Paved parking HSG B
5,158	98	Paved parking HSG A
193	39	>75% Grass cover, Good HSG A
34	61	>75% Grass cover, Good HSG B
6,080	96	Weighted Average
227		3.74% Pervious Area
5,853		96.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	271	0.0691	2.00		Lag/CN Method,
2.3	271	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.11: S1.11 - CBS

Hydrograph



Summary for Subcatchment S1.2: S1.2 - CB

Runoff = 0.59 cfs @ 12.21 hrs, Volume= 0.090 af, Depth= 0.61"
 Routed to Pond 1.2P : Catch Basin

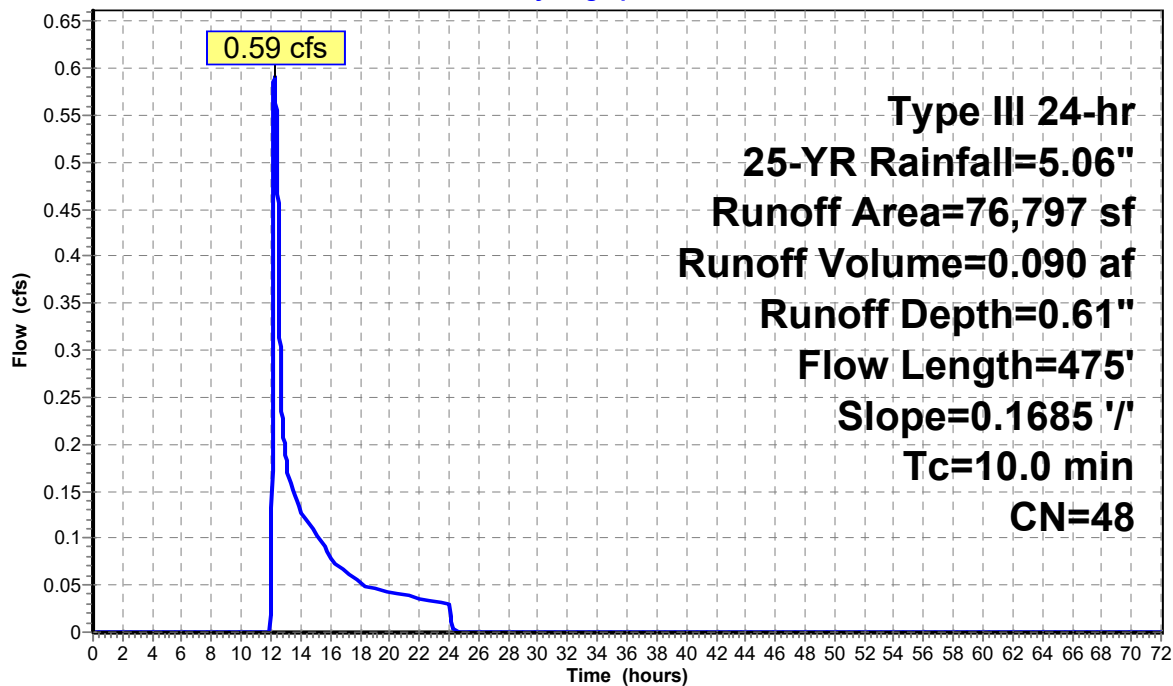
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
462	98	Paved parking HSG B
5,700	98	Roofs HSG A
33,285	30	Woods, Good HSG A
10,863	98	Paved parking HSG A
26,341	39	>75% Grass cover, Good HSG A
146	61	>75% Grass cover, Good HSG B
76,797	48	Weighted Average
59,772		77.83% Pervious Area
17,025		22.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	475	0.1685	0.79		Lag/CN Method,

Subcatchment S1.2: S1.2 - CB

Hydrograph



Summary for Subcatchment S1.3: S1.3 - CBS

Runoff = 0.02 cfs @ 12.08 hrs, Volume= 0.002 af, Depth= 4.82"
 Routed to Pond 1.3P : Catch Basin

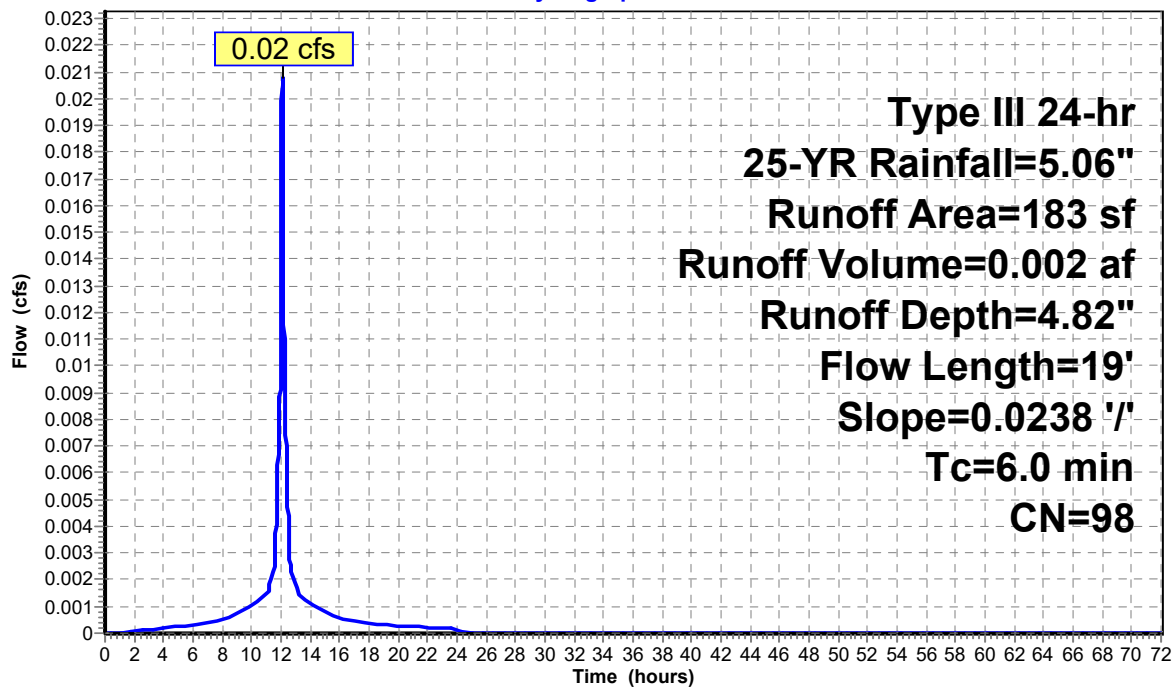
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
183	98	Paved parking HSG A
183		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	19	0.0238	0.78		Lag/CN Method,
0.4	19	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.3: S1.3 - CBS

Hydrograph



Summary for Subcatchment S1.4: S1.4 - CBS

Runoff = 0.35 cfs @ 12.14 hrs, Volume= 0.033 af, Depth= 1.07"
 Routed to Pond 1.4P : Catch Basin

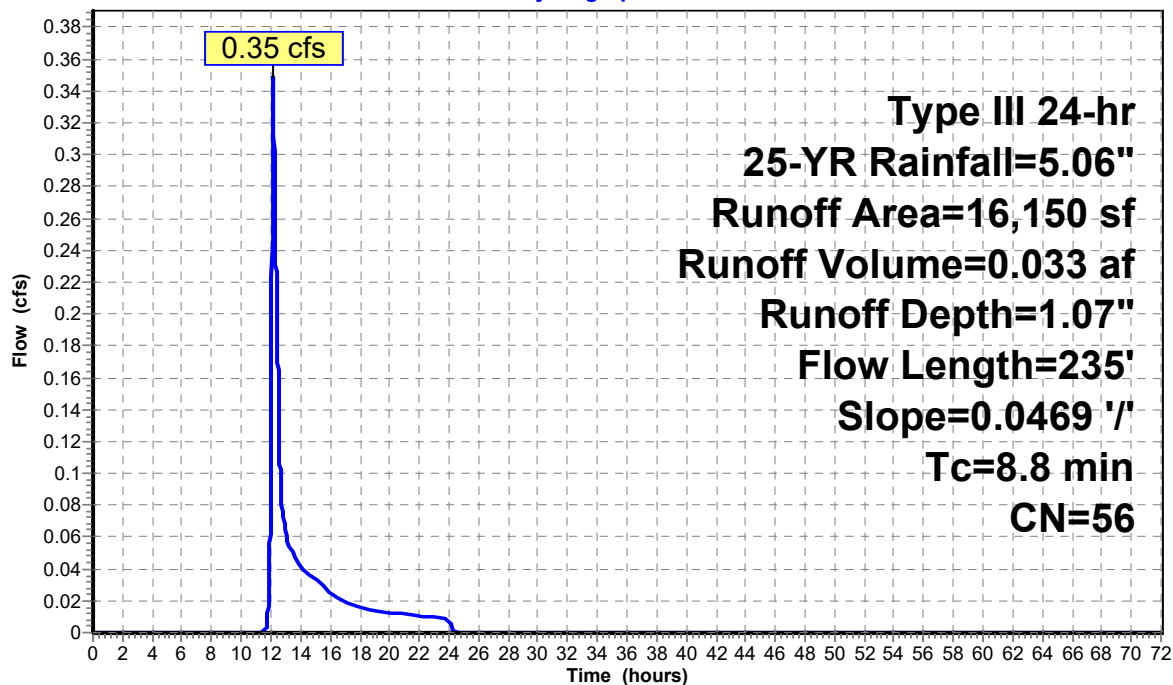
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
1,050	98	Roofs HSG A
3,582	98	Paved parking HSG A
11,518	39	>75% Grass cover, Good HSG A
16,150	56	Weighted Average
11,518		71.32% Pervious Area
4,632		28.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	235	0.0469	0.44		Lag/CN Method,

Subcatchment S1.4: S1.4 - CBS

Hydrograph



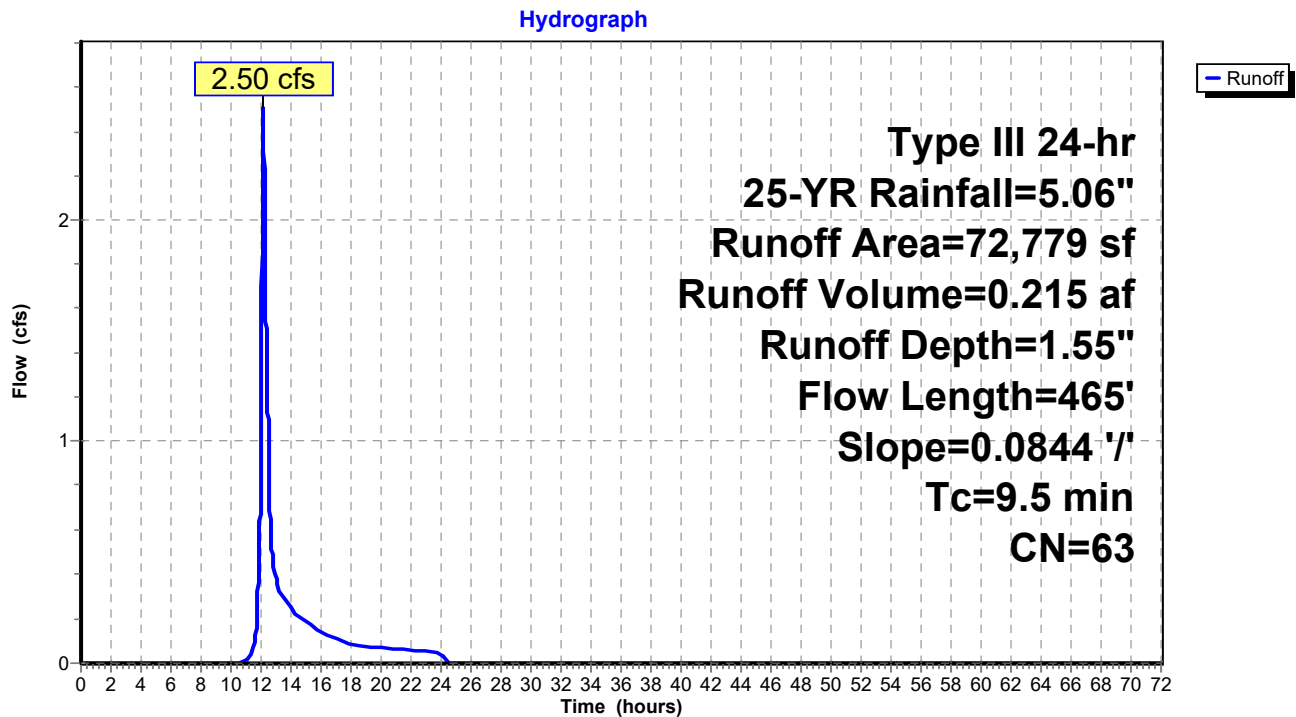
Summary for Subcatchment S1.41: S1.41 - CBS

Runoff = 2.50 cfs @ 12.15 hrs, Volume= 0.215 af, Depth= 1.55"
 Routed to Pond 1.41P : Catch Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
3,632	98	Paved parking HSG B
3,275	98	Roofs HSG B
9,325	98	Roofs HSG A
8,926	98	Paved parking HSG A
36,661	39	>75% Grass cover, Good HSG A
10,960	61	>75% Grass cover, Good HSG B
72,779	63	Weighted Average
47,621		65.43% Pervious Area
25,158		34.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	465	0.0844	0.82		Lag/CN Method,

Subcatchment S1.41: S1.41 - CBS

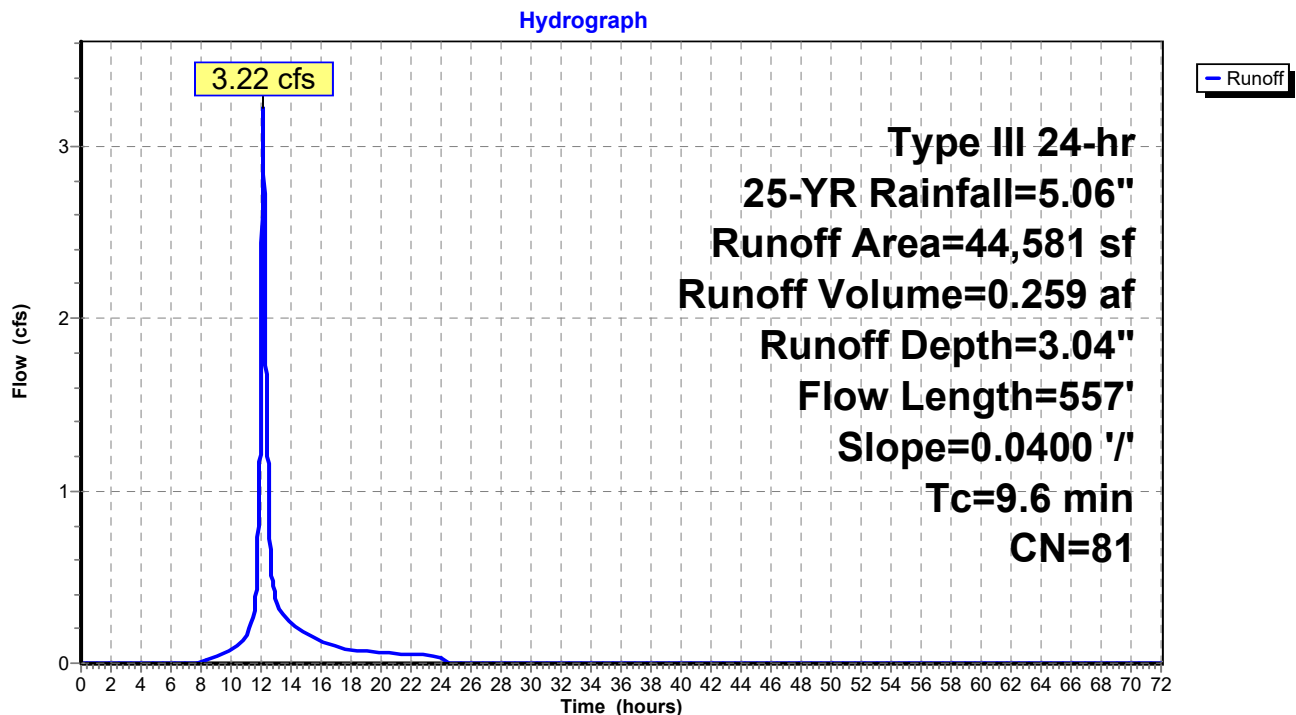
Summary for Subcatchment S1.42: S1.42 - CBS

Runoff = 3.22 cfs @ 12.13 hrs, Volume= 0.259 af, Depth= 3.04"
 Routed to Pond 1.42P : Catch Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
5,716	98	Paved parking HSG B
432	98	Roofs HSG C
408	76	Gravel roads HSG A
3,432	98	Roofs HSG A
8,736	98	Roofs HSG B
8,114	98	Paved parking HSG A
3,652	39	>75% Grass cover, Good HSG A
14,092	61	>75% Grass cover, Good HSG B
44,581	81	Weighted Average
18,151		40.72% Pervious Area
26,430		59.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	557	0.0400	0.96		Lag/CN Method,

Subcatchment S1.42: S1.42 - CBS

Summary for Subcatchment S1.43: S1.43 - IB

Runoff = 0.38 cfs @ 12.11 hrs, Volume= 0.034 af, Depth= 0.95"
 Routed to Pond 2P : Sediment Forebay

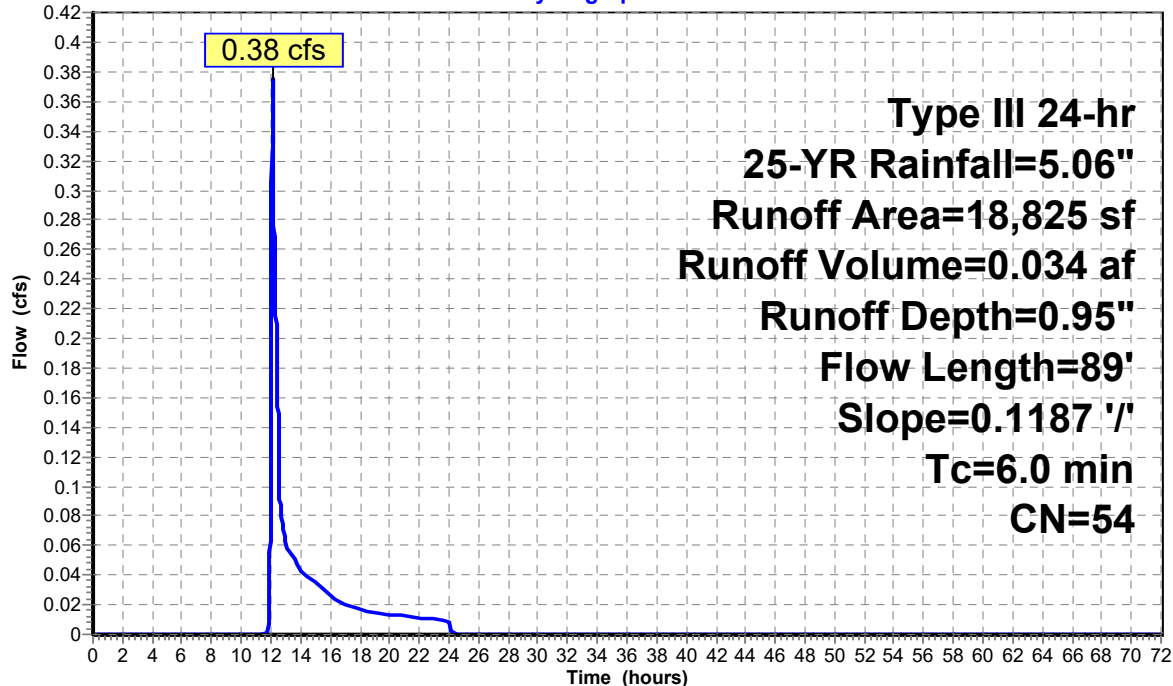
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
2,100	98	Roofs HSG A
9,413	39	>75% Grass cover, Good HSG A
7,312	61	>75% Grass cover, Good HSG B
18,825	54	Weighted Average
16,725		88.84% Pervious Area
2,100		11.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	89	0.1187	0.55		Lag/CN Method,
2.7	89	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.43: S1.43 - IB

Hydrograph



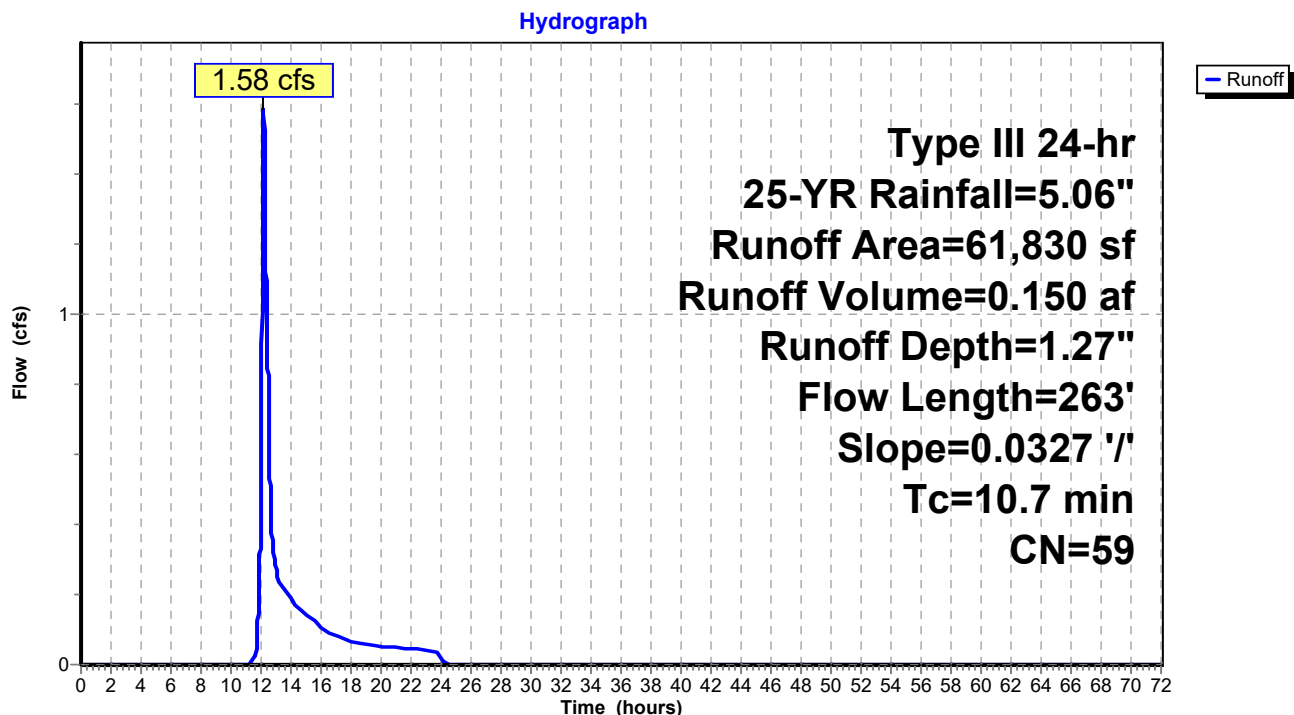
Summary for Subcatchment S1.5: S1.5 - CBS

Runoff = 1.58 cfs @ 12.16 hrs, Volume= 0.150 af, Depth= 1.27"
 Routed to Pond 1.5P : Catch Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
10,626	98	Roofs HSG A
10,156	98	Paved parking HSG A
41,047	39	>75% Grass cover, Good HSG A
61,830	59	Weighted Average
41,047		66.39% Pervious Area
20,782		33.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	263	0.0327	0.41		Lag/CN Method,

Subcatchment S1.5: S1.5 - CBS

Summary for Subcatchment S1.51: S1.51 - CBS

Runoff = 0.64 cfs @ 12.37 hrs, Volume= 0.083 af, Depth= 1.20"
 Routed to Pond 1.51P : Catch Basin

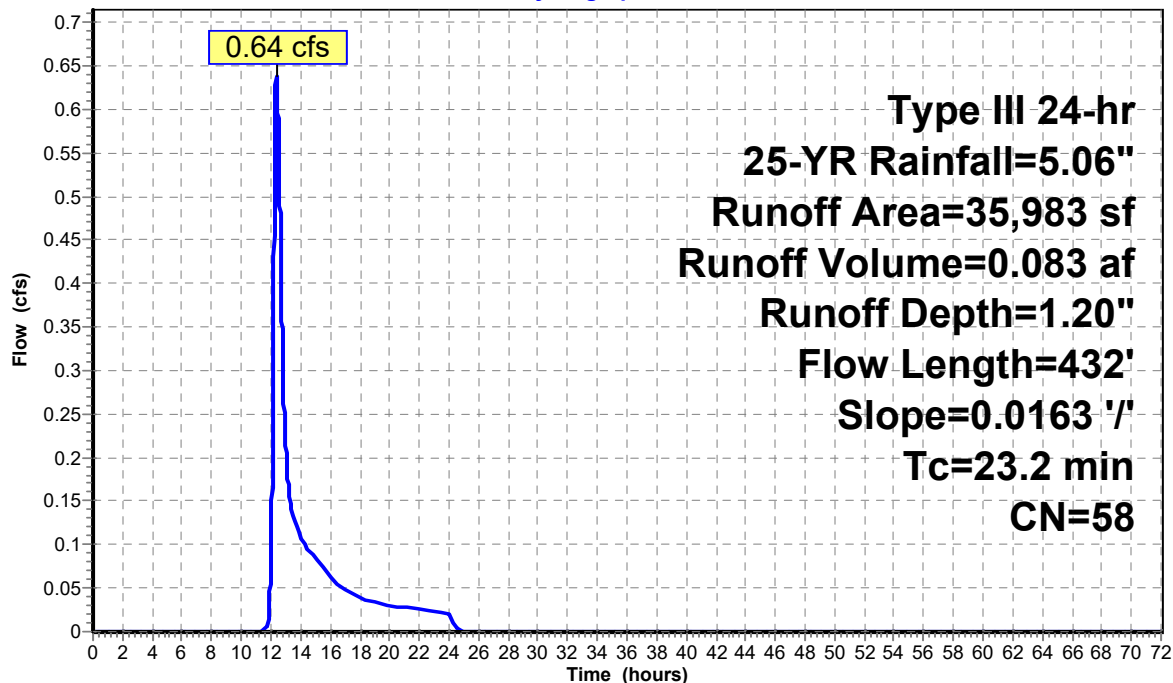
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
5,124	98	Roofs HSG A
126	98	Roofs HSG B
5,171	98	Paved parking HSG A
21,968	39	>75% Grass cover, Good HSG A
3,594	61	>75% Grass cover, Good HSG B
35,983	58	Weighted Average
25,562		71.04% Pervious Area
10,421		28.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	432	0.0163	0.31		Lag/CN Method,

Subcatchment S1.51: S1.51 - CBS

Hydrograph



Summary for Subcatchment S1.52: S1.52 - CBS

Runoff = 0.56 cfs @ 12.09 hrs, Volume= 0.040 af, Depth= 2.85"
 Routed to Pond 1.52P : Catch Basin

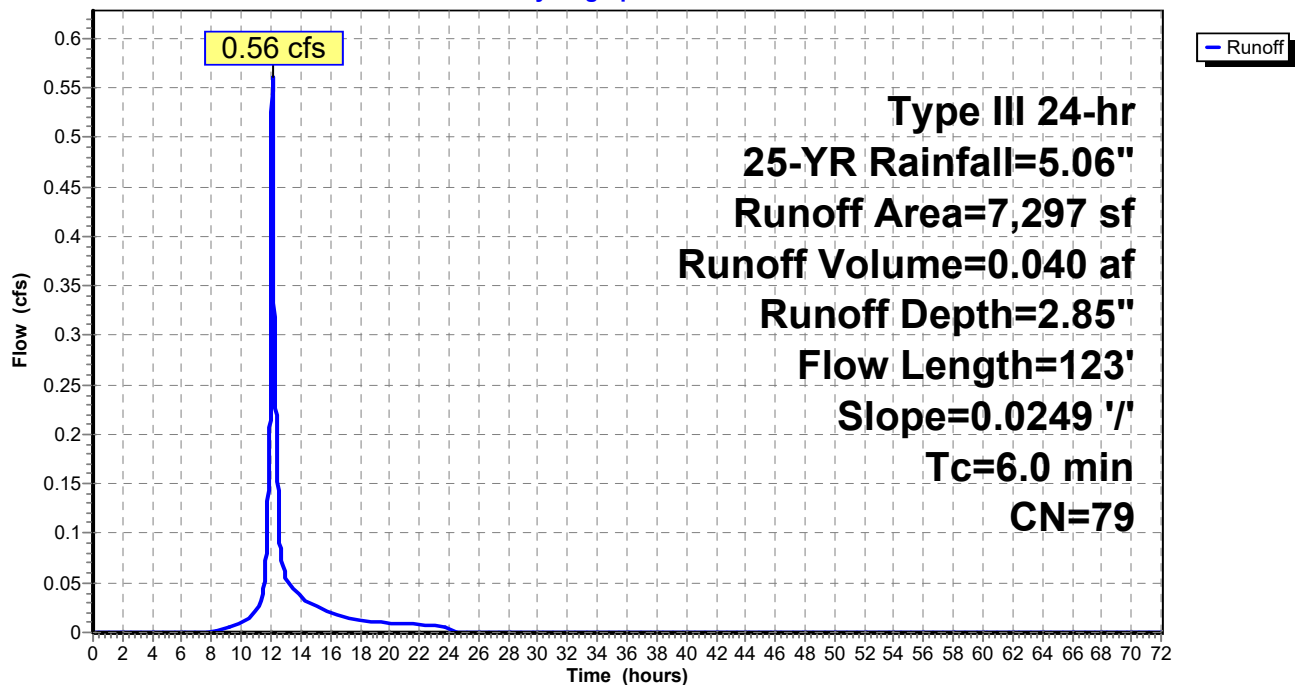
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
1,476	98	Paved parking HSG B
1,974	98	Roofs HSG B
612	98	Paved parking HSG A
1,005	39	>75% Grass cover, Good HSG A
2,229	61	>75% Grass cover, Good HSG B
7,297	79	Weighted Average
3,234		44.32% Pervious Area
4,063		55.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	123	0.0249	0.53		Lag/CN Method,
3.9	123	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.52: S1.52 - CBS

Hydrograph



Summary for Subcatchment S1.53: S1.53 - CBS

Runoff = 0.60 cfs @ 12.12 hrs, Volume= 0.046 af, Depth= 2.16"
 Routed to Pond 1.53P : Catch Basin

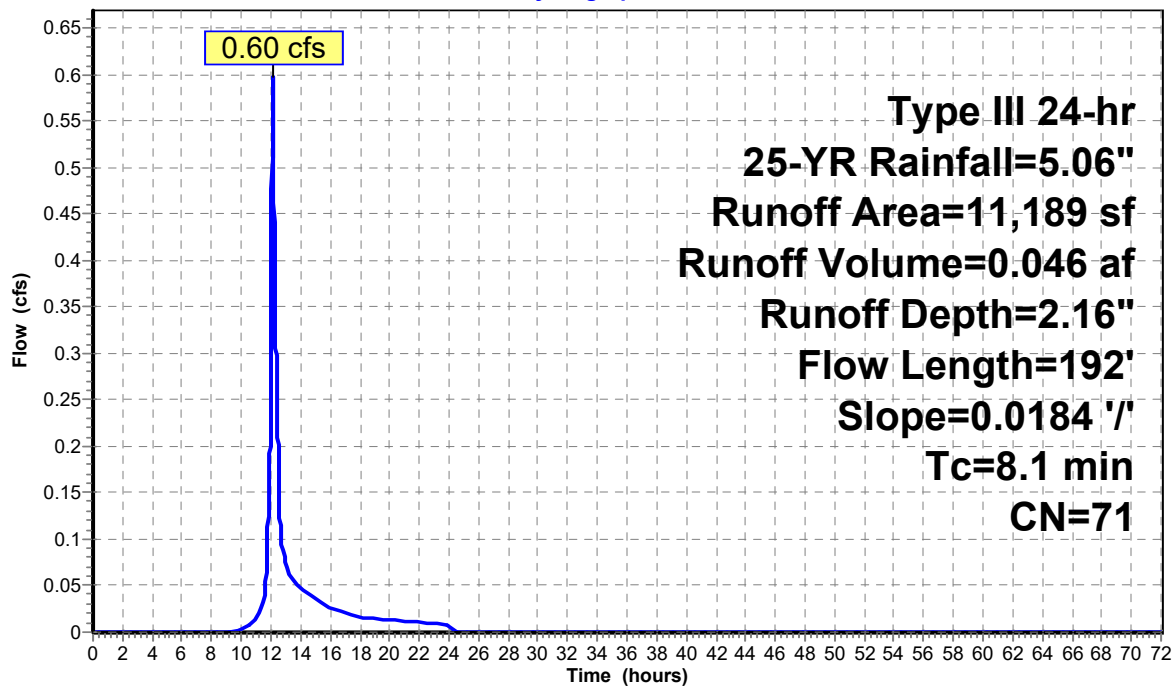
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
1,482	98	Paved parking HSG B
1,315	98	Roofs HSG B
785	98	Roofs HSG A
438	98	Paved parking HSG A
1,803	39	>75% Grass cover, Good HSG A
5,367	61	>75% Grass cover, Good HSG B
11,189	71	Weighted Average
7,170		64.08% Pervious Area
4,020		35.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.1	192	0.0184	0.39		Lag/CN Method,

Subcatchment S1.53: S1.53 - CBS

Hydrograph



Summary for Subcatchment S1.6: S1.6 - CBS

Runoff = 0.13 cfs @ 12.09 hrs, Volume= 0.009 af, Depth= 3.33"
 Routed to Pond 1.6P : Catch Basin

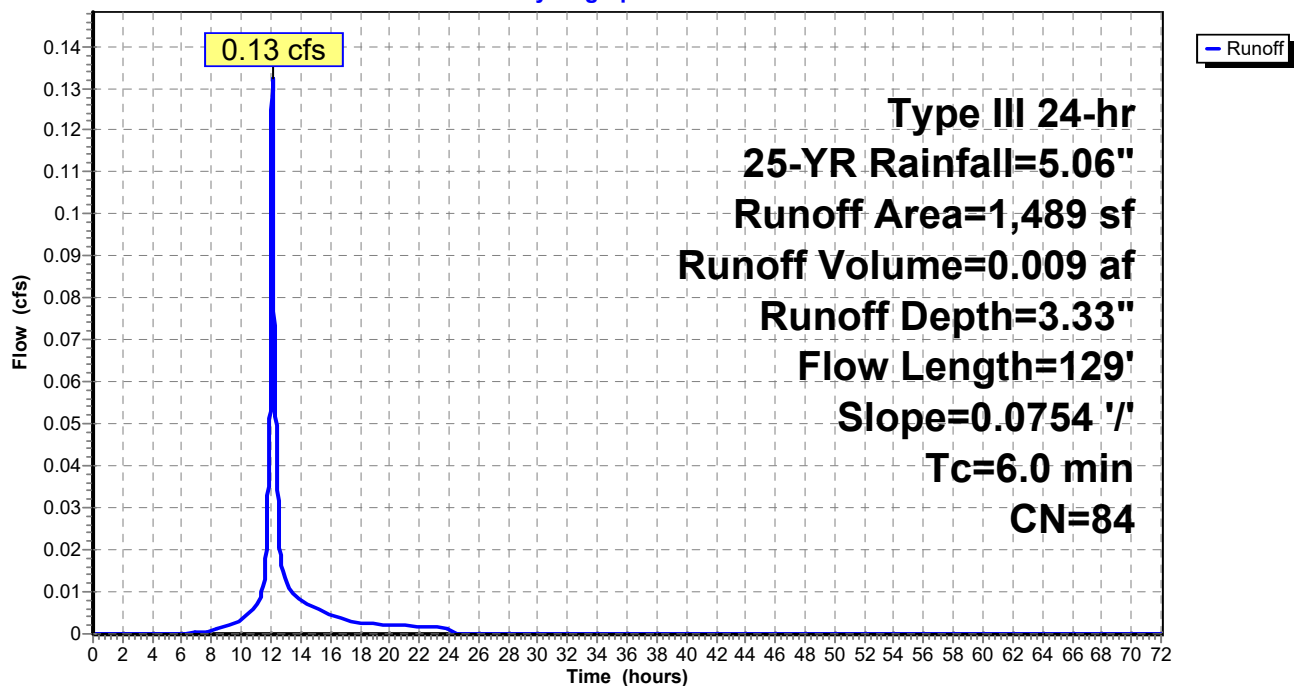
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
1,128	98	Paved parking HSG A
361	39	>75% Grass cover, Good HSG A
1,489	84	Weighted Average
361		24.27% Pervious Area
1,128		75.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	129	0.0754	1.09		Lag/CN Method,
2.0	129	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.6: S1.6 - CBS

Hydrograph



Summary for Subcatchment S1.7: S1.7 - CBS

Runoff = 0.12 cfs @ 12.11 hrs, Volume= 0.010 af, Depth= 1.01"
 Routed to Pond 1.7P : Catch Basin

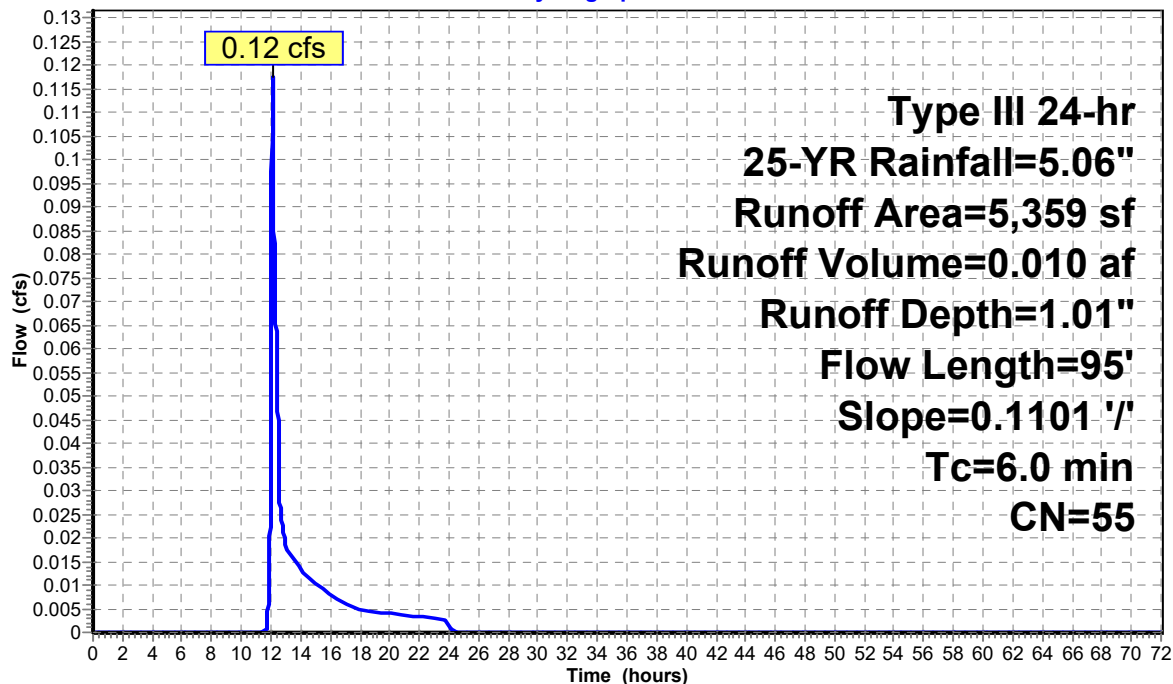
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
2,755	30	Woods, Good HSG A
1,853	98	Paved parking HSG A
751	39	>75% Grass cover, Good HSG A
5,359	55	Weighted Average
3,506		65.43% Pervious Area
1,853		34.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.9	95	0.1101	0.55		Lag/CN Method,
2.9	95	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.7: S1.7 - CBS

Hydrograph



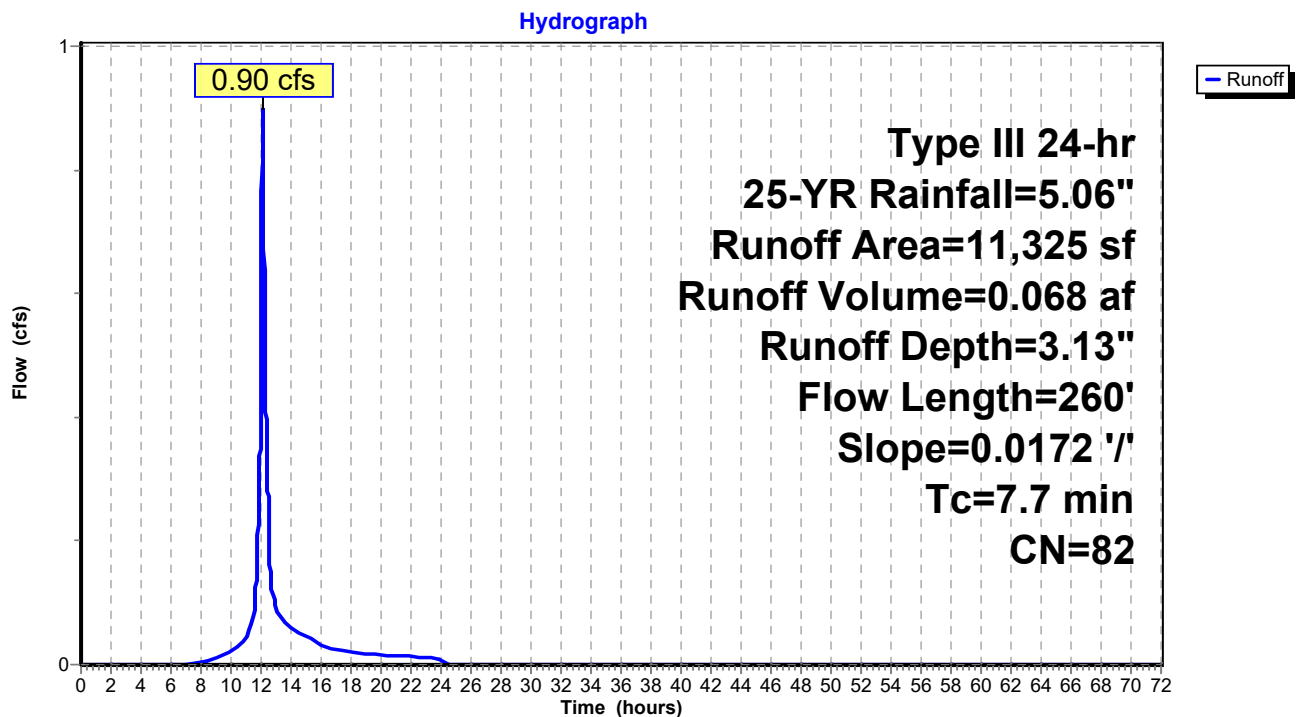
Summary for Subcatchment S1.8: S1.8 - CBS

Runoff = 0.90 cfs @ 12.11 hrs, Volume= 0.068 af, Depth= 3.13"
 Routed to Pond 1.8P : Catch Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
1,162	98	Roofs HSG A
7,086	98	Paved parking HSG A
3,076	39	>75% Grass cover, Good HSG A
11,325	82	Weighted Average
3,076		27.16% Pervious Area
8,248		72.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	260	0.0172	0.56		Lag/CN Method,

Subcatchment S1.8: S1.8 - CBS

Summary for Subcatchment S1.9: S1.9 - CBS

Runoff = 1.39 cfs @ 12.15 hrs, Volume= 0.116 af, Depth= 3.04"
 Routed to Pond 1.8P : Catch Basin

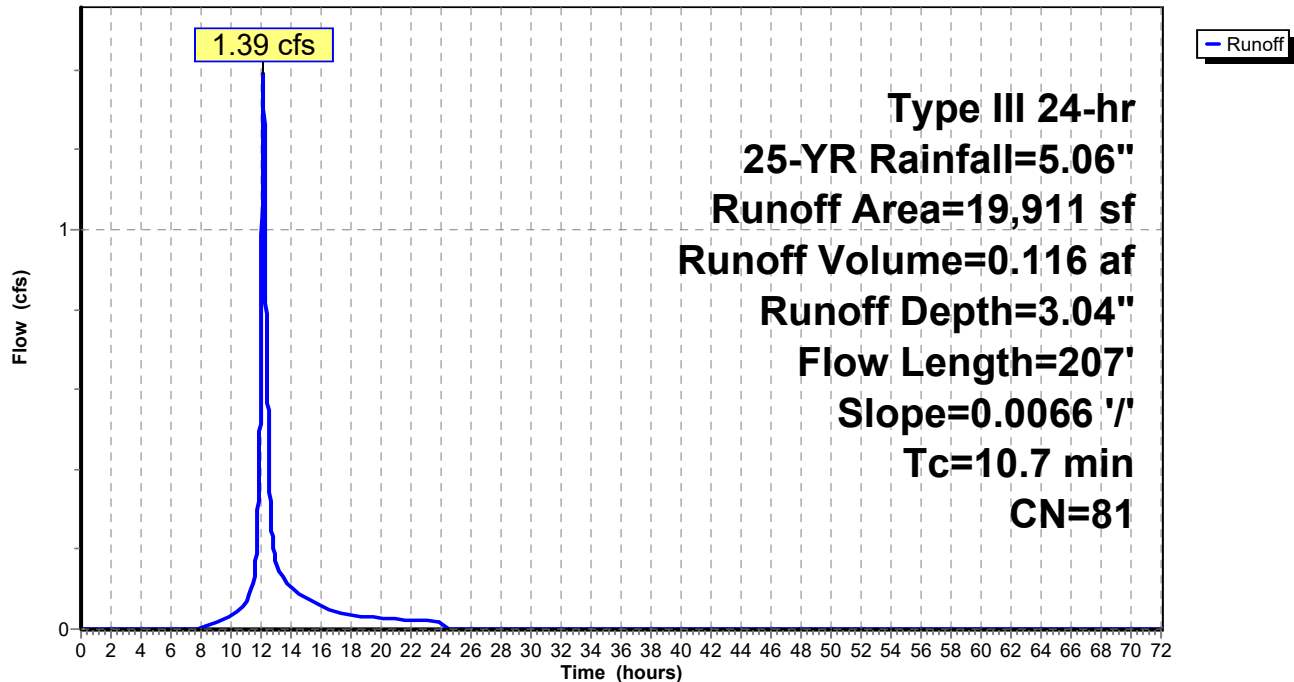
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
48	30	Woods, Good HSG A
1,067	98	Roofs HSG A
13,064	98	Paved parking HSG A
5,732	39	>75% Grass cover, Good HSG A
19,911	81	Weighted Average
5,780		29.03% Pervious Area
14,131		70.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	207	0.0066	0.32		Lag/CN Method,

Subcatchment S1.9: S1.9 - CBS

Hydrograph



Summary for Subcatchment S3: S3 - IB

Runoff = 0.02 cfs @ 12.46 hrs, Volume= 0.007 af, Depth= 0.21"
 Routed to Pond 7P : Sediment Forebay

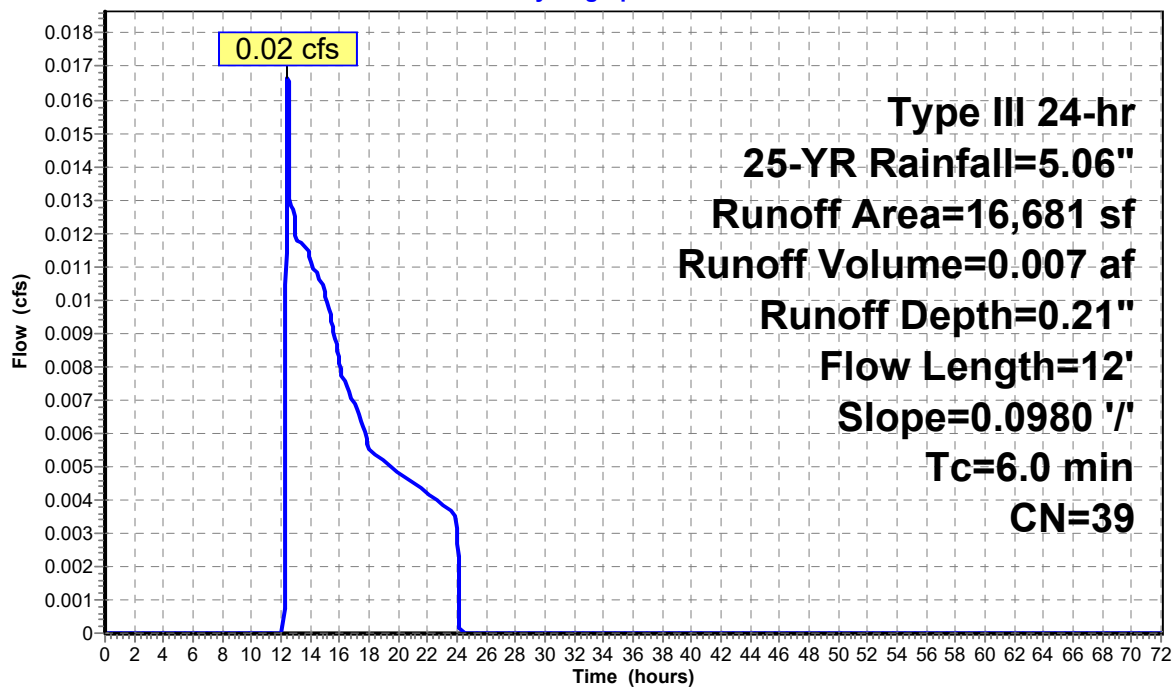
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
16,681	39	>75% Grass cover, Good HSG A
16,681		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	12	0.0980	0.23		Lag/CN Method,
0.9	12	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S3: S3 - IB

Hydrograph



Summary for Subcatchment S3.1: S3.1 - CBS

Runoff = 16.57 cfs @ 12.08 hrs, Volume= 1.345 af, Depth= 4.82"
 Routed to Pond 3.1P : Catch Basin

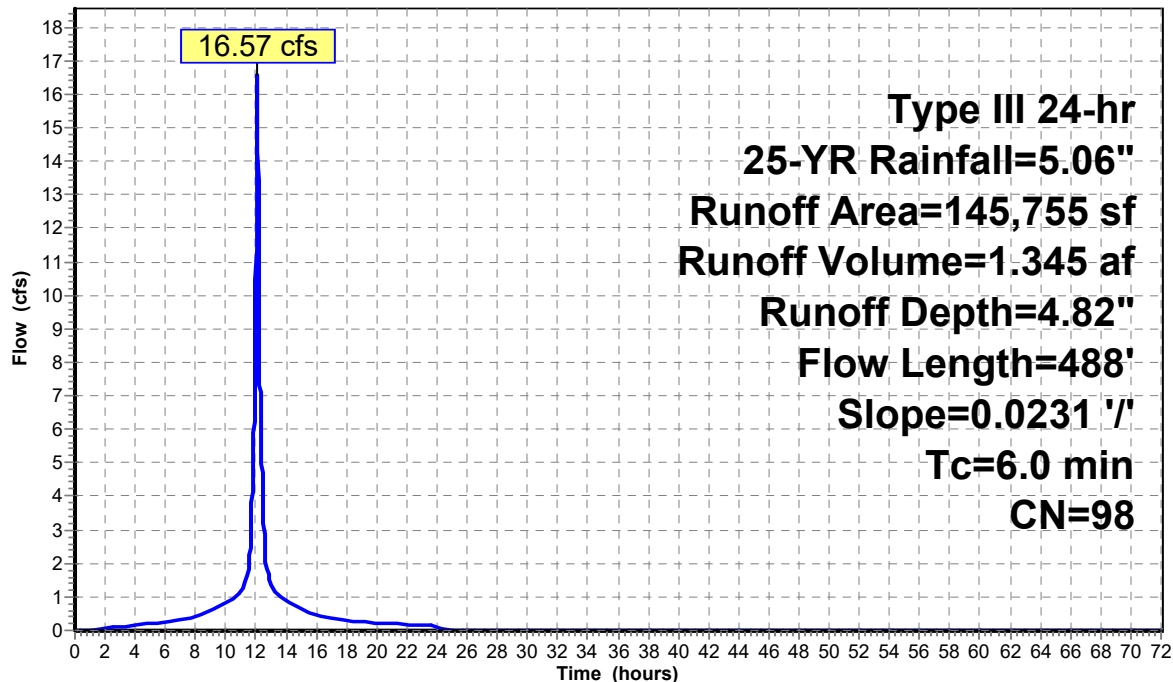
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
61,600	98	Roofs HSG A
83,399	98	Paved parking HSG A
756	39	>75% Grass cover, Good HSG A
145,755	98	Weighted Average
756		0.52% Pervious Area
144,999		99.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	488	0.0231	1.46		Lag/CN Method,
5.6	488	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S3.1: S3.1 - CBS

Hydrograph



Summary for Subcatchment S3.2: S3.2 - CBS

Runoff = 1.32 cfs @ 12.08 hrs, Volume= 0.104 af, Depth= 4.59"
 Routed to Pond 3.2P : Catch Basin

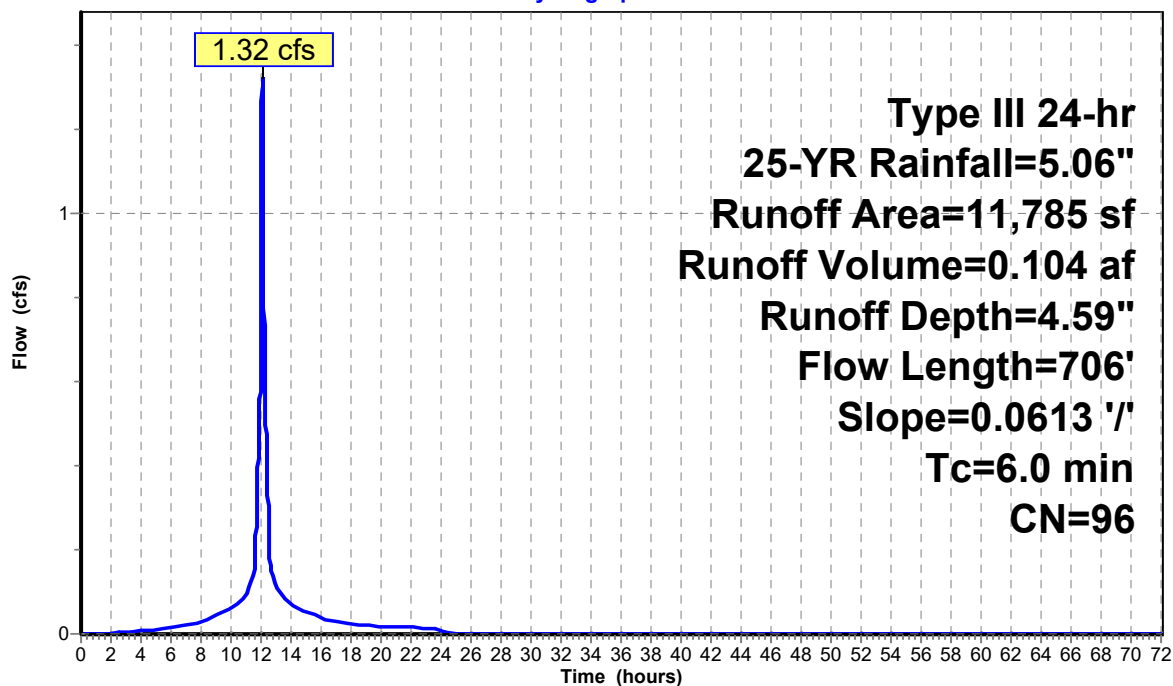
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
11,313	98	Paved parking HSG A
472	39	>75% Grass cover, Good HSG A
11,785	96	Weighted Average
472		4.01% Pervious Area
11,313		95.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	706	0.0613	2.28		Lag/CN Method,
5.2	706	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S3.2: S3.2 - CBS

Hydrograph



Summary for Subcatchment S3.21: S3.21 - CBS

Runoff = 0.66 cfs @ 12.18 hrs, Volume= 0.067 af, Depth= 1.14"
 Routed to Pond 3.21P : Catch Basin

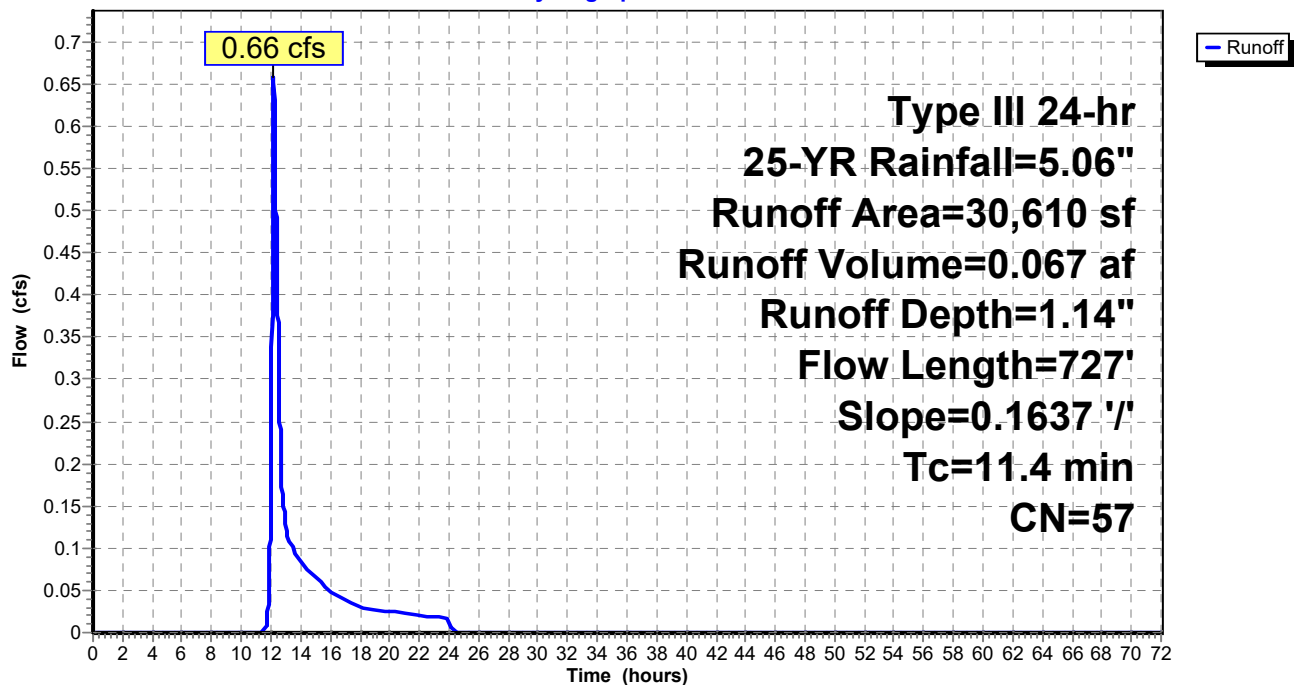
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-YR Rainfall=5.06"

Area (sf)	CN	Description
13,390	30	Woods, Good HSG A
11,285	98	Paved parking HSG A
5,935	39	>75% Grass cover, Good HSG A
30,610	57	Weighted Average
19,325		63.13% Pervious Area
11,285		36.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	727	0.1637	1.07		Lag/CN Method,

Subcatchment S3.21: S3.21 - CBS

Hydrograph



Summary for Reach OP-1: Observation Point 1

Inflow Area = 34.369 ac, 20.99% Impervious, Inflow Depth = 0.36" for 25-YR event

Inflow = 6.28 cfs @ 12.34 hrs, Volume= 1.035 af

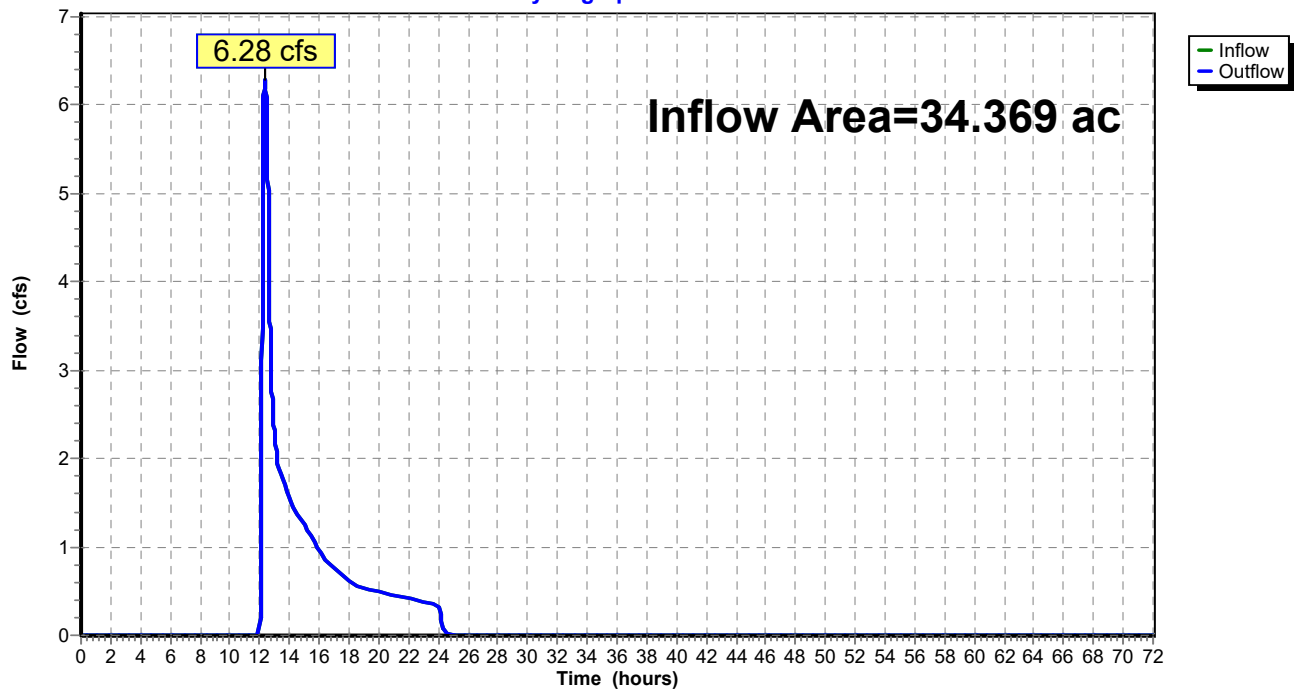
Outflow = 6.28 cfs @ 12.34 hrs, Volume= 1.035 af, Atten= 0%, Lag= 0.0 min

Routed to nonexistent node OP-T

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach OP-1: Observation Point 1

Hydrograph



Summary for Pond 1.11P: Catch Basin

Inflow Area = 5.822 ac, 36.41% Impervious, Inflow Depth = 1.44" for 25-YR event
 Inflow = 6.75 cfs @ 12.14 hrs, Volume= 0.700 af
 Outflow = 6.75 cfs @ 12.14 hrs, Volume= 0.700 af, Atten= 0%, Lag= 0.0 min
 Primary = 6.75 cfs @ 12.14 hrs, Volume= 0.700 af
 Routed to Pond 1.1AP : Sediment Forebay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 359.69' @ 12.15 hrs

Flood Elev= 362.50'

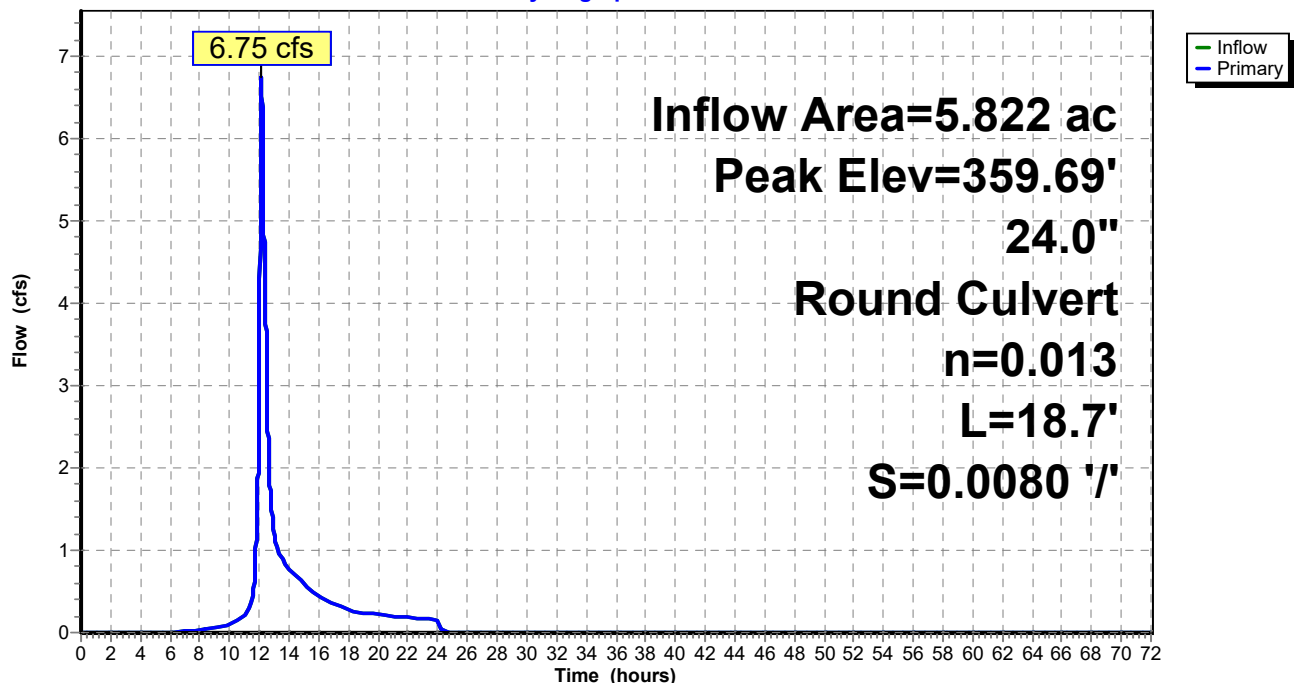
Device	Routing	Invert	Outlet Devices
#1	Primary	357.15'	24.0" Round Culvert L= 18.7' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 357.15' / 357.00' S= 0.0080 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=6.68 cfs @ 12.14 hrs HW=359.69' TW=359.37' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 6.68 cfs @ 2.12 fps)

Pond 1.11P: Catch Basin

Hydrograph



Summary for Pond 1.1AP: Sediment Forebay

Inflow Area = 6.166 ac, 34.38% Impervious, Inflow Depth = 1.42" for 25-YR event
 Inflow = 7.03 cfs @ 12.14 hrs, Volume= 0.727 af
 Outflow = 6.83 cfs @ 12.17 hrs, Volume= 0.673 af, Atten= 3%, Lag= 1.8 min
 Primary = 6.83 cfs @ 12.17 hrs, Volume= 0.673 af
 Routed to Pond 1.1P : Infiltration Basin A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 359.38' @ 12.17 hrs Surf.Area= 2,742 sf Storage= 3,323 cf
 Flood Elev= 361.00' Surf.Area= 4,693 sf Storage= 9,274 cf

Plug-Flow detention time= 62.4 min calculated for 0.673 af (93% of inflow)
 Center-of-Mass det. time= 24.0 min (883.4 - 859.4)

Volume	Invert	Avail.Storage	Storage Description
#1	357.00'	9,274 cf	Custom Stage Data (Irregular) Listed below (Recalc)

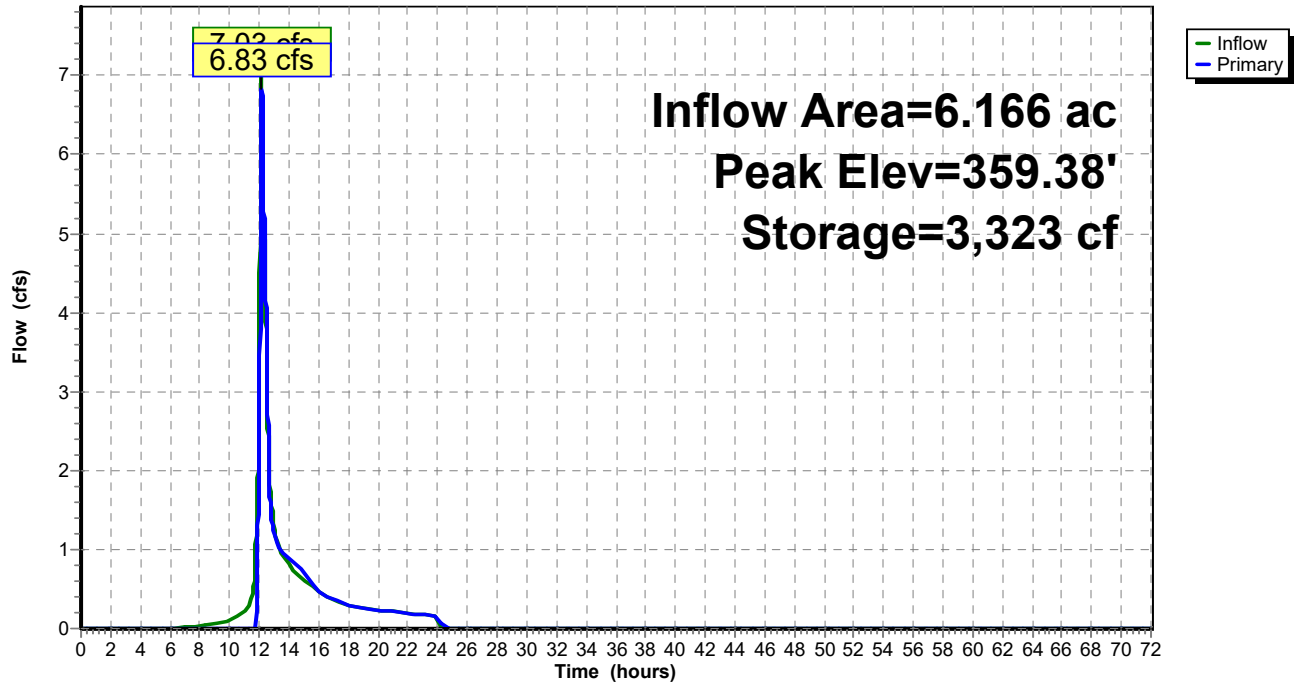
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
357.00	313	317.0	0	0	313
359.00	2,359	365.0	2,354	2,354	3,006
361.00	4,693	413.0	6,920	9,274	6,078

Device	Routing	Invert	Outlet Devices
#1	Primary	359.00'	10.0' long + 3.0 ' SideZ x 14.0' breadth FOREBAY Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.64 2.67 2.70 2.65 2.64 2.65 2.65 2.63

Primary OutFlow Max=6.82 cfs @ 12.17 hrs HW=359.38' TW=357.83' (Dynamic Tailwater)
 ↑1=FOREBAY (Weir Controls 6.82 cfs @ 1.61 fps)

Pond 1.1AP: Sediment Forebay

Hydrograph



Summary for Pond 1.1P: Infiltration Basin A

Inflow Area = 6.166 ac, 34.38% Impervious, Inflow Depth = 1.31" for 25-YR event
 Inflow = 6.83 cfs @ 12.17 hrs, Volume= 0.673 af
 Outflow = 1.06 cfs @ 13.24 hrs, Volume= 0.673 af, Atten= 85%, Lag= 64.3 min
 Discarded = 1.06 cfs @ 13.24 hrs, Volume= 0.673 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach OP-1 : Observation Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 359.27' @ 13.24 hrs Surf.Area= 5,350 sf Storage= 9,632 cf
 Flood Elev= 361.00' Surf.Area= 7,245 sf Storage= 20,470 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 96.3 min (979.7 - 883.4)

Volume	Invert	Avail.Storage	Storage Description
#1	357.00'	20,470 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
357.00	3,206	281.5	0	0	3,206
359.00	5,077	338.5	8,212	8,212	6,086
361.00	7,245	383.4	12,258	20,470	8,764

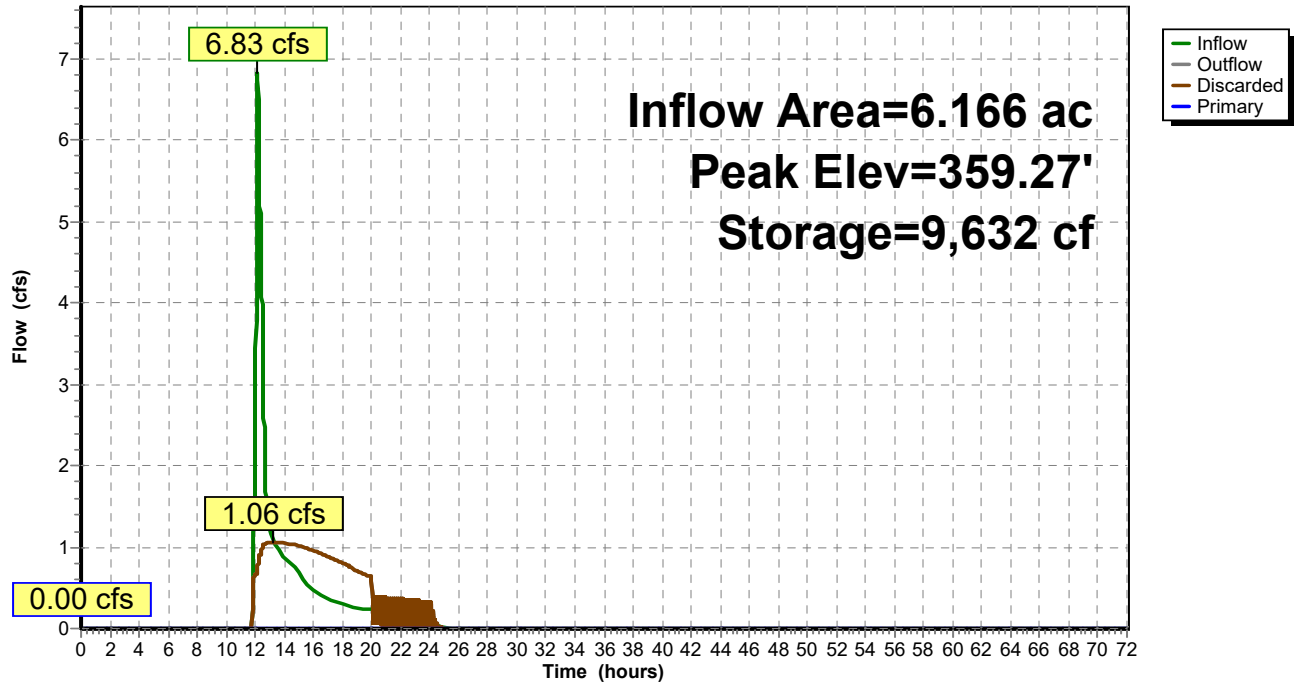
Device	Routing	Invert	Outlet Devices
#1	Discarded	357.00'	8.530 in/hr Exfiltration over Surface area
#2	Primary	357.00'	18.0" Round Culvert L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 357.00' / 356.50' S= 0.0200 ' S= 0.0200 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Primary	360.50'	10.0' long + 3.0 ' SideZ x 7.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78
#4	Device 2	360.50'	24.0" x 24.0" Horiz. RIM C= 0.600 Limited to weir flow at low heads
#5	Primary	359.75'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=1.06 cfs @ 13.24 hrs HW=359.27' (Free Discharge)
 1=Exfiltration (Exfiltration Controls 1.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=357.00' TW=0.00' (Dynamic Tailwater)
 2=Culvert (Controls 0.00 cfs)
 4=RIM (Controls 0.00 cfs)
 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
 5=Orifice/Grate (Controls 0.00 cfs)

Pond 1.1P: Infiltration Basin A

Hydrograph



Summary for Pond 1.2P: Catch Basin

Inflow Area = 1.763 ac, 22.17% Impervious, Inflow Depth = 0.61" for 25-YR event
 Inflow = 0.59 cfs @ 12.21 hrs, Volume= 0.090 af
 Outflow = 0.59 cfs @ 12.21 hrs, Volume= 0.090 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.59 cfs @ 12.21 hrs, Volume= 0.090 af
 Routed to Pond 1.11P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

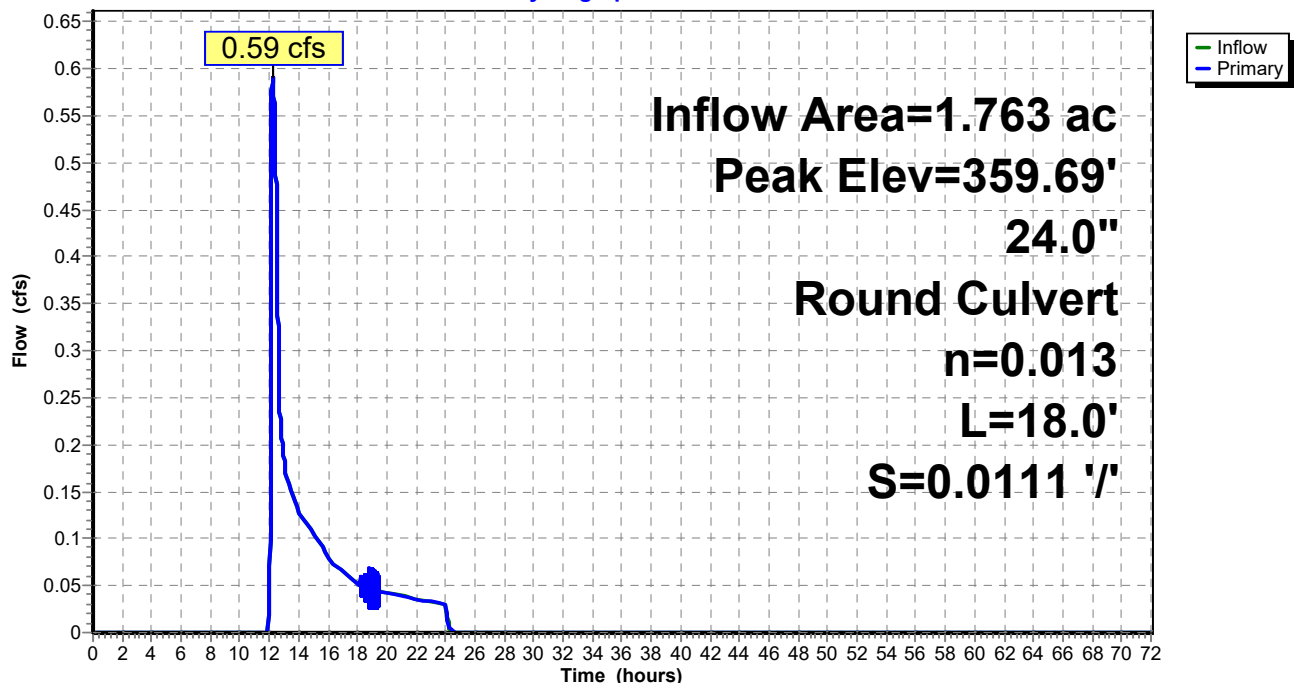
Peak Elev= 359.69' @ 12.16 hrs

Flood Elev= 362.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	357.35'	24.0" Round Culvert L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 357.35' / 357.15' S= 0.0111 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.61 cfs @ 12.21 hrs HW=359.64' TW=359.62' (Dynamic Tailwater)

↑ **1=Culvert** (Inlet Controls 1.61 cfs @ 0.51 fps)

Pond 1.2P: Catch Basin**Hydrograph**

Summary for Pond 1.3P: Catch Basin

Inflow Area = 3.919 ac, 40.69% Impervious, Inflow Depth = 1.71" for 25-YR event
 Inflow = 5.71 cfs @ 12.14 hrs, Volume= 0.557 af
 Outflow = 5.71 cfs @ 12.14 hrs, Volume= 0.557 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.71 cfs @ 12.14 hrs, Volume= 0.557 af
 Routed to Pond 1.11P : Catch Basin

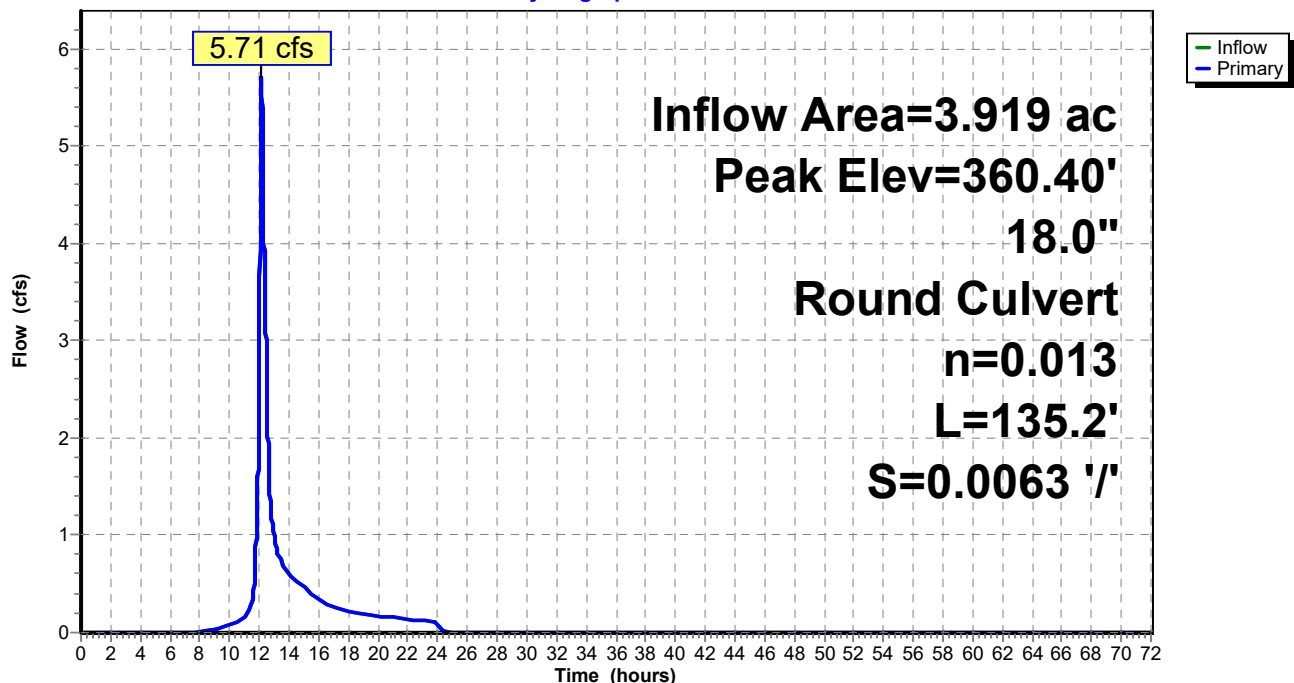
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 360.40' @ 12.15 hrs

Flood Elev= 362.99'

Device	Routing	Invert	Outlet Devices
#1	Primary	358.10'	18.0" Round Culvert L= 135.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 358.10' / 357.25' S= 0.0063 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=5.66 cfs @ 12.14 hrs HW=360.40' TW=359.69' (Dynamic Tailwater)
 ↑ **1=Culvert** (Inlet Controls 5.66 cfs @ 3.20 fps)

Pond 1.3P: Catch Basin**Hydrograph**

Summary for Pond 1.41P: Catch Basin

Inflow Area = 1.671 ac, 34.57% Impervious, Inflow Depth = 1.55" for 25-YR event
 Inflow = 2.50 cfs @ 12.15 hrs, Volume= 0.215 af
 Outflow = 2.51 cfs @ 12.14 hrs, Volume= 0.215 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.51 cfs @ 12.14 hrs, Volume= 0.215 af
 Routed to Pond 1.42P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 357.12' @ 12.17 hrs

Flood Elev= 357.65'

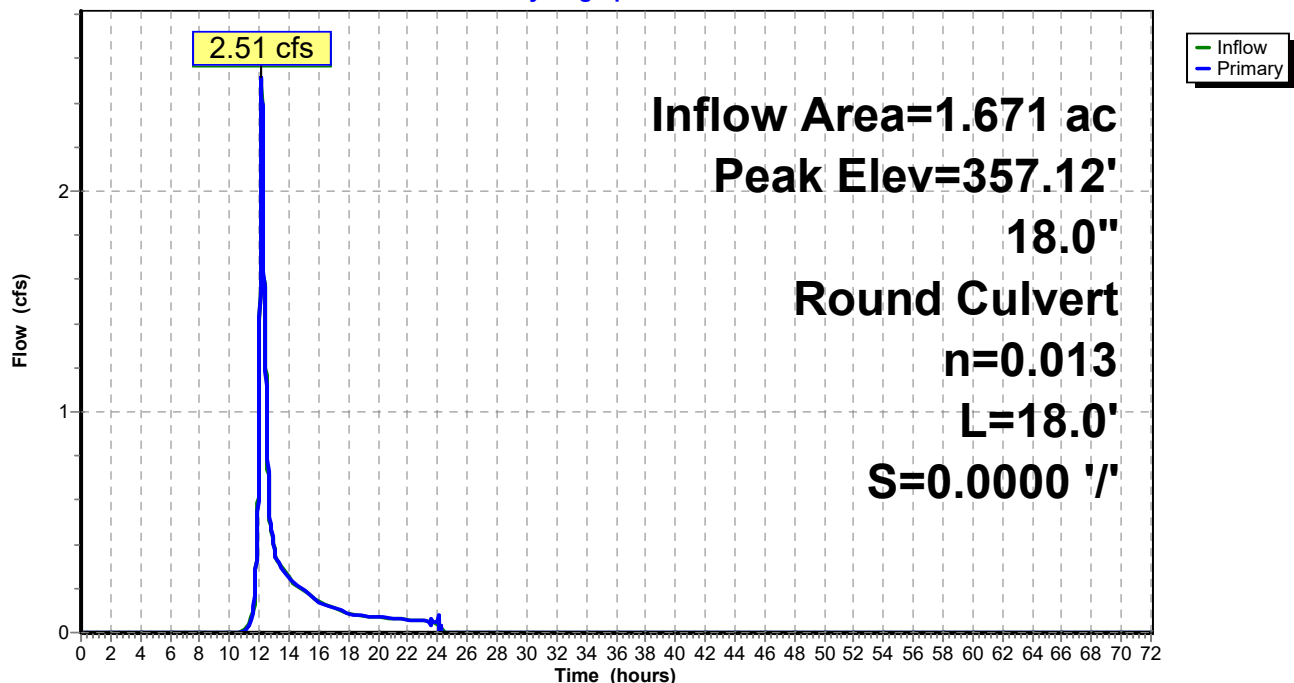
Device	Routing	Invert	Outlet Devices
#1	Primary	353.15'	18.0" Round Culvert L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 353.15' / 353.15' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.04 cfs @ 12.14 hrs HW=357.05' TW=356.96' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 2.04 cfs @ 1.16 fps)

Pond 1.41P: Catch Basin

Hydrograph



Summary for Pond 1.42P: Catch Basin

Inflow Area = 2.694 ac, 43.96% Impervious, Inflow Depth = 2.11" for 25-YR event
 Inflow = 5.73 cfs @ 12.14 hrs, Volume= 0.475 af
 Outflow = 5.73 cfs @ 12.14 hrs, Volume= 0.475 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.73 cfs @ 12.14 hrs, Volume= 0.475 af
 Routed to Pond 2P : Sediment Forebay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 356.99' @ 12.16 hrs

Flood Elev= 357.65'

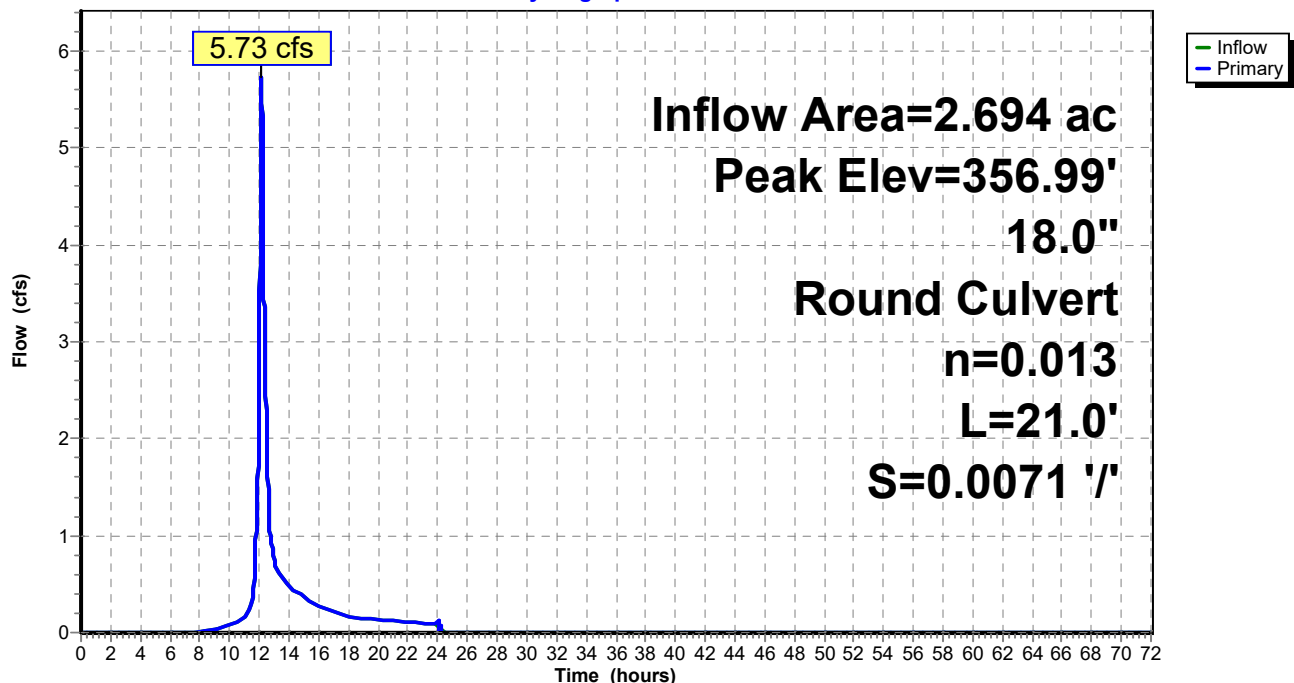
Device	Routing	Invert	Outlet Devices
#1	Primary	353.15'	18.0" Round Culvert L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 353.15' / 353.00' S= 0.0071 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=5.59 cfs @ 12.14 hrs HW=356.95' TW=356.26' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 5.59 cfs @ 3.16 fps)

Pond 1.42P: Catch Basin

Hydrograph



Summary for Pond 1.43P: Infiltration Basin B

Inflow Area = 3.126 ac, 39.42% Impervious, Inflow Depth = 1.58" for 25-YR event
 Inflow = 5.21 cfs @ 12.20 hrs, Volume= 0.412 af
 Outflow = 0.50 cfs @ 14.22 hrs, Volume= 0.412 af, Atten= 90%, Lag= 121.1 min
 Discarded = 0.50 cfs @ 14.22 hrs, Volume= 0.412 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach OP-1 : Observation Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 355.77' @ 14.22 hrs Surf.Area= 3,903 sf Storage= 7,202 cf
 Flood Elev= 357.00' Surf.Area= 5,210 sf Storage= 12,808 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 181.3 min (1,071.0 - 889.6)

Volume	Invert	Avail.Storage	Storage Description		
#1	353.00'	12,808 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
353.00	1,423	271.5	0	0	1,423
355.00	3,187	315.6	4,493	4,493	3,565
357.00	5,210	358.3	8,315	12,808	5,952

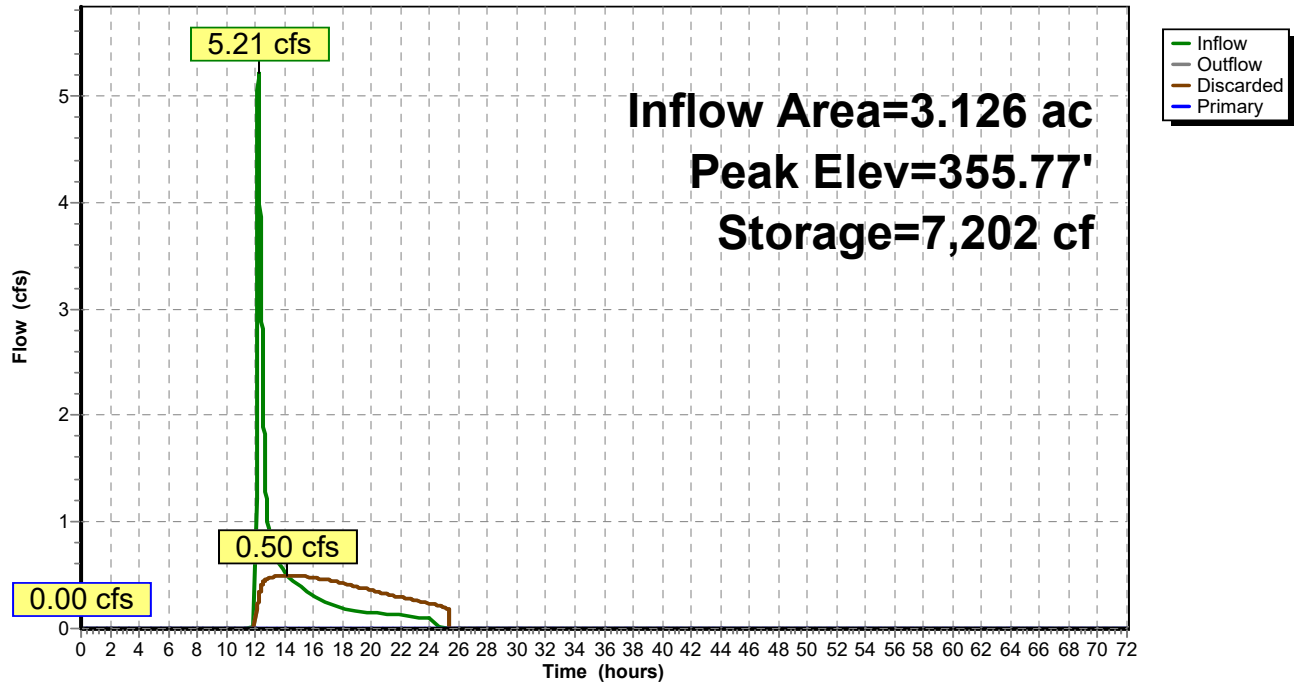
Device	Routing	Invert	Outlet Devices												
#1	Primary	356.50'	5.0' long + 3.0 ' SideZ x 7.0' breadth Broad-Crested Rectangular Weir												
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00												
			2.50 3.00 3.50 4.00 4.50 5.00 5.50												
			Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65												
			2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78												
#2	Discarded	353.00'	5.490 in/hr Exfiltration over Surface area												

Discarded OutFlow Max=0.50 cfs @ 14.22 hrs HW=355.77' (Free Discharge)

↑**2=Exfiltration** (Exfiltration Controls 0.50 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=353.00' TW=0.00' (Dynamic Tailwater)

↑**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1.43P: Infiltration Basin B**Hydrograph**

Summary for Pond 1.4P: Catch Basin

Inflow Area = 3.915 ac, 40.62% Impervious, Inflow Depth = 1.70" for 25-YR event
 Inflow = 5.69 cfs @ 12.14 hrs, Volume= 0.555 af
 Outflow = 5.69 cfs @ 12.14 hrs, Volume= 0.555 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.69 cfs @ 12.14 hrs, Volume= 0.555 af
 Routed to Pond 1.3P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 361.11' @ 12.15 hrs

Flood Elev= 363.27'

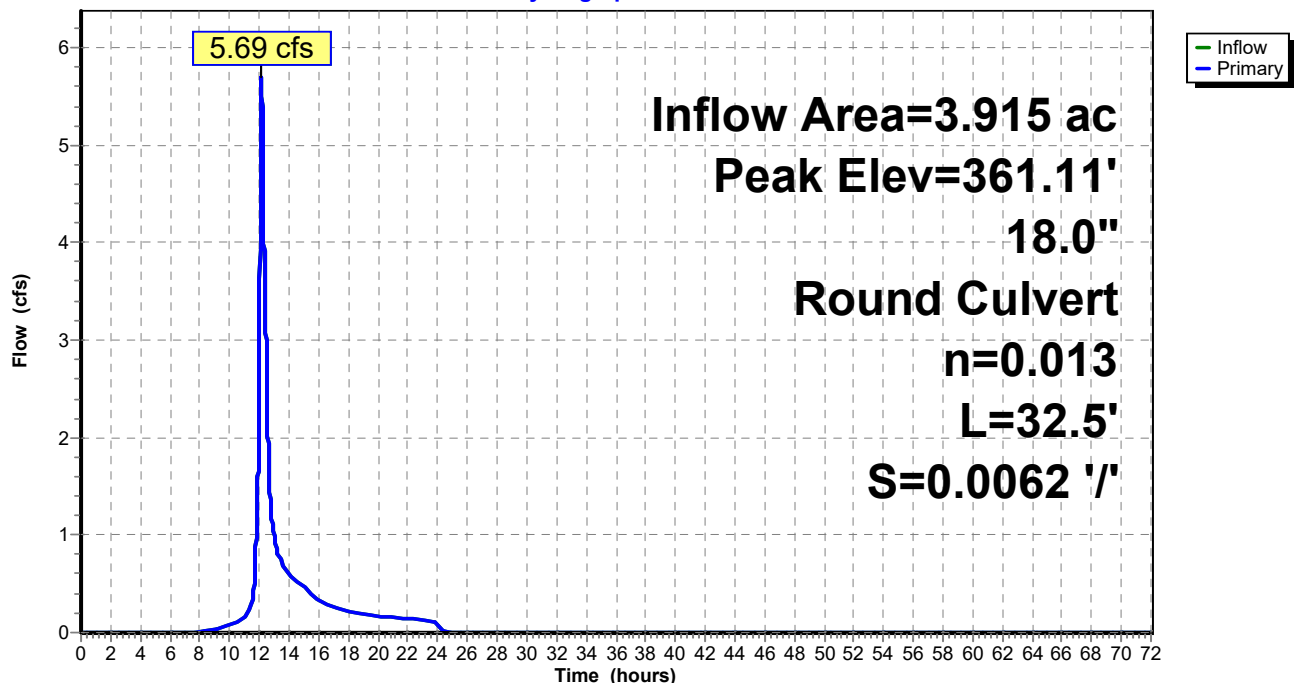
Device	Routing	Invert	Outlet Devices
#1	Primary	358.30'	18.0" Round Culvert L= 32.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 358.30' / 358.10' S= 0.0062 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=5.59 cfs @ 12.14 hrs HW=361.09' TW=360.40' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 5.59 cfs @ 3.16 fps)

Pond 1.4P: Catch Basin

Hydrograph



Summary for Pond 1.51P: Catch Basin

Inflow Area = 1.250 ac, 33.97% Impervious, Inflow Depth = 1.62" for 25-YR event
 Inflow = 1.37 cfs @ 12.12 hrs, Volume= 0.169 af
 Outflow = 1.37 cfs @ 12.12 hrs, Volume= 0.169 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.37 cfs @ 12.12 hrs, Volume= 0.169 af
 Routed to Pond 1.5P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 364.83' @ 12.14 hrs

Flood Elev= 368.68'

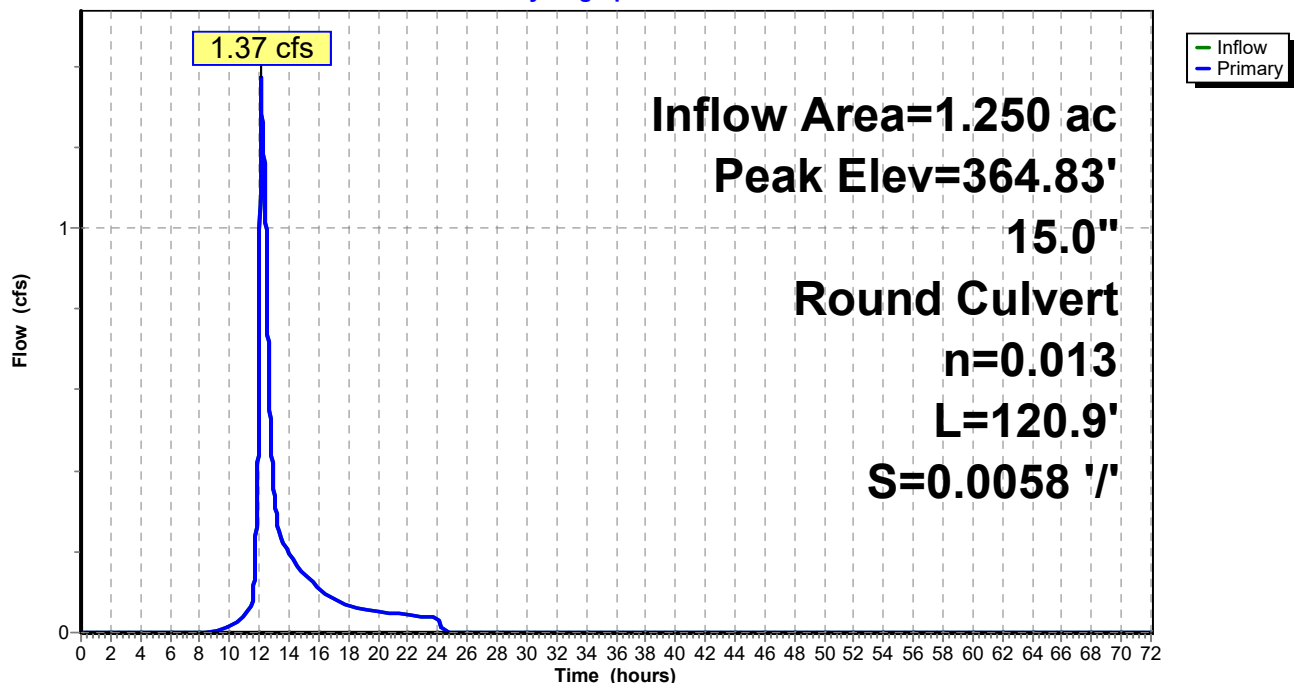
Device	Routing	Invert	Outlet Devices
#1	Primary	363.90'	15.0" Round Culvert L= 120.9' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 363.90' / 363.20' S= 0.0058 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.31 cfs @ 12.12 hrs HW=364.81' TW=364.56' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 1.31 cfs @ 1.91 fps)

Pond 1.51P: Catch Basin

Hydrograph



Summary for Pond 1.52P: Catch Basin

Inflow Area = 0.424 ac, 43.72% Impervious, Inflow Depth = 2.43" for 25-YR event
 Inflow = 1.14 cfs @ 12.10 hrs, Volume= 0.086 af
 Outflow = 1.14 cfs @ 12.10 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.14 cfs @ 12.10 hrs, Volume= 0.086 af
 Routed to Pond 1.51P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 366.02' @ 12.11 hrs

Flood Elev= 370.12'

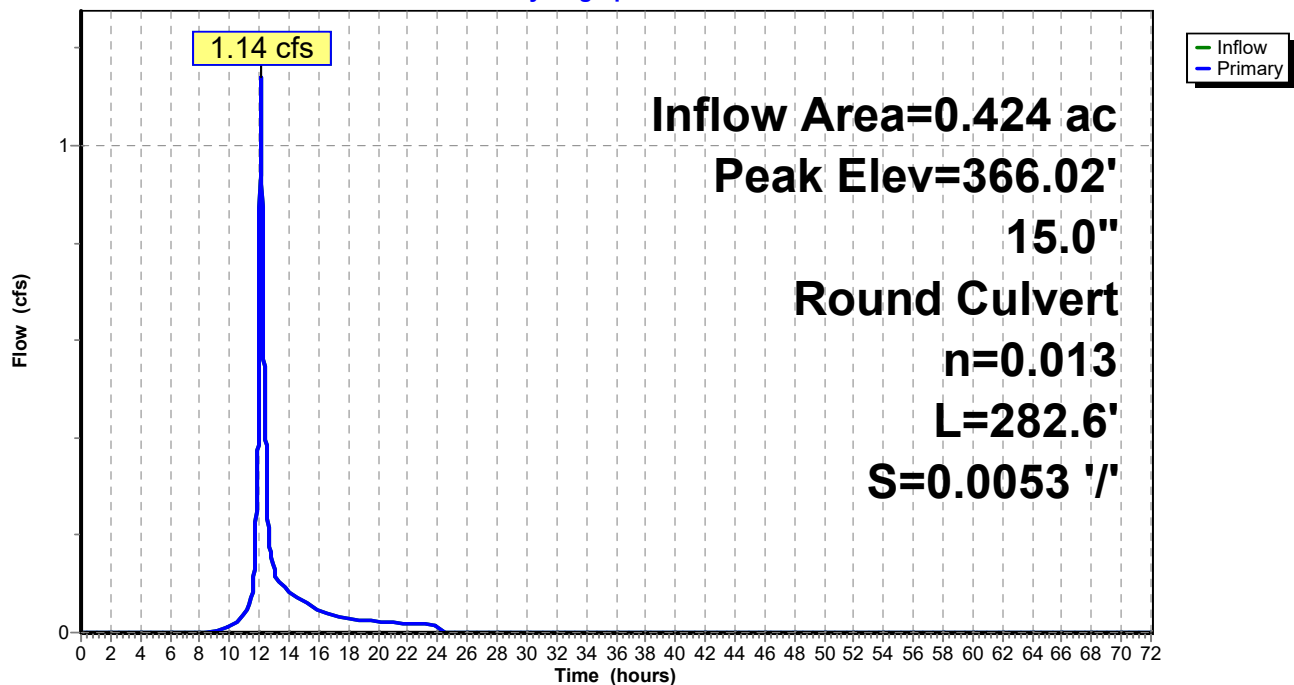
Device	Routing	Invert	Outlet Devices
#1	Primary	365.40'	15.0" Round Culvert L= 282.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 365.40' / 363.90' S= 0.0053 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.13 cfs @ 12.10 hrs HW=366.02' TW=364.78' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 1.13 cfs @ 2.73 fps)

Pond 1.52P: Catch Basin

Hydrograph



Summary for Pond 1.53P: Catch Basin

Inflow Area = 0.257 ac, 35.92% Impervious, Inflow Depth = 2.16" for 25-YR event
 Inflow = 0.60 cfs @ 12.12 hrs, Volume= 0.046 af
 Outflow = 0.60 cfs @ 12.12 hrs, Volume= 0.046 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.60 cfs @ 12.12 hrs, Volume= 0.046 af
 Routed to Pond 1.52P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 366.11' @ 12.12 hrs

Flood Elev= 370.17'

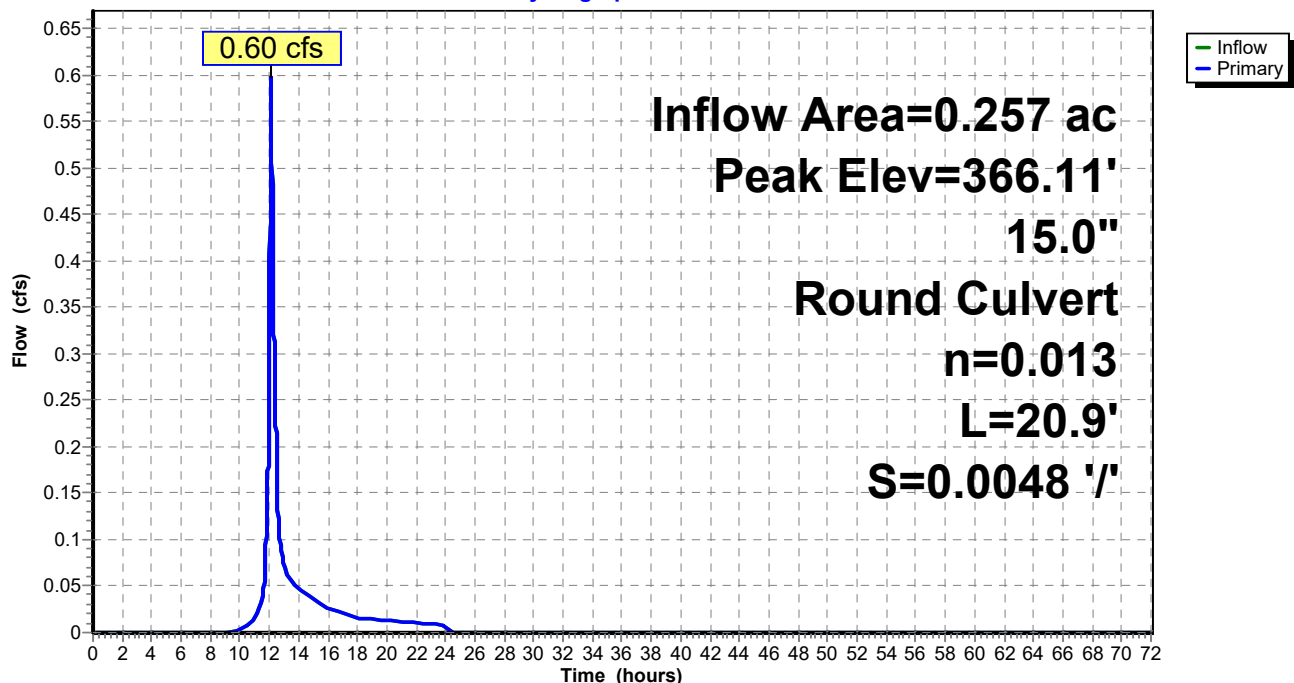
Device	Routing	Invert	Outlet Devices
#1	Primary	365.50'	15.0" Round Culvert L= 20.9' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 365.50' / 365.40' S= 0.0048 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.60 cfs @ 12.12 hrs HW=366.11' TW=366.02' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 0.60 cfs @ 1.49 fps)

Pond 1.53P: Catch Basin

Hydrograph



Summary for Pond 1.5P: Catch Basin

Inflow Area = 3.544 ac, 41.87% Impervious, Inflow Depth = 1.77" for 25-YR event
 Inflow = 5.34 cfs @ 12.14 hrs, Volume= 0.522 af
 Outflow = 5.34 cfs @ 12.14 hrs, Volume= 0.522 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.34 cfs @ 12.14 hrs, Volume= 0.522 af
 Routed to Pond 1.4P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

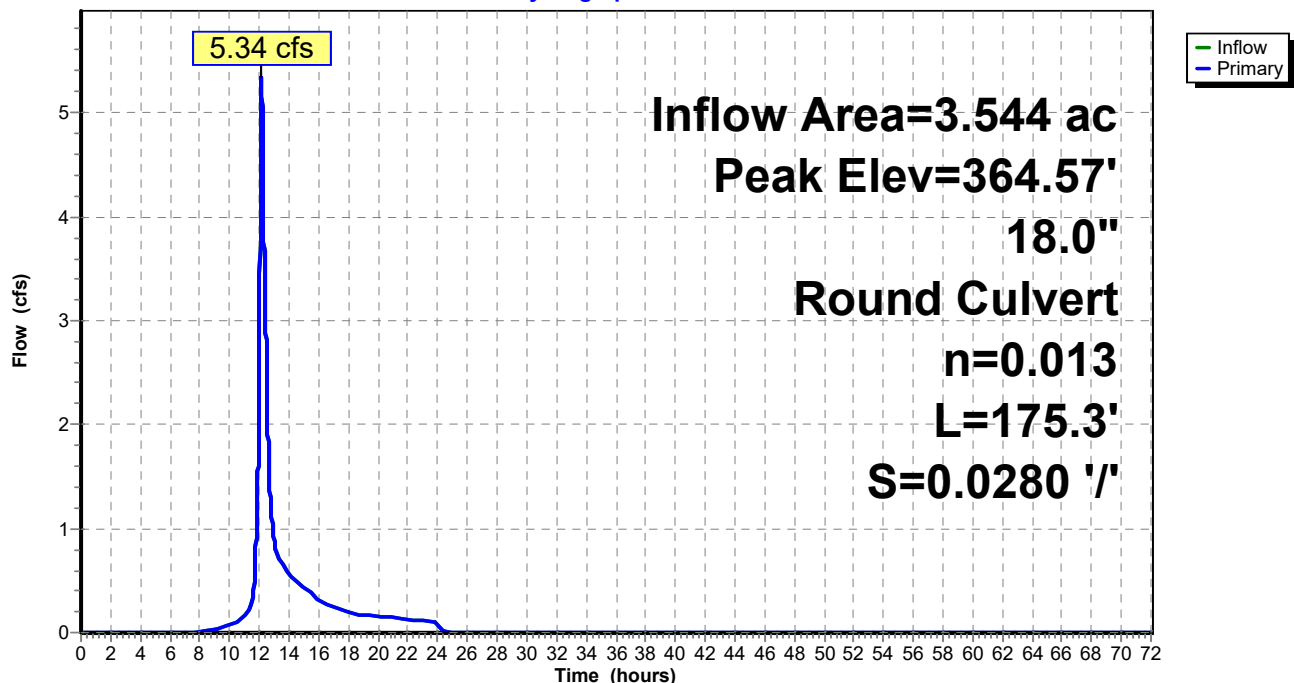
Peak Elev= 364.57' @ 12.14 hrs

Flood Elev= 367.78'

Device	Routing	Invert	Outlet Devices
#1	Primary	363.20'	18.0" Round Culvert L= 175.3' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 363.20' / 358.30' S= 0.0280 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=5.34 cfs @ 12.14 hrs HW=364.57' TW=361.09' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 5.34 cfs @ 3.15 fps)

Pond 1.5P: Catch Basin**Hydrograph**

Summary for Pond 1.6P: Catch Basin

Inflow Area = 0.874 ac, 66.59% Impervious, Inflow Depth = 2.79" for 25-YR event
 Inflow = 2.48 cfs @ 12.13 hrs, Volume= 0.203 af
 Outflow = 2.48 cfs @ 12.13 hrs, Volume= 0.203 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.48 cfs @ 12.13 hrs, Volume= 0.203 af
 Routed to Pond 1.5P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

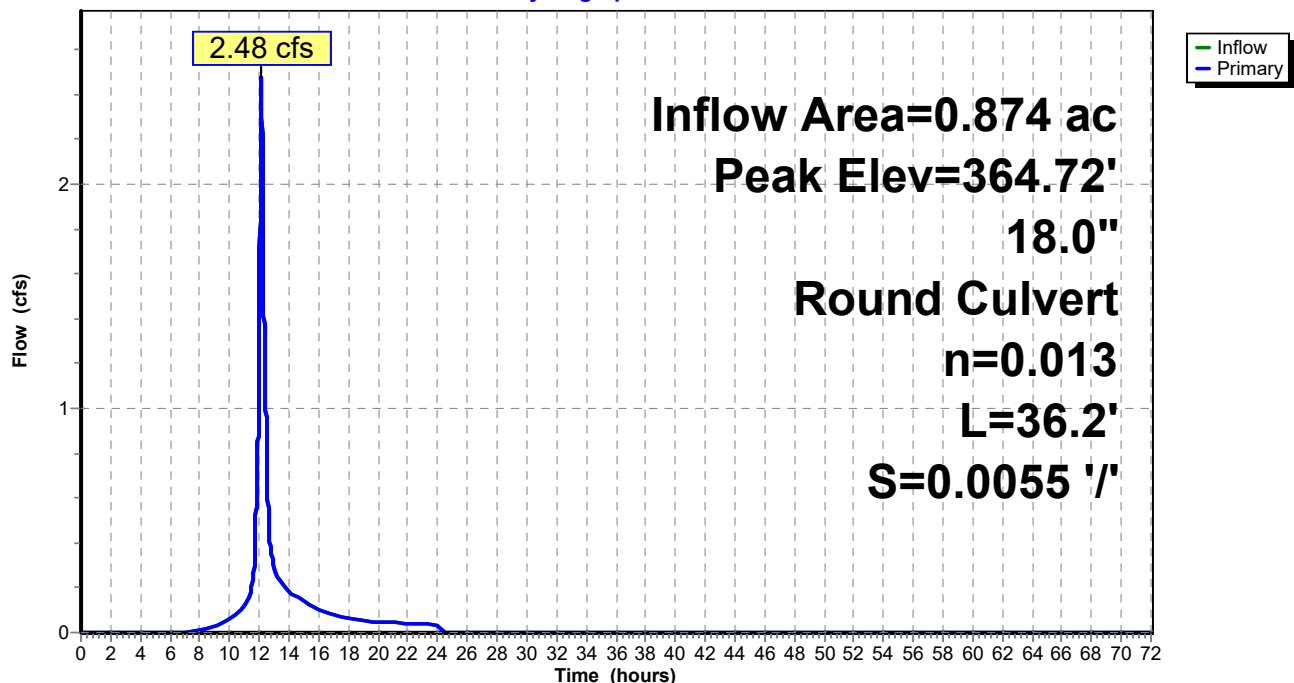
Peak Elev= 364.72' @ 12.14 hrs

Flood Elev= 369.07'

Device	Routing	Invert	Outlet Devices
#1	Primary	363.40'	18.0" Round Culvert L= 36.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 363.40' / 363.20' S= 0.0055 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.35 cfs @ 12.13 hrs HW=364.71' TW=364.57' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 2.35 cfs @ 1.44 fps)

Pond 1.6P: Catch Basin**Hydrograph**

Summary for Pond 1.7P: Catch Basin

Inflow Area = 0.840 ac, 66.22% Impervious, Inflow Depth = 2.77" for 25-YR event
 Inflow = 2.36 cfs @ 12.13 hrs, Volume= 0.194 af
 Outflow = 2.36 cfs @ 12.13 hrs, Volume= 0.194 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.36 cfs @ 12.13 hrs, Volume= 0.194 af
 Routed to Pond 1.6P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 366.21' @ 12.13 hrs

Flood Elev= 372.97'

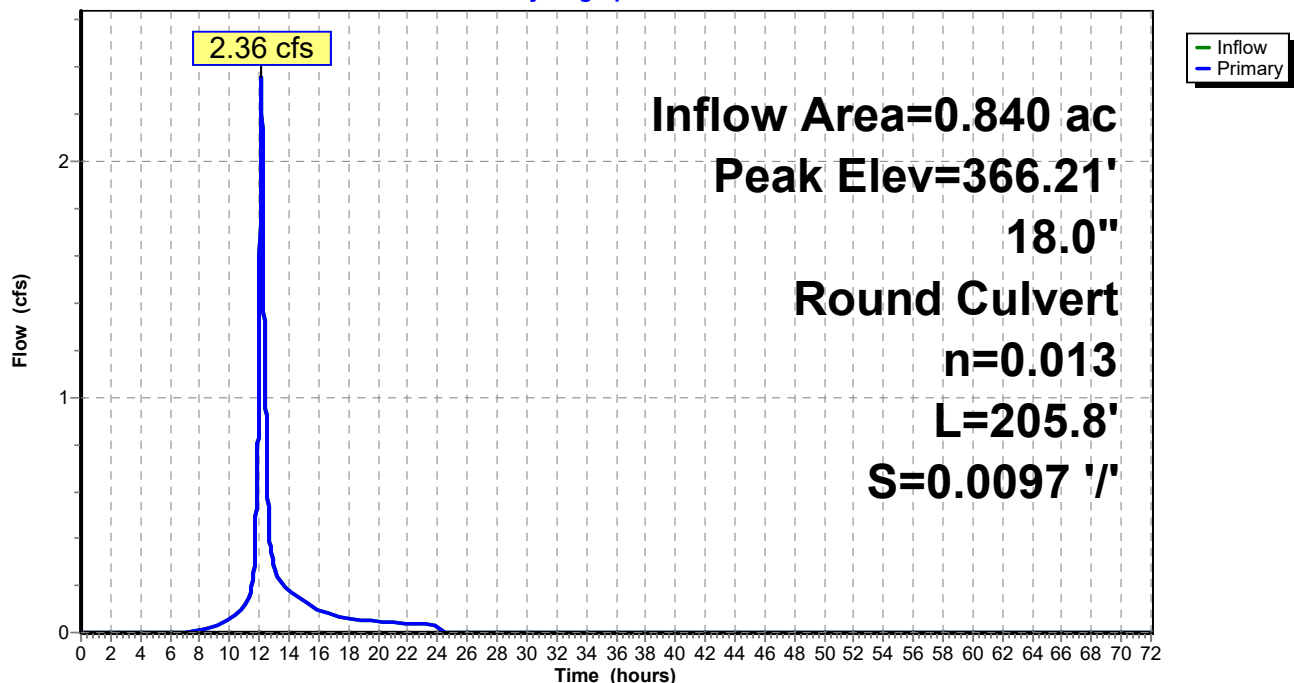
Device	Routing	Invert	Outlet Devices
#1	Primary	365.40'	18.0" Round Culvert L= 205.8' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 365.40' / 363.40' S= 0.0097 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.36 cfs @ 12.13 hrs HW=366.21' TW=364.72' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 2.36 cfs @ 2.42 fps)

Pond 1.7P: Catch Basin

Hydrograph



Summary for Pond 1.8P: Catch Basin

Inflow Area = 0.717 ac, 71.65% Impervious, Inflow Depth = 3.07" for 25-YR event
 Inflow = 2.25 cfs @ 12.13 hrs, Volume= 0.184 af
 Outflow = 2.25 cfs @ 12.13 hrs, Volume= 0.184 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.25 cfs @ 12.13 hrs, Volume= 0.184 af
 Routed to Pond 1.7P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

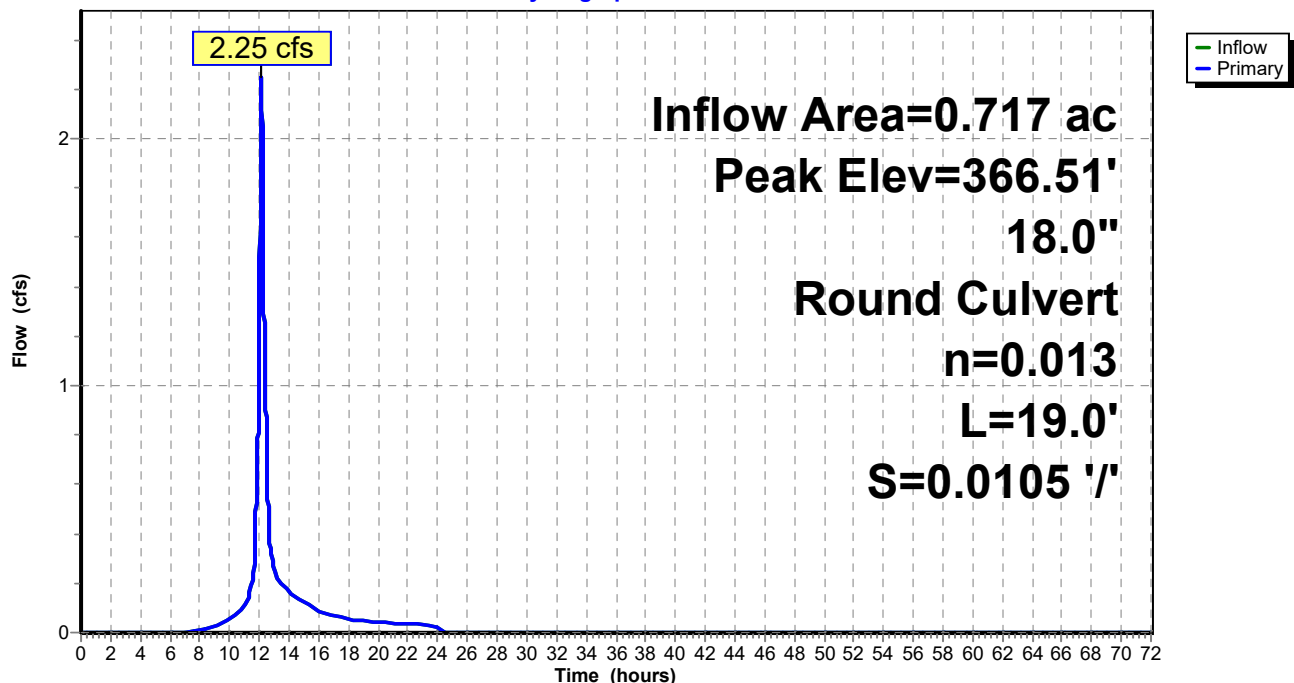
Peak Elev= 366.51' @ 12.13 hrs

Flood Elev= 372.95'

Device	Routing	Invert	Outlet Devices
#1	Primary	365.60'	18.0" Round Culvert L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 365.60' / 365.40' S= 0.0105 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.24 cfs @ 12.13 hrs HW=366.50' TW=366.21' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 2.24 cfs @ 2.88 fps)

Pond 1.8P: Catch Basin**Hydrograph**

Summary for Pond 2P: Sediment Forebay

Inflow Area = 3.126 ac, 39.42% Impervious, Inflow Depth = 1.95" for 25-YR event
 Inflow = 6.08 cfs @ 12.14 hrs, Volume= 0.509 af
 Outflow = 5.21 cfs @ 12.20 hrs, Volume= 0.412 af, Atten= 14%, Lag= 3.8 min
 Primary = 5.21 cfs @ 12.20 hrs, Volume= 0.412 af
 Routed to Pond 1.43P : Infiltration Basin B

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 356.34' @ 12.20 hrs Surf.Area= 3,201 sf Storage= 5,244 cf
 Flood Elev= 357.00' Surf.Area= 3,971 sf Storage= 7,622 cf

Plug-Flow detention time= 121.3 min calculated for 0.412 af (81% of inflow)
 Center-of-Mass det. time= 42.9 min (889.6 - 846.7)

Volume	Invert	Avail.Storage	Storage Description
#1	353.00'	7,622 cf	Custom Stage Data (Irregular) Listed below (Recalc)

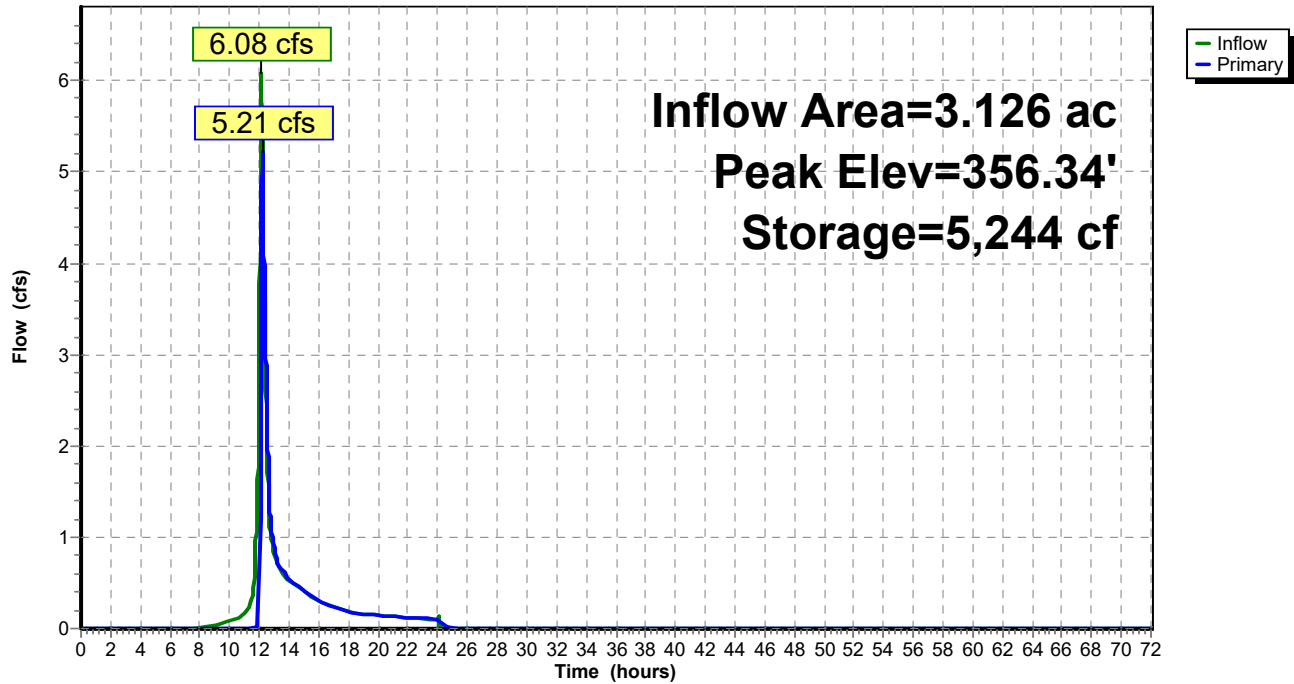
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
353.00	234	243.9	0	0	234
355.00	1,905	307.7	1,871	1,871	3,088
357.00	3,971	391.4	5,751	7,622	7,797

Device	Routing	Invert	Outlet Devices
#1	Primary	356.00'	10.0' long + 3.0 ' SideZ x 7.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=5.21 cfs @ 12.20 hrs HW=356.34' TW=353.74' (Dynamic Tailwater)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 5.21 cfs @ 1.41 fps)

Pond 2P: Sediment Forebay

Hydrograph



Summary for Pond 3.1P: Catch Basin

Inflow Area = 3.346 ac, 99.48% Impervious, Inflow Depth = 4.82" for 25-YR event
 Inflow = 16.57 cfs @ 12.08 hrs, Volume= 1.345 af
 Outflow = 16.57 cfs @ 12.08 hrs, Volume= 1.345 af, Atten= 0%, Lag= 0.0 min
 Primary = 16.57 cfs @ 12.08 hrs, Volume= 1.345 af
 Routed to Pond 7P : Sediment Forebay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

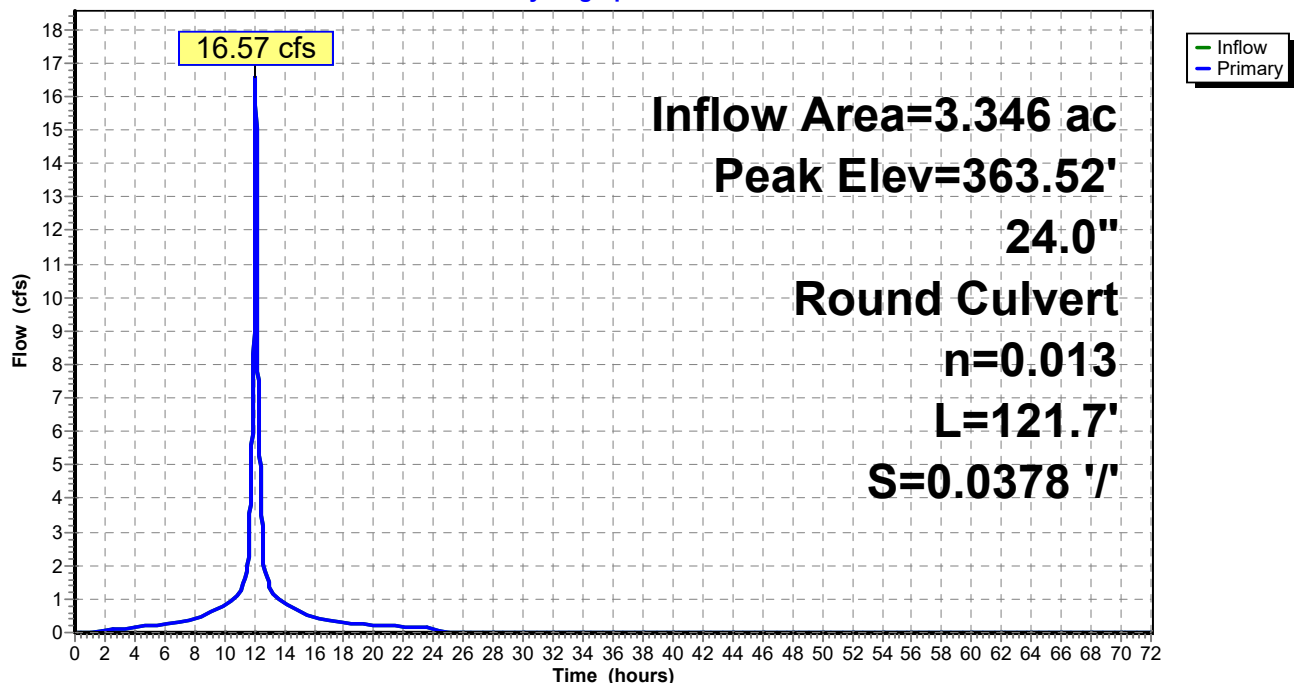
Peak Elev= 363.52' @ 12.08 hrs

Flood Elev= 365.61'

Device	Routing	Invert	Outlet Devices
#1	Primary	360.60'	24.0" Round Culvert L= 121.7' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 360.60' / 356.00' S= 0.0378 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=16.54 cfs @ 12.08 hrs HW=363.52' TW=355.66' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 16.54 cfs @ 5.26 fps)

Pond 3.1P: Catch Basin**Hydrograph**

Summary for Pond 3.21P: Catch Basin

Inflow Area = 0.703 ac, 36.87% Impervious, Inflow Depth = 1.14" for 25-YR event
 Inflow = 0.66 cfs @ 12.18 hrs, Volume= 0.067 af
 Outflow = 0.66 cfs @ 12.18 hrs, Volume= 0.067 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.66 cfs @ 12.18 hrs, Volume= 0.067 af
 Routed to Pond 3.2P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 359.57' @ 12.13 hrs

Flood Elev= 365.24'

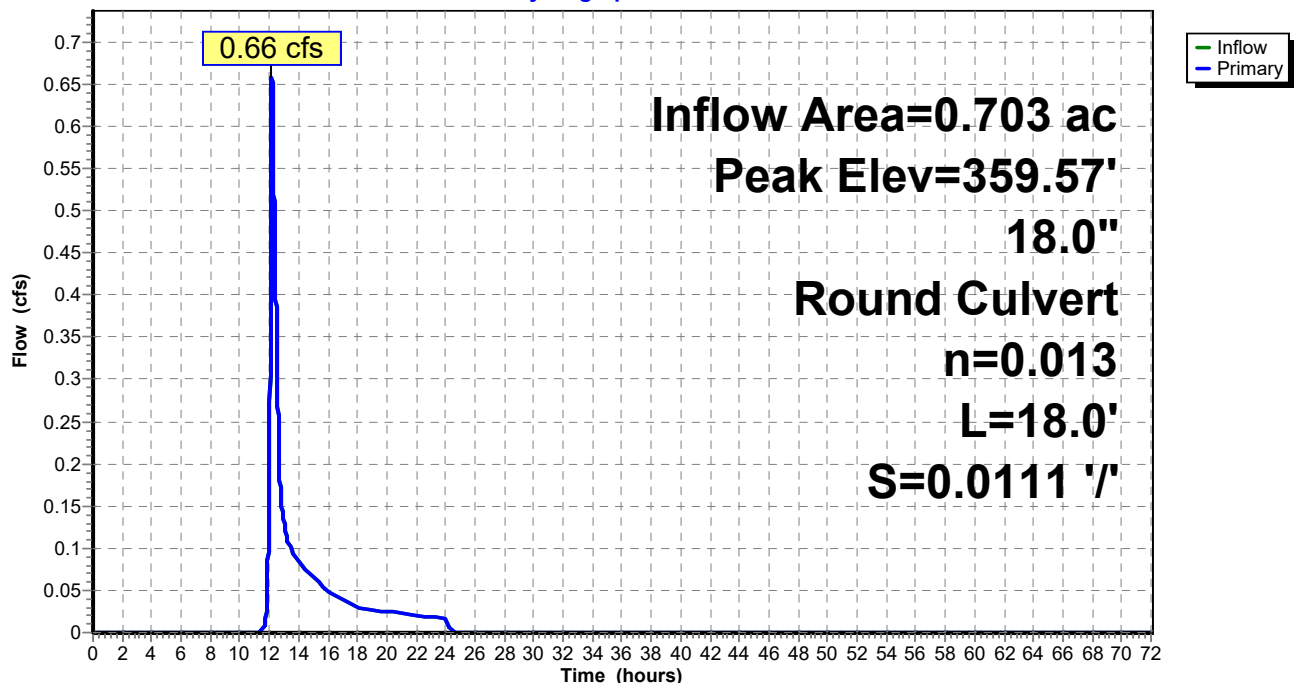
Device	Routing	Invert	Outlet Devices
#1	Primary	359.00'	18.0" Round Culvert L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 359.00' / 358.80' S= 0.0111 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.69 cfs @ 12.18 hrs HW=359.55' TW=359.42' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 0.69 cfs @ 1.77 fps)

Pond 3.21P: Catch Basin

Hydrograph



Summary for Pond 3.2P: Catch Basin

Inflow Area = 0.973 ac, 53.30% Impervious, Inflow Depth = 2.10" for 25-YR event
 Inflow = 1.79 cfs @ 12.10 hrs, Volume= 0.170 af
 Outflow = 1.79 cfs @ 12.10 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.79 cfs @ 12.10 hrs, Volume= 0.170 af
 Routed to Pond 7P : Sediment Forebay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

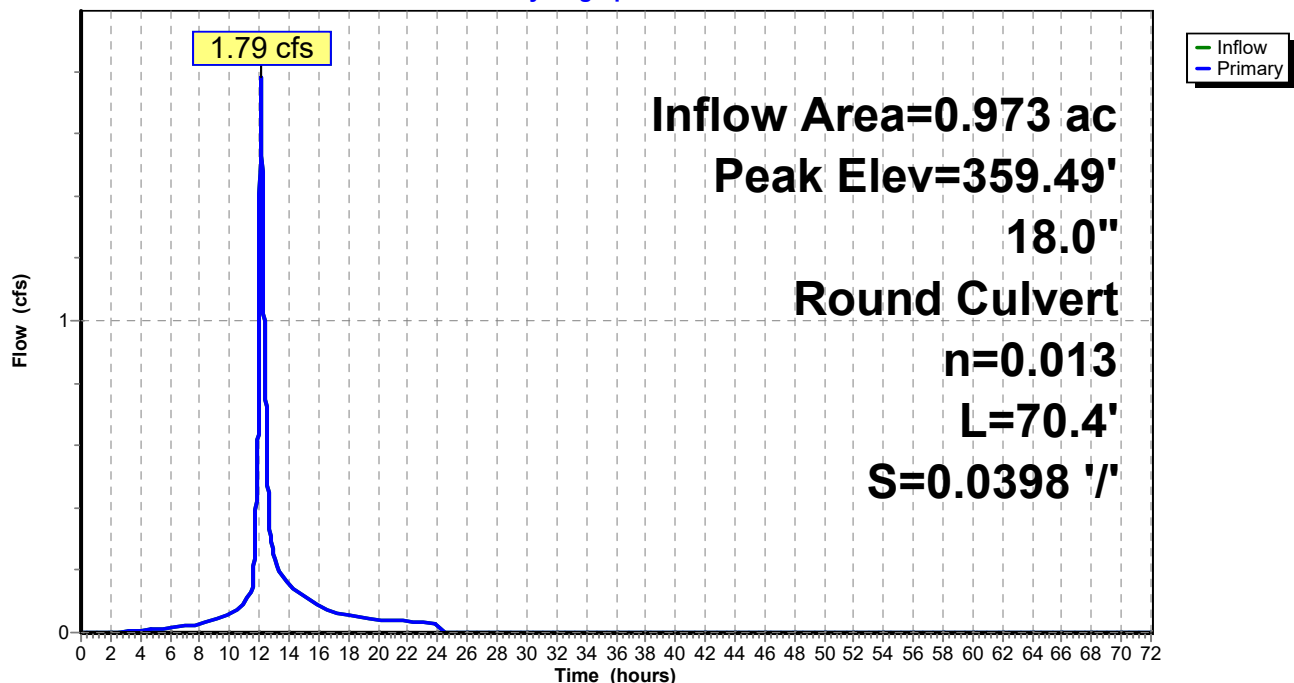
Peak Elev= 359.49' @ 12.10 hrs

Flood Elev= 365.24'

Device	Routing	Invert	Outlet Devices
#1	Primary	358.80'	18.0" Round Culvert L= 70.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 358.80' / 356.00' S= 0.0398 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.78 cfs @ 12.10 hrs HW=359.49' TW=355.67' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 1.78 cfs @ 2.24 fps)

Pond 3.2P: Catch Basin**Hydrograph**

Summary for Pond 3P: Infiltration Basin C

Inflow Area = 4.702 ac, 81.82% Impervious, Inflow Depth = 2.53" for 25-YR event
 Inflow = 17.37 cfs @ 12.11 hrs, Volume= 0.990 af
 Outflow = 1.14 cfs @ 13.17 hrs, Volume= 0.990 af, Atten= 93%, Lag= 63.6 min
 Discarded = 1.14 cfs @ 13.17 hrs, Volume= 0.990 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach OP-1 : Observation Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 355.16' @ 13.17 hrs Surf.Area= 9,849 sf Storage= 25,246 cf
 Flood Elev= 356.00' Surf.Area= 10,929 sf Storage= 33,970 cf

Plug-Flow detention time= 223.2 min calculated for 0.990 af (100% of inflow)
 Center-of-Mass det. time= 223.3 min (970.8 - 747.5)

Volume	Invert	Avail.Storage	Storage Description
#1	352.00'	33,970 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
352.00	6,249	342.9	0	0	6,249
354.00	8,450	390.6	14,644	14,644	9,128
356.00	10,929	435.4	19,326	33,970	12,187

Device	Routing	Invert	Outlet Devices
#1	Discarded	352.00'	4.980 in/hr Exfiltration over Surface area
#2	Primary	355.50'	10.0' long + 3.0 ' SideZ x 7.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Discarded OutFlow Max=1.14 cfs @ 13.17 hrs HW=355.16' (Free Discharge)

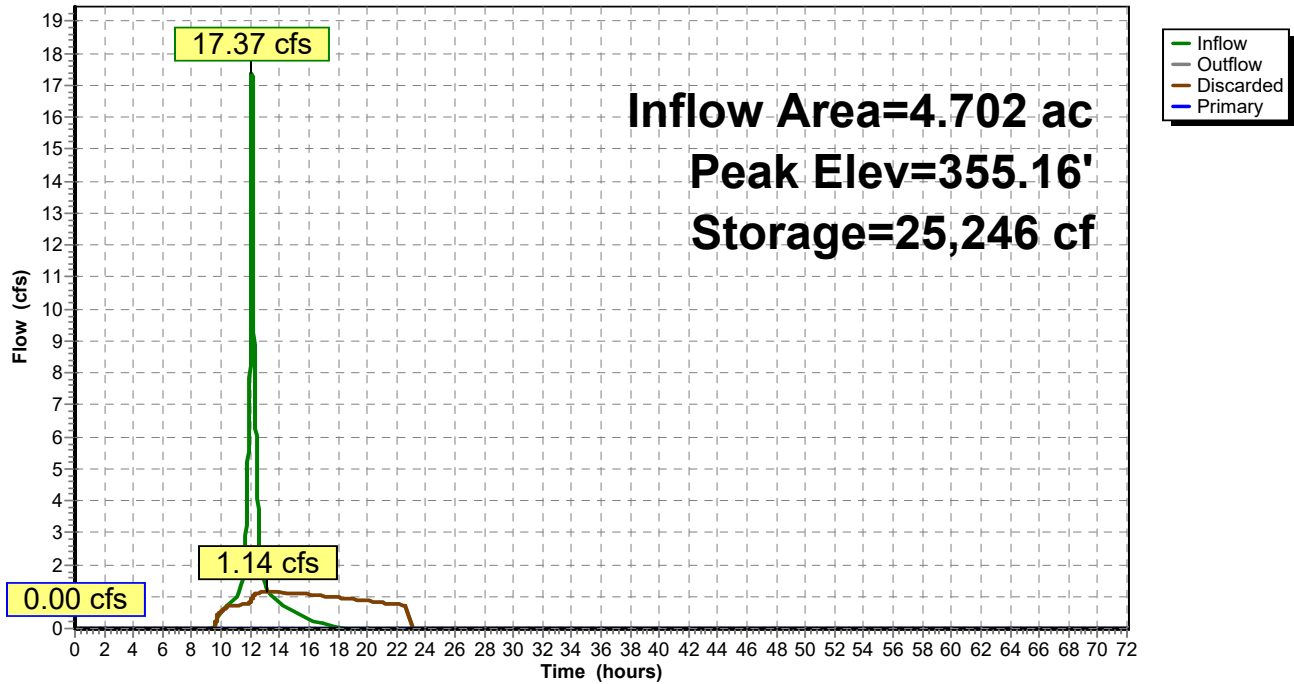
↑**1=Exfiltration** (Exfiltration Controls 1.14 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=352.00' TW=0.00' (Dynamic Tailwater)

↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3P: Infiltration Basin C

Hydrograph



Summary for Pond 7P: Sediment Forebay

Inflow Area = 4.702 ac, 81.82% Impervious, Inflow Depth = 3.88" for 25-YR event
 Inflow = 18.31 cfs @ 12.08 hrs, Volume= 1.522 af
 Outflow = 17.75 cfs @ 12.11 hrs, Volume= 1.522 af, Atten= 3%, Lag= 1.3 min
 Discarded = 0.38 cfs @ 12.11 hrs, Volume= 0.532 af
 Primary = 17.37 cfs @ 12.11 hrs, Volume= 0.990 af
 Routed to Pond 3P : Infiltration Basin C

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 355.68' @ 12.11 hrs Surf.Area= 3,270 sf Storage= 5,958 cf
 Flood Elev= 356.00' Surf.Area= 3,607 sf Storage= 7,073 cf

Plug-Flow detention time= 67.8 min calculated for 1.522 af (100% of inflow)
 Center-of-Mass det. time= 67.9 min (824.0 - 756.1)

Volume	Invert	Avail.Storage	Storage Description		
#1	352.00'	7,073 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
352.00	233	237.5	0	0	233
354.00	1,791	281.3	1,780	1,780	2,114
356.00	3,607	323.9	5,293	7,073	4,253

Device	Routing	Invert	Outlet Devices												
#1	Primary	355.00'	10.0' long + 3.0 ' SideZ x 7.0' breadth Broad-Crested Rectangular Weir												
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00												
			2.50 3.00 3.50 4.00 4.50 5.00 5.50												
			Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65												
			2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78												
#2	Discarded	352.00'	4.980 in/hr Exfiltration over Surface area												

Discarded OutFlow Max=0.38 cfs @ 12.11 hrs HW=355.67' (Free Discharge)

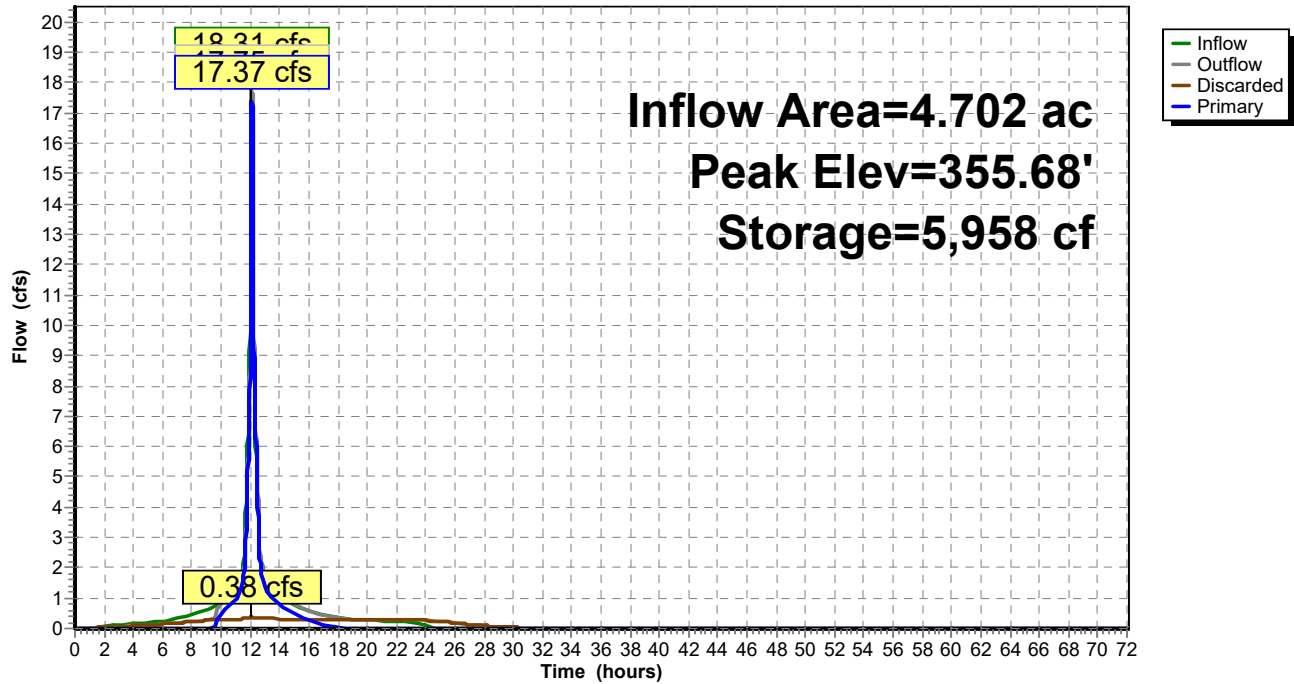
↑**2=Exfiltration** (Exfiltration Controls 0.38 cfs)

Primary OutFlow Max=17.34 cfs @ 12.11 hrs HW=355.67' TW=353.69' (Dynamic Tailwater)

↑**1=Broad-Crested Rectangular Weir** (Weir Controls 17.34 cfs @ 2.14 fps)

Pond 7P: Sediment Forebay

Hydrograph



Summary for Subcatchment S1: S1 - OFF

Runoff = 12.81 cfs @ 12.27 hrs, Volume= 1.678 af, Depth= 0.99"
 Routed to Reach OP-1 : Observation Point 1

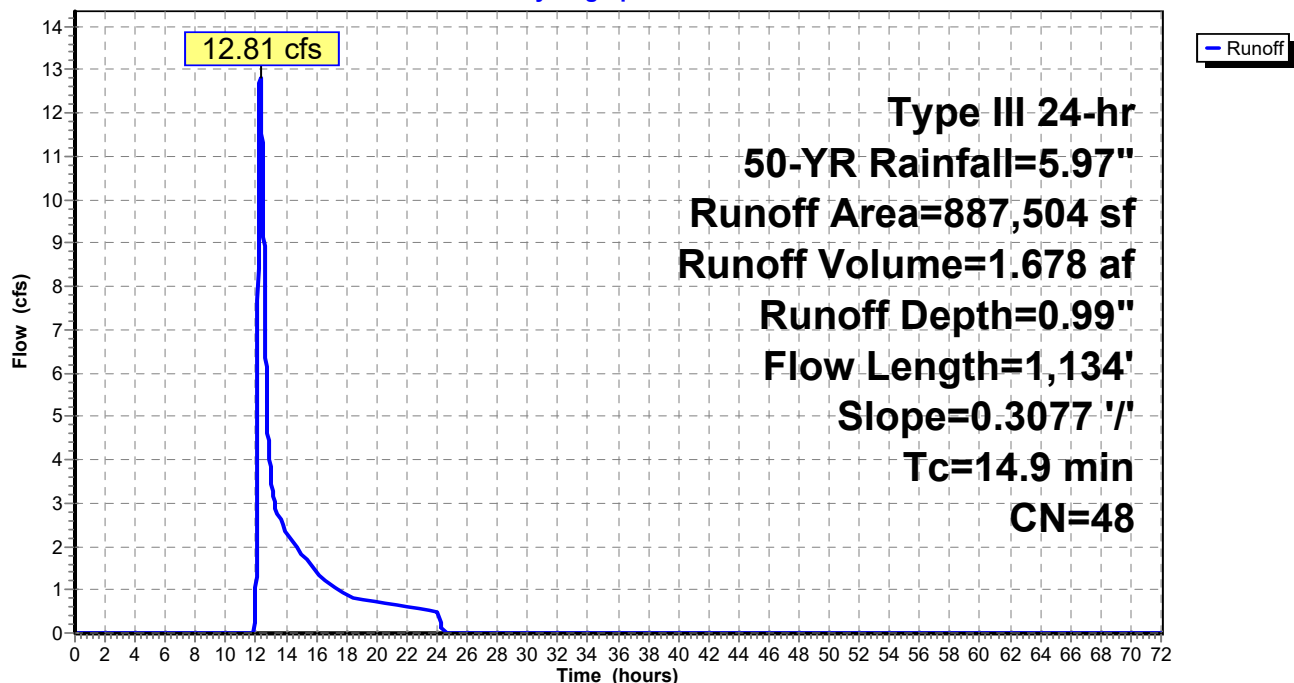
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
853	85	Gravel roads HSG B
3,192	76	Gravel roads HSG A
27,779	55	Woods, Good HSG B
12,435	70	Woods, Good HSG C
311,163	30	Woods, Good HSG A
600	98	Roofs HSG B
357	89	Gravel roads HSG C
170,922	39	>75% Grass cover, Good HSG A
196,027	61	>75% Grass cover, Good HSG B
164,177	74	>75% Grass cover, Good HSG C
887,504	48	Weighted Average
886,904		99.93% Pervious Area
600		0.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	1,134	0.3077	1.27		Lag/CN Method,

Subcatchment S1: S1 - OFF

Hydrograph



Summary for Subcatchment S1.1: S1.1 - IB

Runoff = 0.50 cfs @ 12.10 hrs, Volume= 0.041 af, Depth= 1.42"
 Routed to Pond 1.1AP : Sediment Forebay

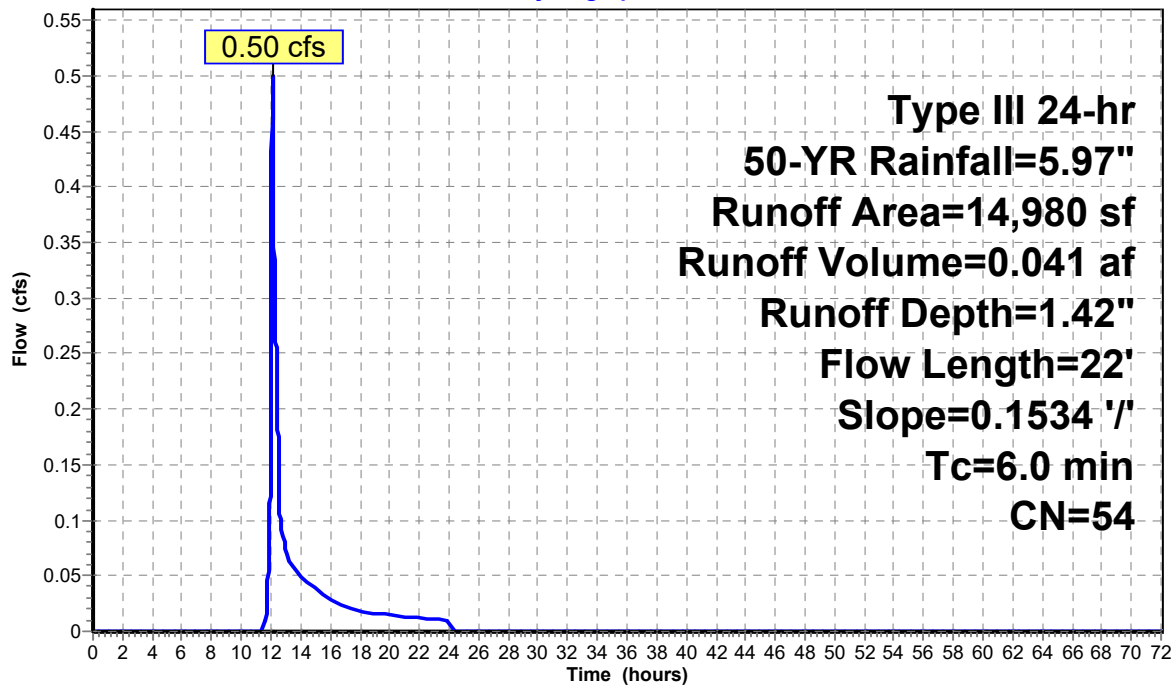
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
5,057	39	>75% Grass cover, Good HSG A
9,923	61	>75% Grass cover, Good HSG B
14,980	54	Weighted Average
14,980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	22	0.1534	0.47		Lag/CN Method,
0.8	22	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.1: S1.1 - IB

Hydrograph



Summary for Subcatchment S1.11: S1.11 - CBS

Runoff = 0.81 cfs @ 12.08 hrs, Volume= 0.064 af, Depth= 5.50"
 Routed to Pond 1.11P : Catch Basin

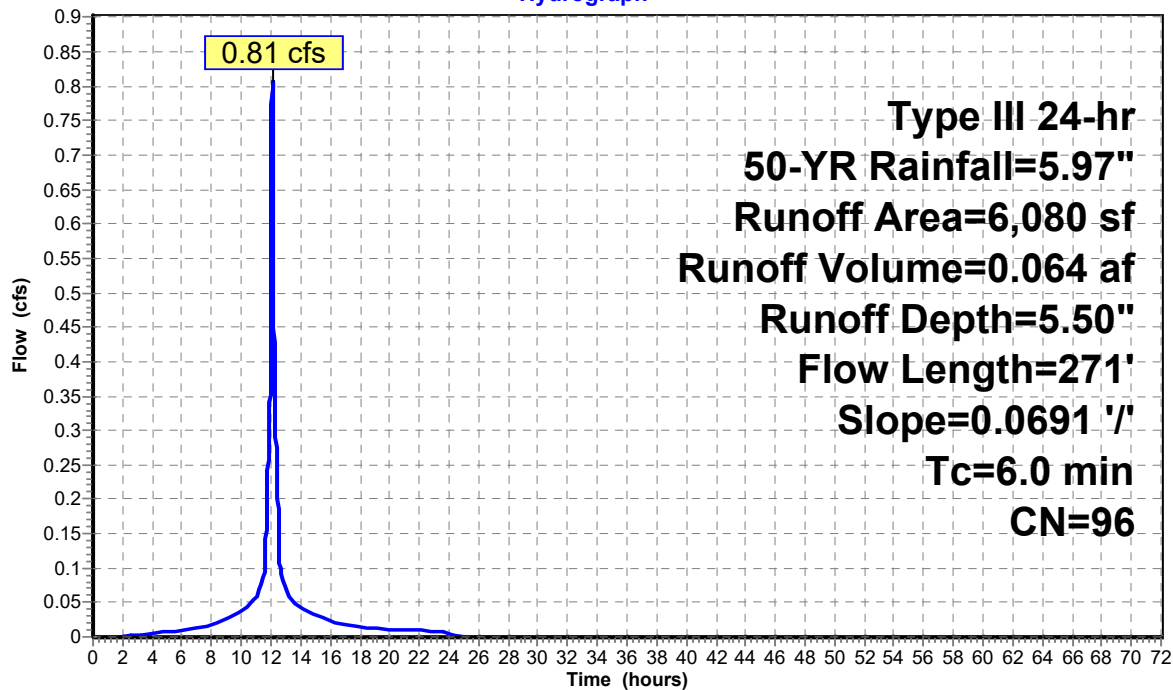
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
694	98	Paved parking HSG B
5,158	98	Paved parking HSG A
193	39	>75% Grass cover, Good HSG A
34	61	>75% Grass cover, Good HSG B
6,080	96	Weighted Average
227		3.74% Pervious Area
5,853		96.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	271	0.0691	2.00		Lag/CN Method,
2.3	271	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.11: S1.11 - CBS

Hydrograph



Summary for Subcatchment S1.2: S1.2 - CB

Runoff = 1.27 cfs @ 12.17 hrs, Volume= 0.145 af, Depth= 0.99"
 Routed to Pond 1.2P : Catch Basin

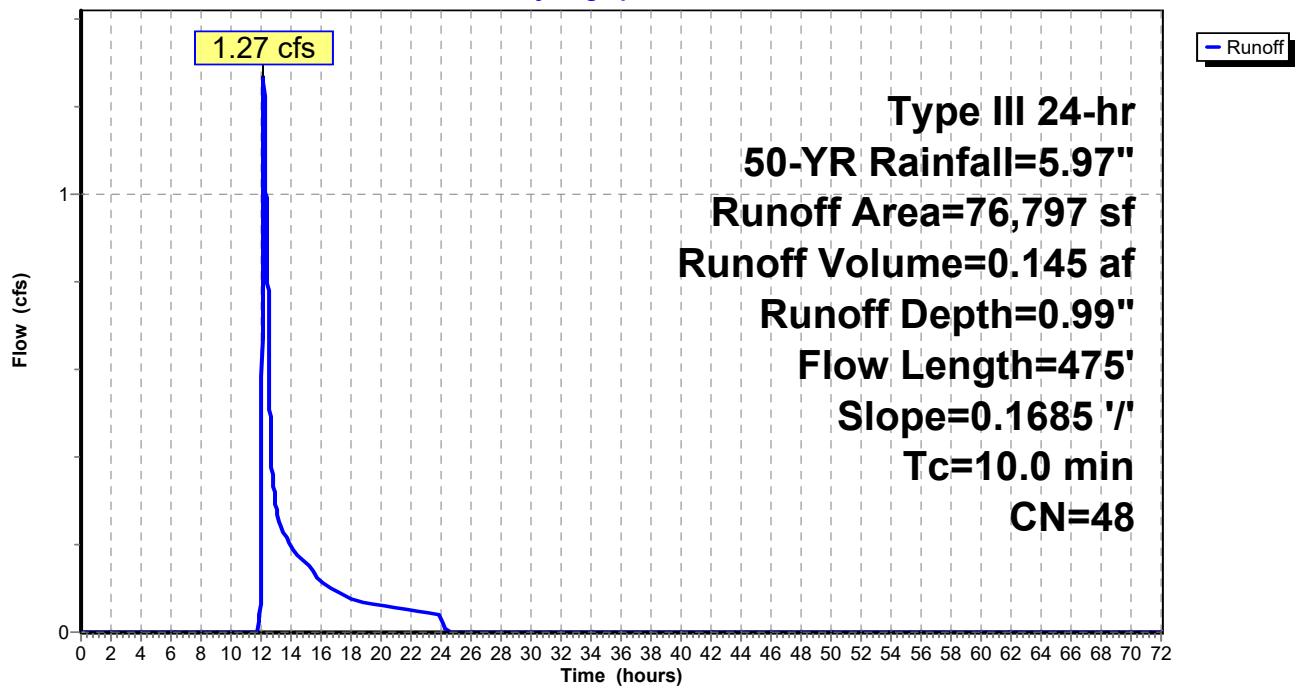
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
462	98	Paved parking HSG B
5,700	98	Roofs HSG A
33,285	30	Woods, Good HSG A
10,863	98	Paved parking HSG A
26,341	39	>75% Grass cover, Good HSG A
146	61	>75% Grass cover, Good HSG B
76,797	48	Weighted Average
59,772		77.83% Pervious Area
17,025		22.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	475	0.1685	0.79		Lag/CN Method,

Subcatchment S1.2: S1.2 - CB

Hydrograph



Summary for Subcatchment S1.3: S1.3 - CBS

Runoff = 0.02 cfs @ 12.08 hrs, Volume= 0.002 af, Depth= 5.73"
 Routed to Pond 1.3P : Catch Basin

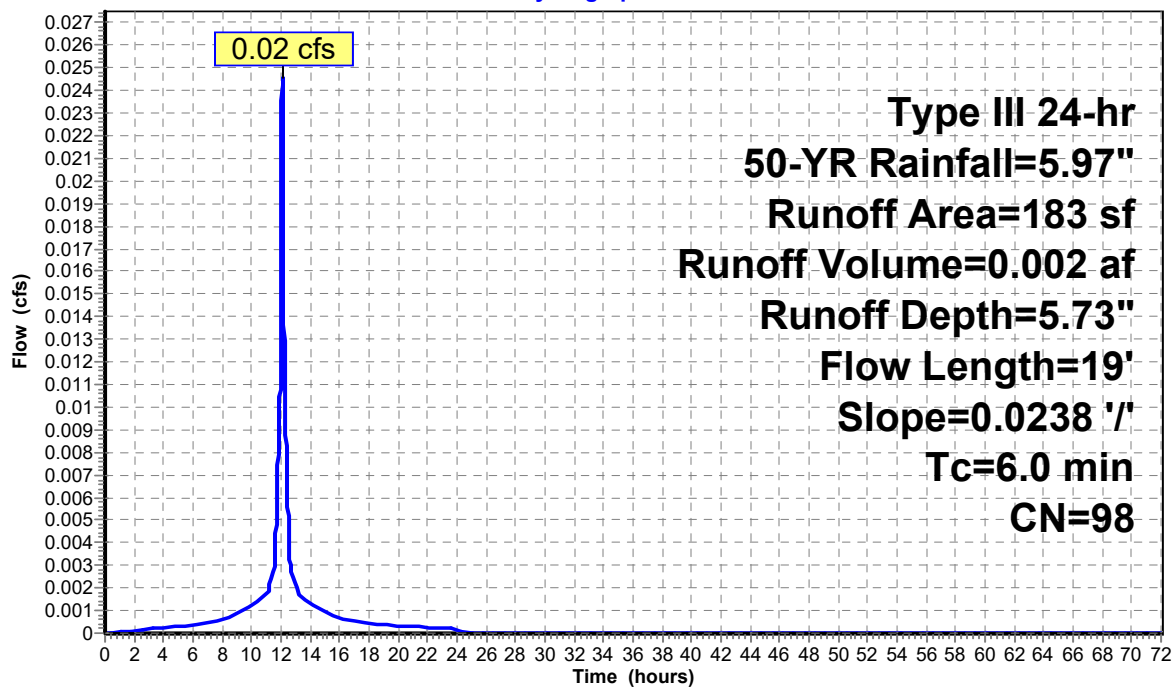
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
183	98	Paved parking HSG A
183		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	19	0.0238	0.78		Lag/CN Method,
0.4	19	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.3: S1.3 - CBS

Hydrograph



Summary for Subcatchment S1.4: S1.4 - CBS

Runoff = 0.56 cfs @ 12.14 hrs, Volume= 0.049 af, Depth= 1.58"
 Routed to Pond 1.4P : Catch Basin

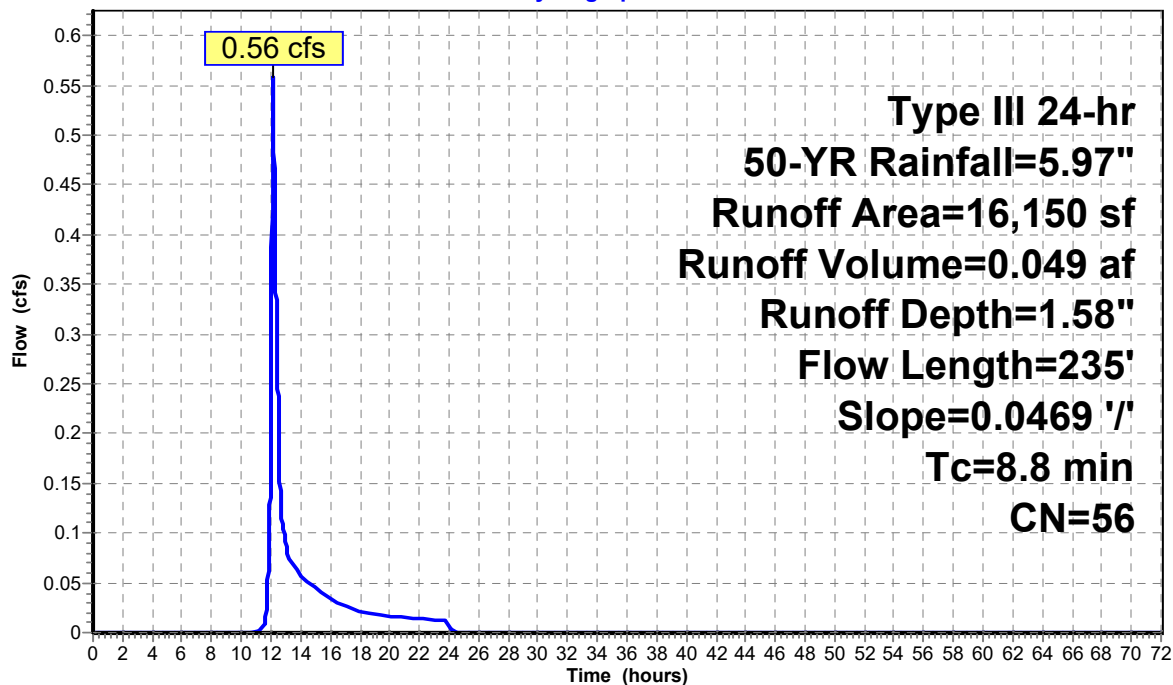
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
1,050	98	Roofs HSG A
3,582	98	Paved parking HSG A
11,518	39	>75% Grass cover, Good HSG A
16,150	56	Weighted Average
11,518		71.32% Pervious Area
4,632		28.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	235	0.0469	0.44		Lag/CN Method,

Subcatchment S1.4: S1.4 - CBS

Hydrograph



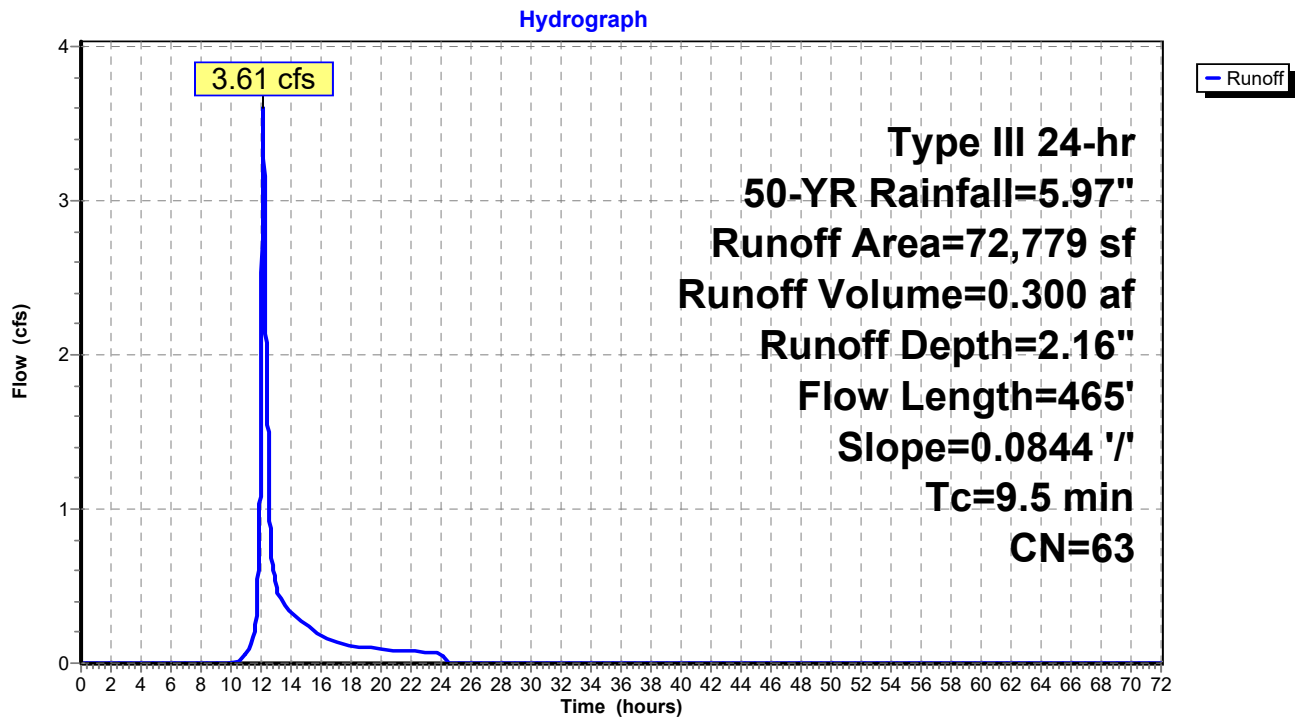
Summary for Subcatchment S1.41: S1.41 - CBS

Runoff = 3.61 cfs @ 12.14 hrs, Volume= 0.300 af, Depth= 2.16"
 Routed to Pond 1.41P : Catch Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
3,632	98	Paved parking HSG B
3,275	98	Roofs HSG B
9,325	98	Roofs HSG A
8,926	98	Paved parking HSG A
36,661	39	>75% Grass cover, Good HSG A
10,960	61	>75% Grass cover, Good HSG B
72,779	63	Weighted Average
47,621		65.43% Pervious Area
25,158		34.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	465	0.0844	0.82		Lag/CN Method,

Subcatchment S1.41: S1.41 - CBS

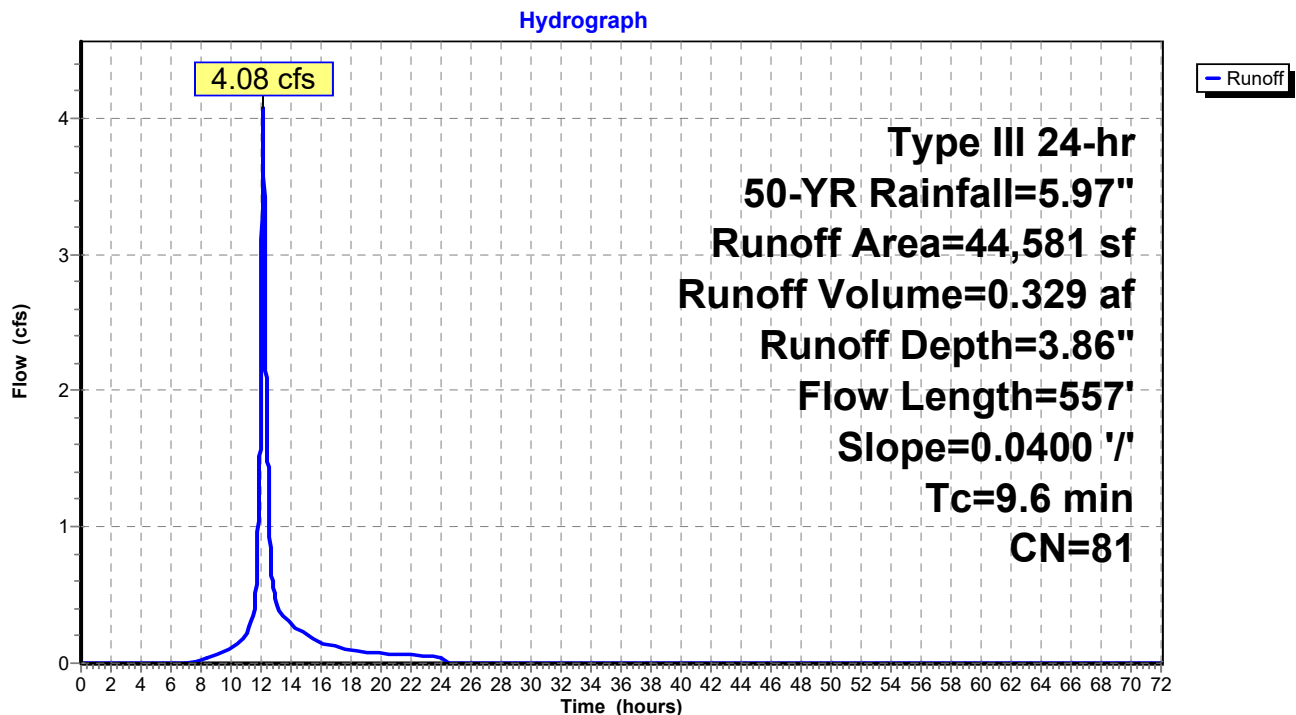
Summary for Subcatchment S1.42: S1.42 - CBS

Runoff = 4.08 cfs @ 12.13 hrs, Volume= 0.329 af, Depth= 3.86"
 Routed to Pond 1.42P : Catch Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
5,716	98	Paved parking HSG B
432	98	Roofs HSG C
408	76	Gravel roads HSG A
3,432	98	Roofs HSG A
8,736	98	Roofs HSG B
8,114	98	Paved parking HSG A
3,652	39	>75% Grass cover, Good HSG A
14,092	61	>75% Grass cover, Good HSG B
44,581	81	Weighted Average
18,151		40.72% Pervious Area
26,430		59.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	557	0.0400	0.96		Lag/CN Method,

Subcatchment S1.42: S1.42 - CBS

Summary for Subcatchment S1.43: S1.43 - IB

Runoff = 0.63 cfs @ 12.10 hrs, Volume= 0.051 af, Depth= 1.42"
 Routed to Pond 2P : Sediment Forebay

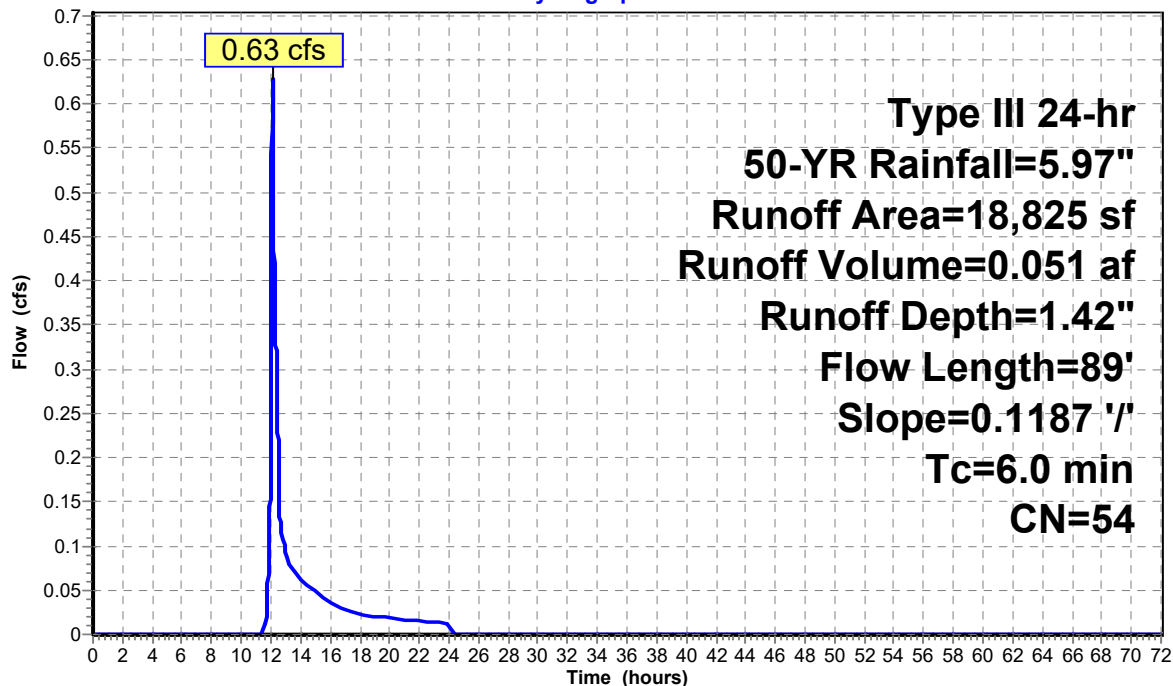
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
2,100	98	Roofs HSG A
9,413	39	>75% Grass cover, Good HSG A
7,312	61	>75% Grass cover, Good HSG B
18,825	54	Weighted Average
16,725		88.84% Pervious Area
2,100		11.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	89	0.1187	0.55		Lag/CN Method,
2.7	89	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.43: S1.43 - IB

Hydrograph



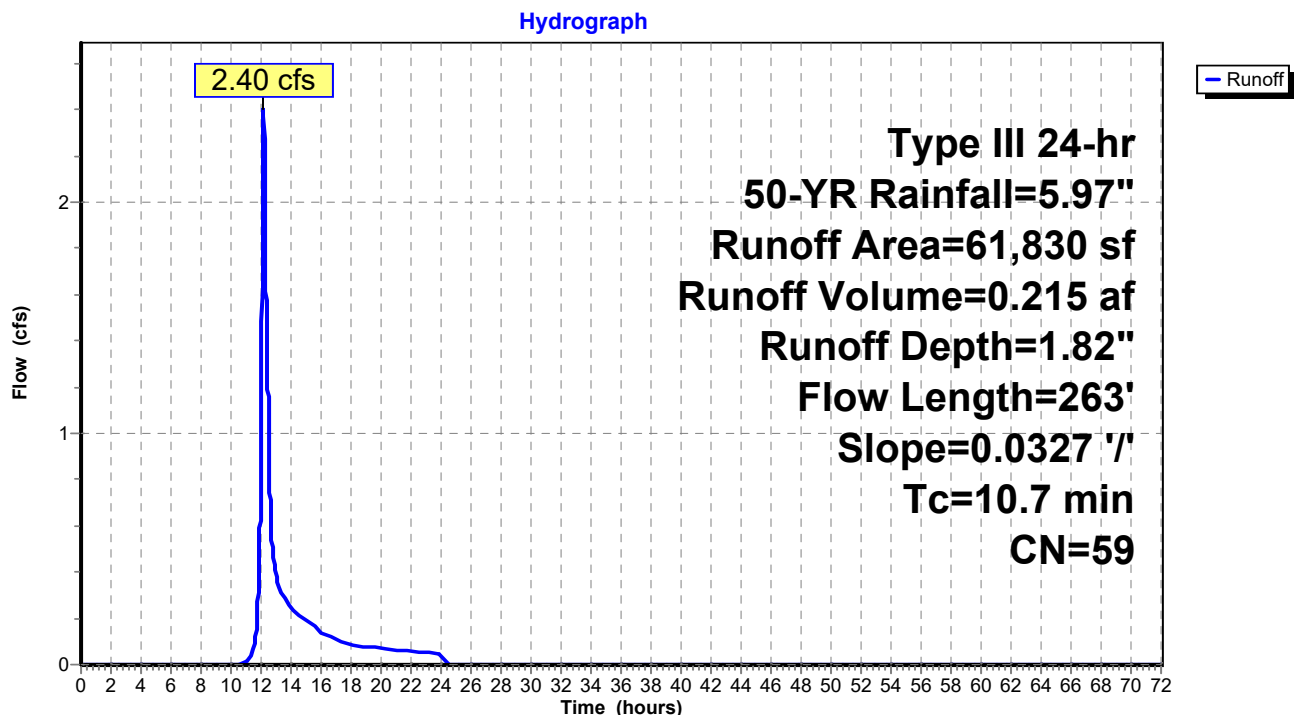
Summary for Subcatchment S1.5: S1.5 - CBS

Runoff = 2.40 cfs @ 12.16 hrs, Volume= 0.215 af, Depth= 1.82"
 Routed to Pond 1.5P : Catch Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
10,626	98	Roofs HSG A
10,156	98	Paved parking HSG A
41,047	39	>75% Grass cover, Good HSG A
61,830	59	Weighted Average
41,047		66.39% Pervious Area
20,782		33.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	263	0.0327	0.41		Lag/CN Method,

Subcatchment S1.5: S1.5 - CBS

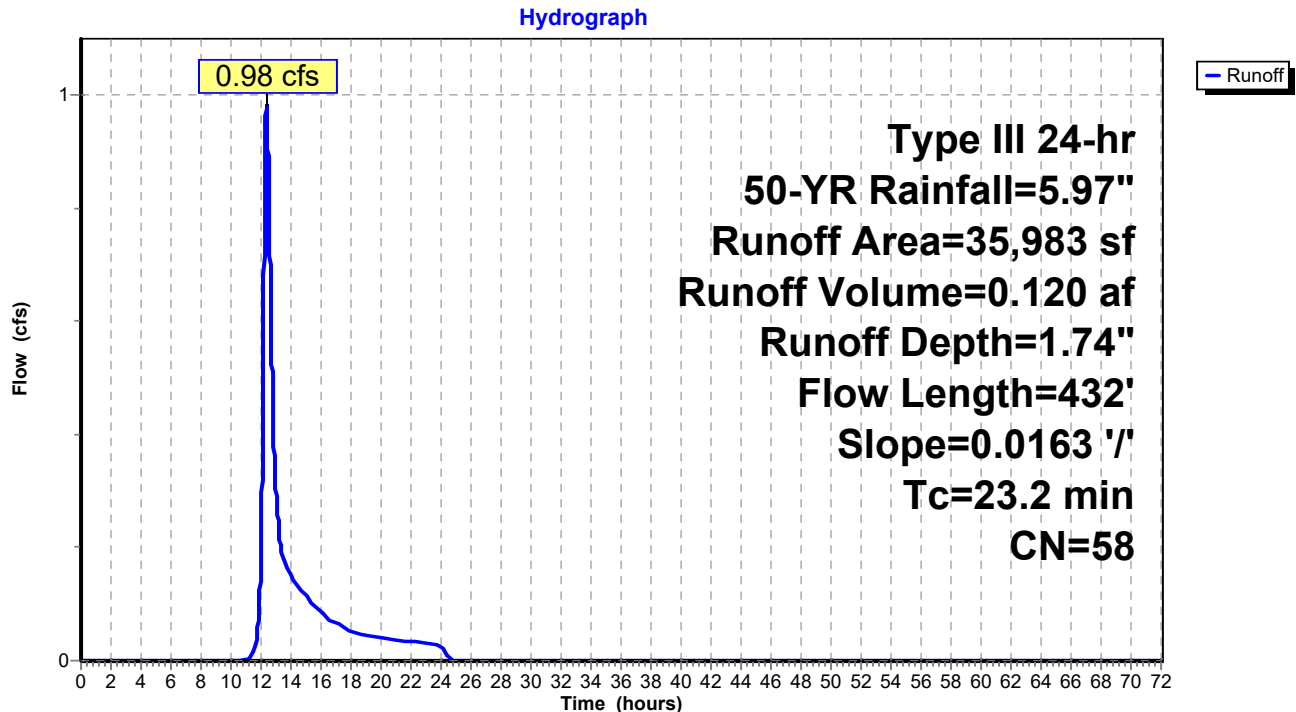
Summary for Subcatchment S1.51: S1.51 - CBS

Runoff = 0.98 cfs @ 12.35 hrs, Volume= 0.120 af, Depth= 1.74"
 Routed to Pond 1.51P : Catch Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
5,124	98	Roofs HSG A
126	98	Roofs HSG B
5,171	98	Paved parking HSG A
21,968	39	>75% Grass cover, Good HSG A
3,594	61	>75% Grass cover, Good HSG B
35,983	58	Weighted Average
25,562		71.04% Pervious Area
10,421		28.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	432	0.0163	0.31		Lag/CN Method,

Subcatchment S1.51: S1.51 - CBS

Summary for Subcatchment S1.52: S1.52 - CBS

Runoff = 0.72 cfs @ 12.09 hrs, Volume= 0.051 af, Depth= 3.65"
 Routed to Pond 1.52P : Catch Basin

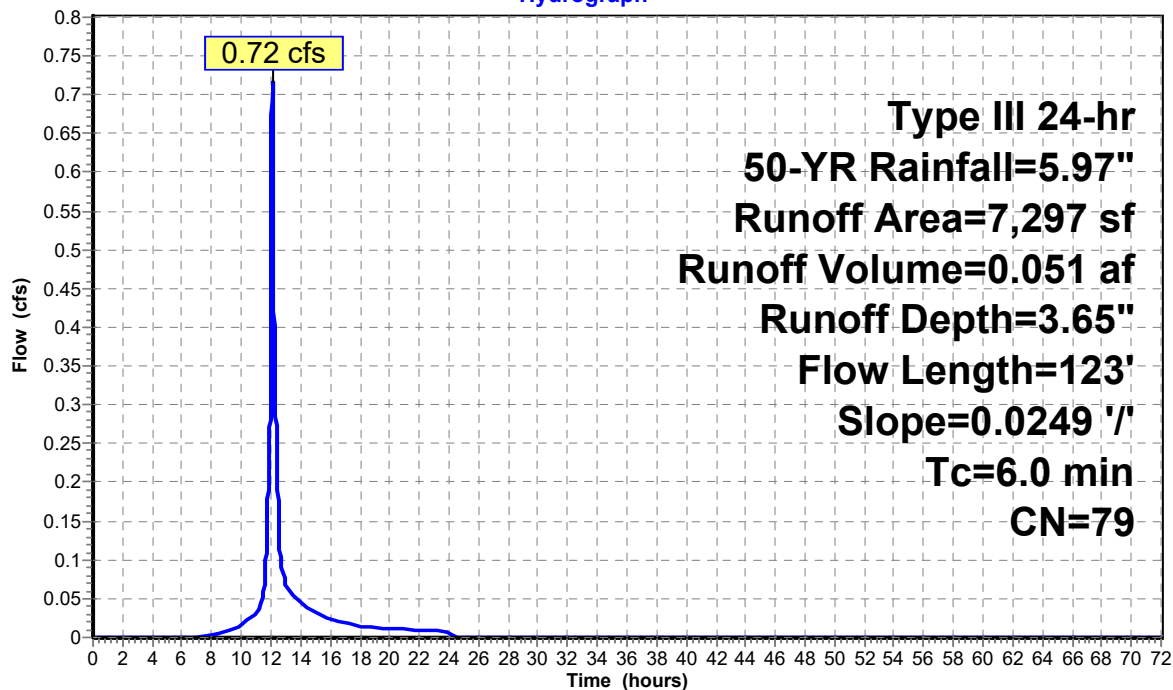
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
1,476	98	Paved parking HSG B
1,974	98	Roofs HSG B
612	98	Paved parking HSG A
1,005	39	>75% Grass cover, Good HSG A
2,229	61	>75% Grass cover, Good HSG B
7,297	79	Weighted Average
3,234		44.32% Pervious Area
4,063		55.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	123	0.0249	0.53		Lag/CN Method,
3.9	123	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.52: S1.52 - CBS

Hydrograph



Summary for Subcatchment S1.53: S1.53 - CBS

Runoff = 0.80 cfs @ 12.12 hrs, Volume= 0.062 af, Depth= 2.87"
 Routed to Pond 1.53P : Catch Basin

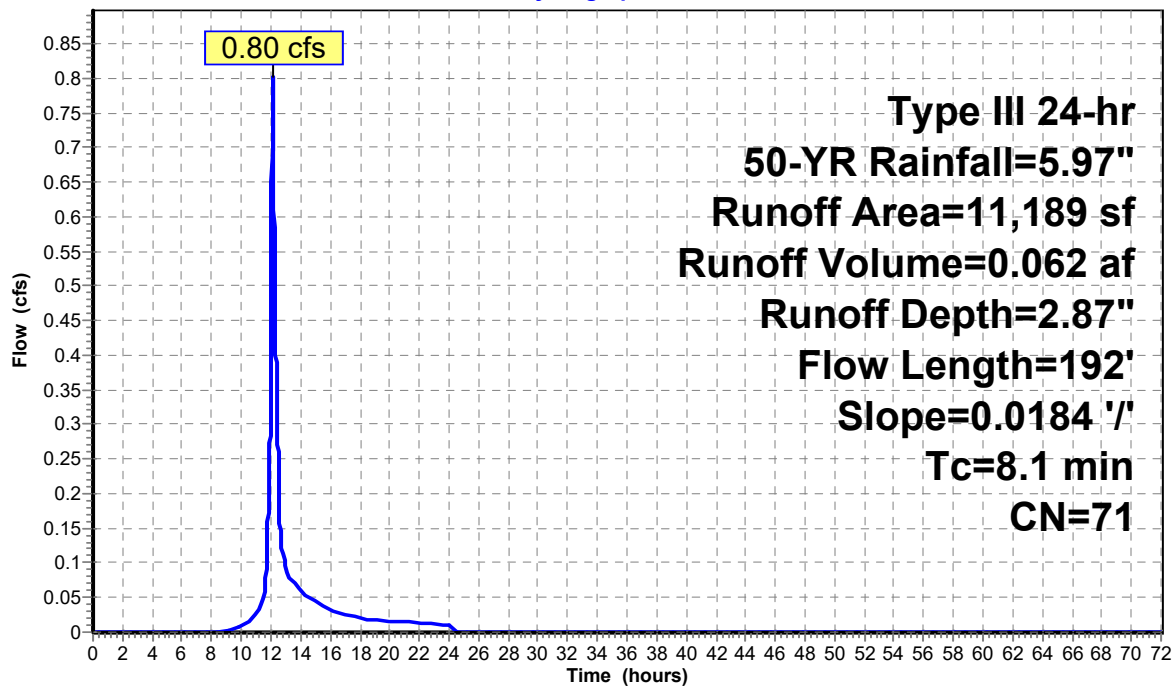
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
1,482	98	Paved parking HSG B
1,315	98	Roofs HSG B
785	98	Roofs HSG A
438	98	Paved parking HSG A
1,803	39	>75% Grass cover, Good HSG A
5,367	61	>75% Grass cover, Good HSG B
11,189	71	Weighted Average
7,170		64.08% Pervious Area
4,020		35.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.1	192	0.0184	0.39		Lag/CN Method,

Subcatchment S1.53: S1.53 - CBS

Hydrograph



Summary for Subcatchment S1.6: S1.6 - CBS

Runoff = 0.16 cfs @ 12.09 hrs, Volume= 0.012 af, Depth= 4.17"
 Routed to Pond 1.6P : Catch Basin

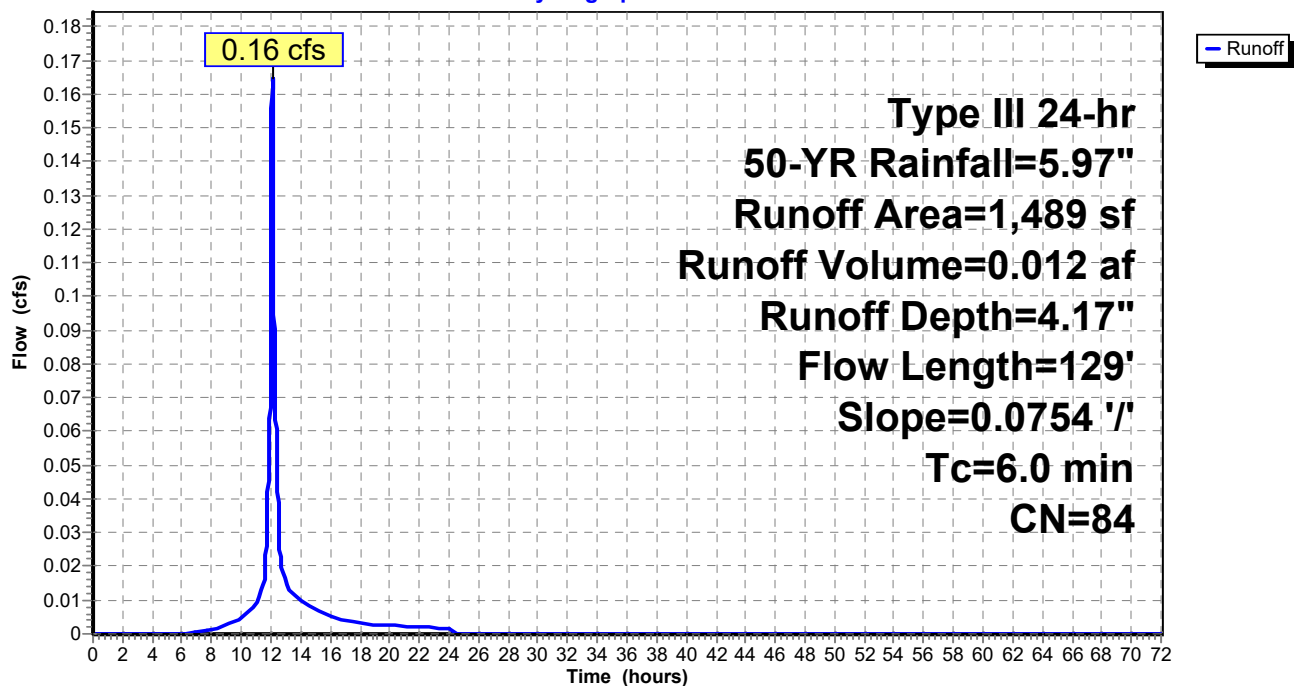
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
1,128	98	Paved parking HSG A
361	39	>75% Grass cover, Good HSG A
1,489	84	Weighted Average
361		24.27% Pervious Area
1,128		75.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	129	0.0754	1.09		Lag/CN Method,
2.0	129	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.6: S1.6 - CBS

Hydrograph



Summary for Subcatchment S1.7: S1.7 - CBS

Runoff = 0.19 cfs @ 12.10 hrs, Volume= 0.015 af, Depth= 1.50"
 Routed to Pond 1.7P : Catch Basin

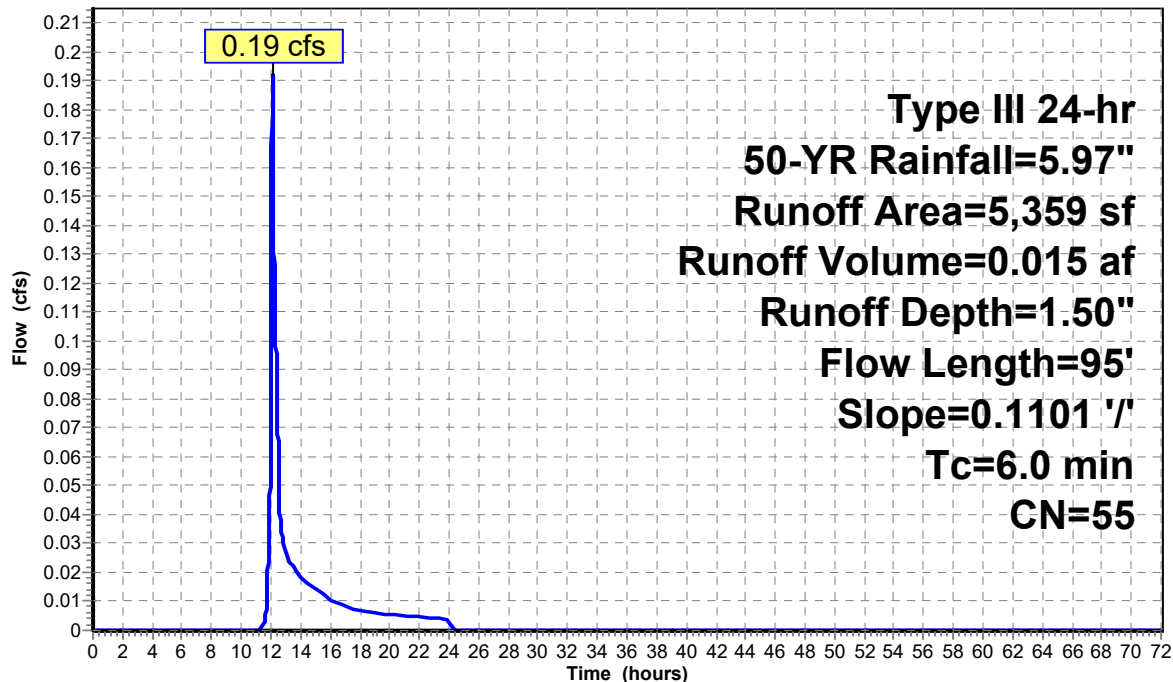
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
2,755	30	Woods, Good HSG A
1,853	98	Paved parking HSG A
751	39	>75% Grass cover, Good HSG A
5,359	55	Weighted Average
3,506		65.43% Pervious Area
1,853		34.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.9	95	0.1101	0.55		Lag/CN Method,
2.9	95	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S1.7: S1.7 - CBS

Hydrograph



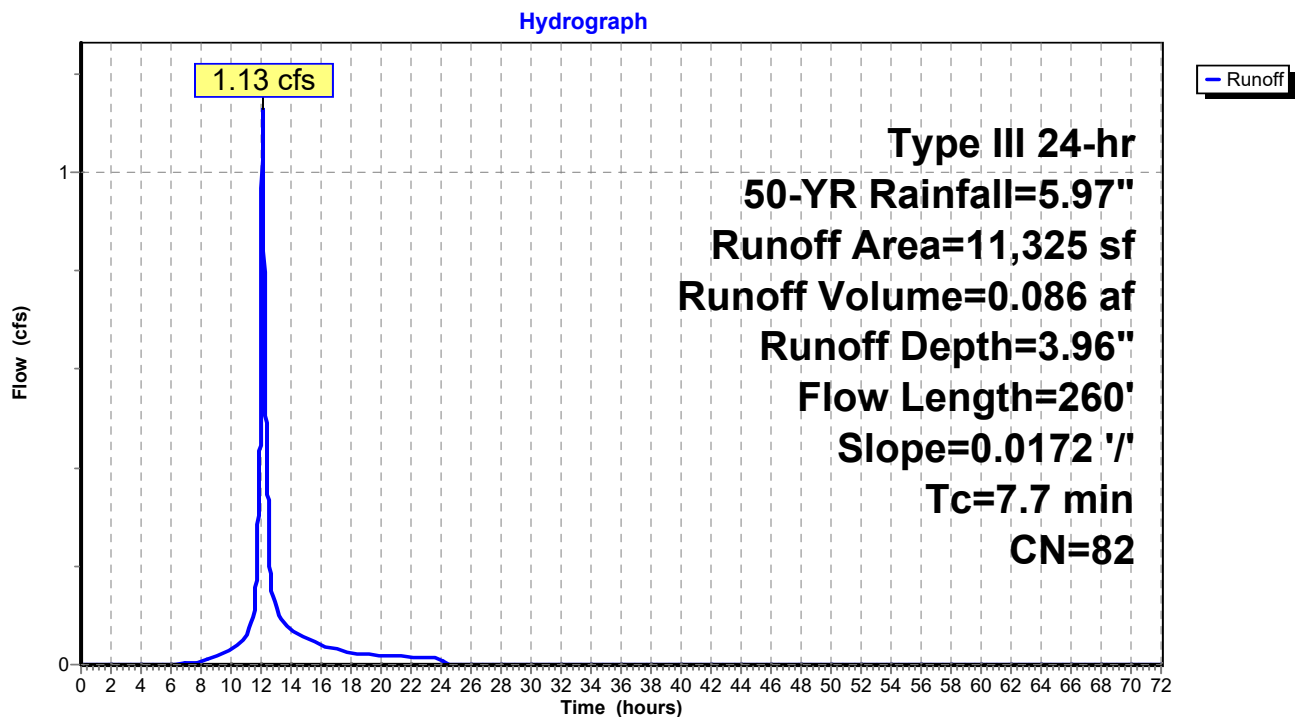
Summary for Subcatchment S1.8: S1.8 - CBS

Runoff = 1.13 cfs @ 12.11 hrs, Volume= 0.086 af, Depth= 3.96"
 Routed to Pond 1.8P : Catch Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
1,162	98	Roofs HSG A
7,086	98	Paved parking HSG A
3,076	39	>75% Grass cover, Good HSG A
11,325	82	Weighted Average
3,076		27.16% Pervious Area
8,248		72.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	260	0.0172	0.56		Lag/CN Method,

Subcatchment S1.8: S1.8 - CBS

Summary for Subcatchment S1.9: S1.9 - CBS

Runoff = 1.76 cfs @ 12.15 hrs, Volume= 0.147 af, Depth= 3.86"
 Routed to Pond 1.8P : Catch Basin

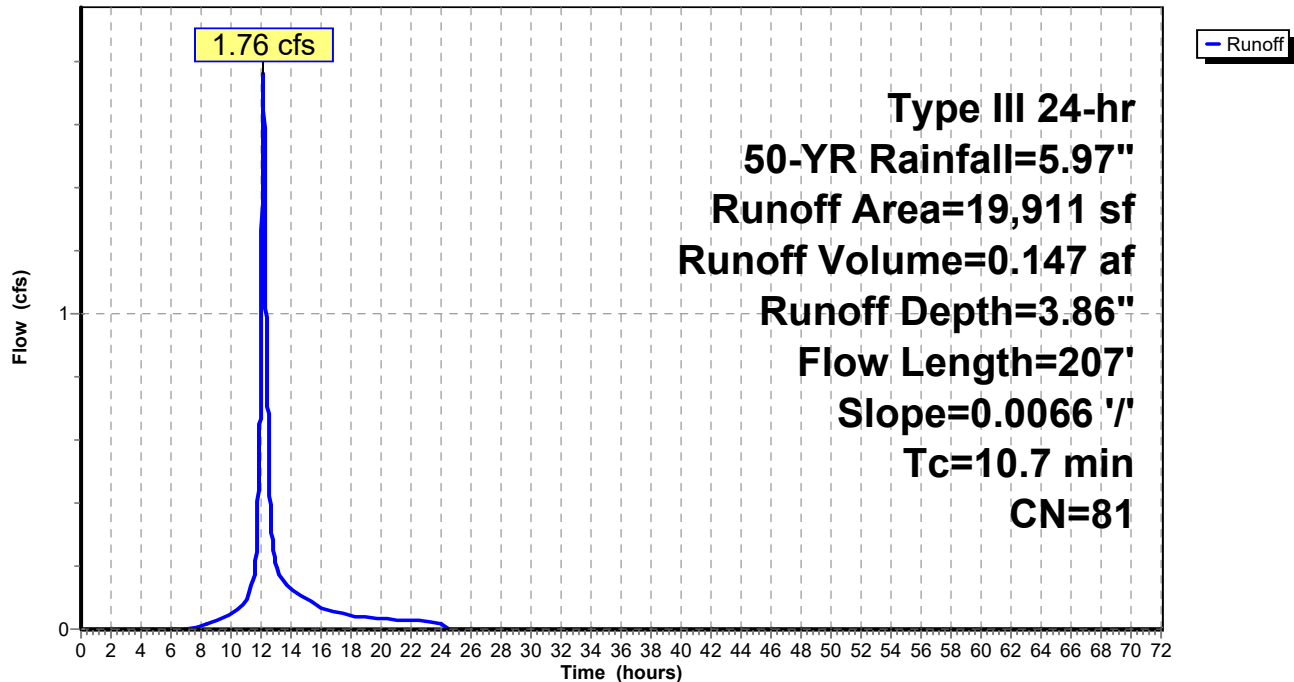
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
48	30	Woods, Good HSG A
1,067	98	Roofs HSG A
13,064	98	Paved parking HSG A
5,732	39	>75% Grass cover, Good HSG A
19,911	81	Weighted Average
5,780		29.03% Pervious Area
14,131		70.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	207	0.0066	0.32		Lag/CN Method,

Subcatchment S1.9: S1.9 - CBS

Hydrograph



Summary for Subcatchment S3: S3 - IB

Runoff = 0.07 cfs @ 12.35 hrs, Volume= 0.014 af, Depth= 0.44"
 Routed to Pond 7P : Sediment Forebay

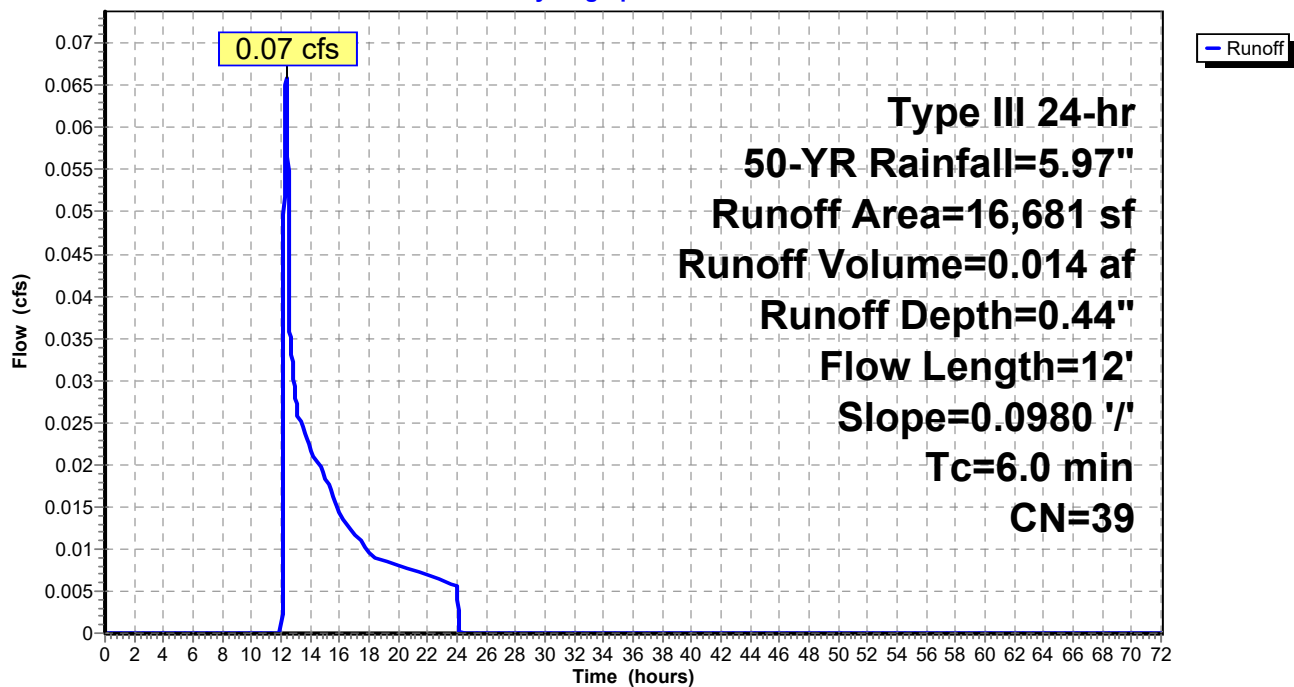
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
16,681	39	>75% Grass cover, Good HSG A
16,681		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	12	0.0980	0.23		Lag/CN Method,
0.9	12	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S3: S3 - IB

Hydrograph



Summary for Subcatchment S3.1: S3.1 - CBS

Runoff = 19.58 cfs @ 12.08 hrs, Volume= 1.598 af, Depth= 5.73"
 Routed to Pond 3.1P : Catch Basin

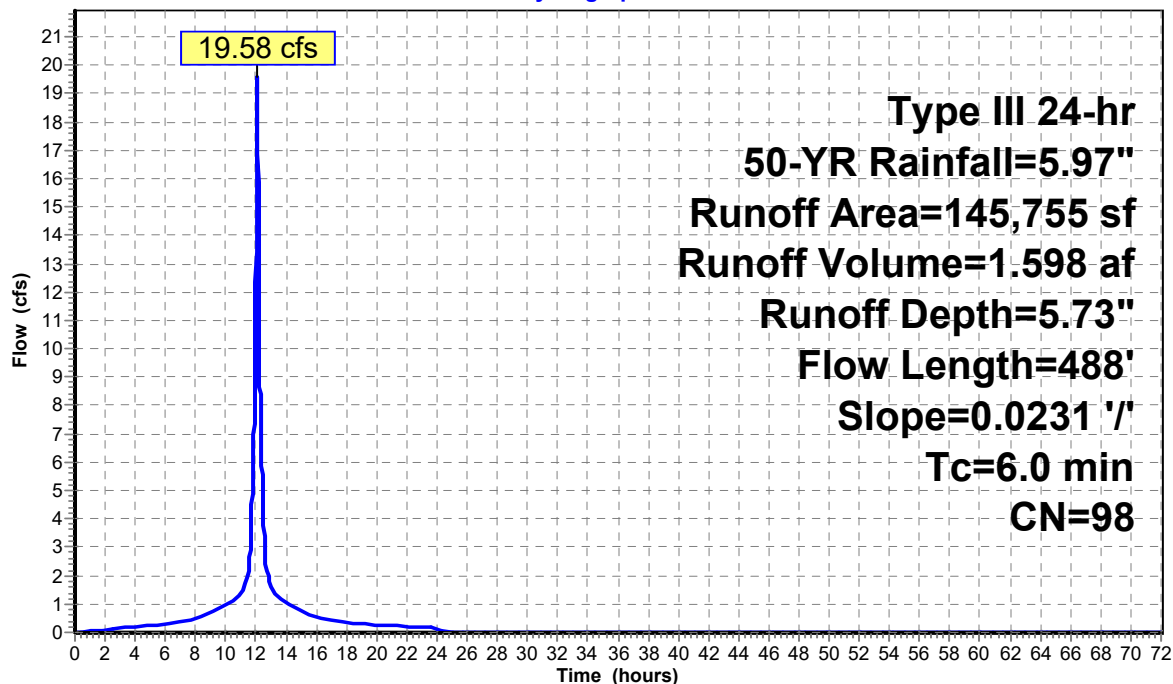
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
61,600	98	Roofs HSG A
83,399	98	Paved parking HSG A
756	39	>75% Grass cover, Good HSG A
145,755	98	Weighted Average
756		0.52% Pervious Area
144,999		99.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	488	0.0231	1.46		Lag/CN Method,
5.6	488	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S3.1: S3.1 - CBS

Hydrograph



Summary for Subcatchment S3.2: S3.2 - CBS

Runoff = 1.56 cfs @ 12.08 hrs, Volume= 0.124 af, Depth= 5.50"
 Routed to Pond 3.2P : Catch Basin

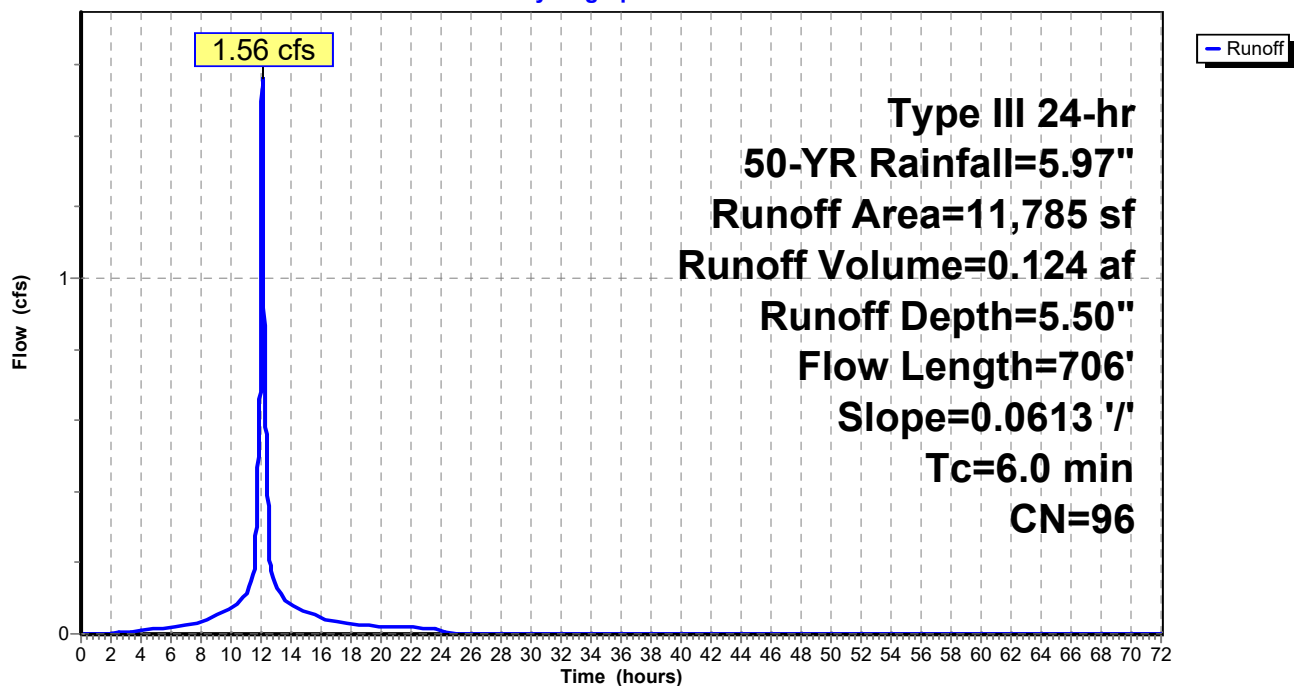
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
11,313	98	Paved parking HSG A
472	39	>75% Grass cover, Good HSG A
11,785	96	Weighted Average
472		4.01% Pervious Area
11,313		95.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	706	0.0613	2.28		Lag/CN Method,
5.2	706	Total, Increased to minimum Tc = 6.0 min			

Subcatchment S3.2: S3.2 - CBS

Hydrograph



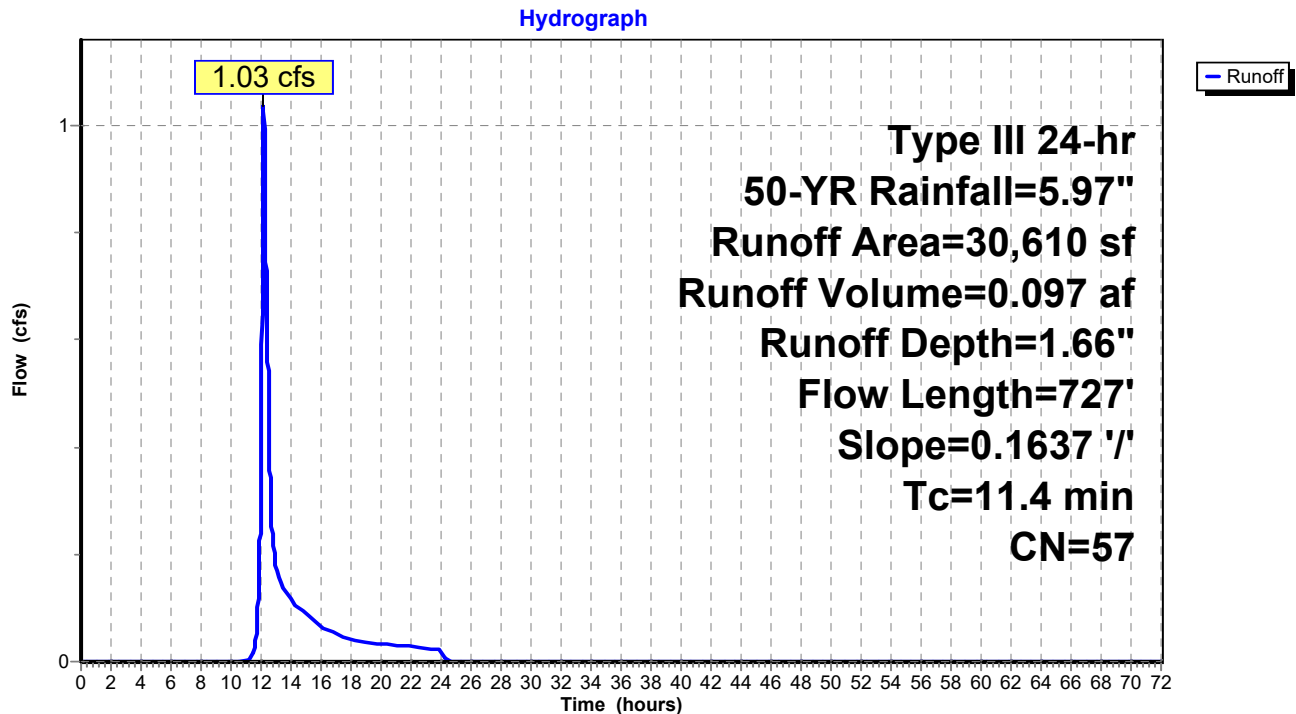
Summary for Subcatchment S3.21: S3.21 - CBS

Runoff = 1.03 cfs @ 12.17 hrs, Volume= 0.097 af, Depth= 1.66"
 Routed to Pond 3.21P : Catch Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-YR Rainfall=5.97"

Area (sf)	CN	Description
13,390	30	Woods, Good HSG A
11,285	98	Paved parking HSG A
5,935	39	>75% Grass cover, Good HSG A
30,610	57	Weighted Average
19,325		63.13% Pervious Area
11,285		36.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	727	0.1637	1.07		Lag/CN Method,

Subcatchment S3.21: S3.21 - CBS

Summary for Reach OP-1: Observation Point 1

Inflow Area = 34.369 ac, 20.99% Impervious, Inflow Depth = 0.61" for 50-YR event

Inflow = 12.81 cfs @ 12.27 hrs, Volume= 1.748 af

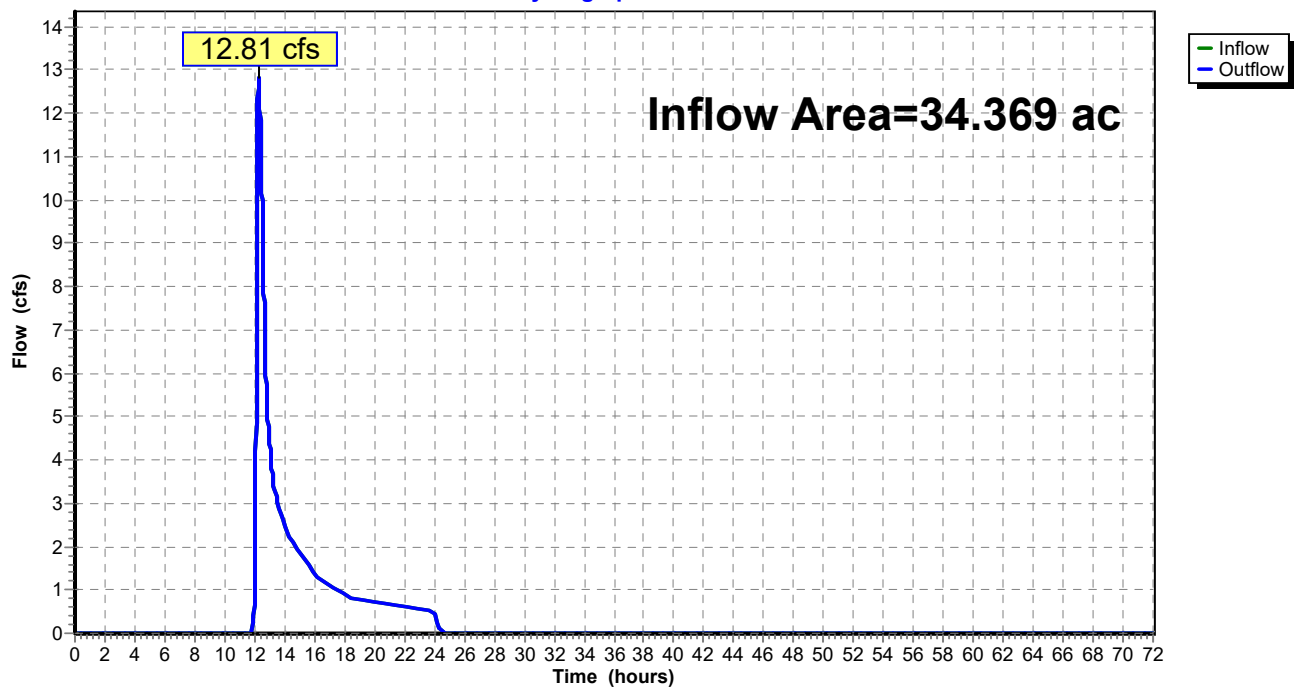
Outflow = 12.81 cfs @ 12.27 hrs, Volume= 1.748 af, Atten= 0%, Lag= 0.0 min

Routed to nonexistent node OP-T

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach OP-1: Observation Point 1

Hydrograph



Summary for Pond 1.11P: Catch Basin

Inflow Area = 5.822 ac, 36.41% Impervious, Inflow Depth = 1.99" for 50-YR event
 Inflow = 9.82 cfs @ 12.14 hrs, Volume= 0.967 af
 Outflow = 9.82 cfs @ 12.14 hrs, Volume= 0.967 af, Atten= 0%, Lag= 0.0 min
 Primary = 9.82 cfs @ 12.14 hrs, Volume= 0.967 af
 Routed to Pond 1.1AP : Sediment Forebay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 360.15' @ 12.14 hrs

Flood Elev= 362.50'

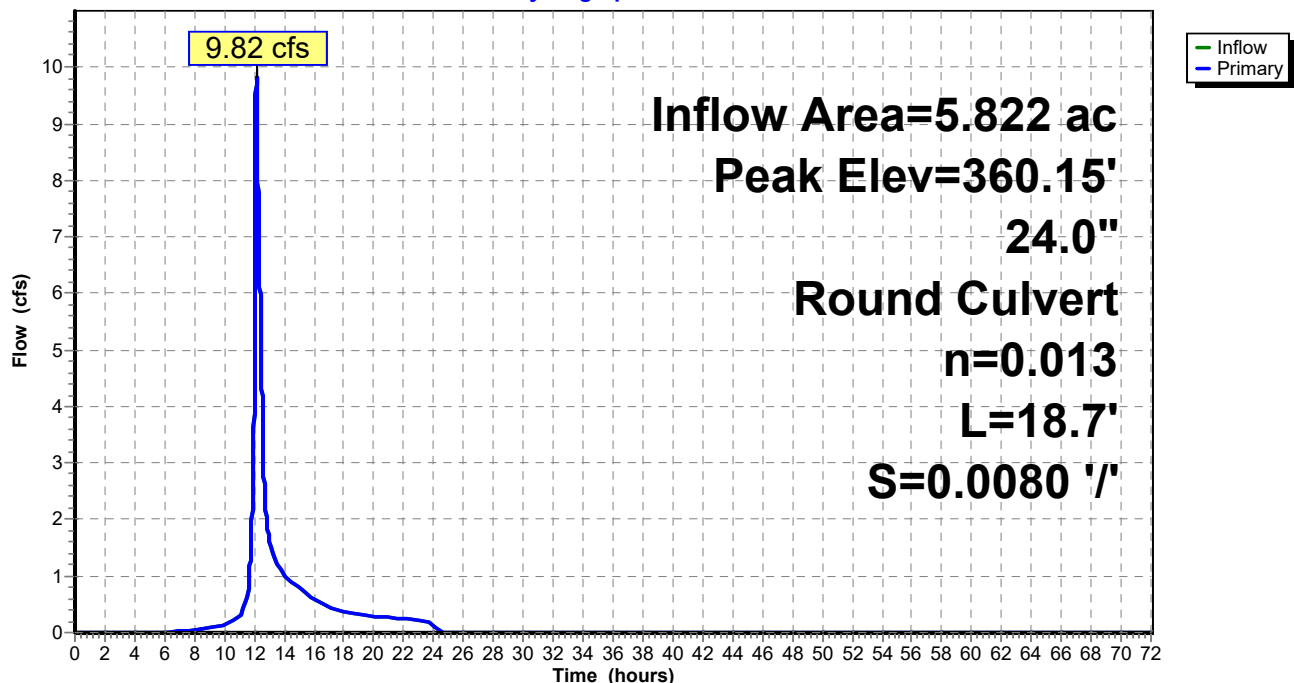
Device	Routing	Invert	Outlet Devices
#1	Primary	357.15'	24.0" Round Culvert L= 18.7' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 357.15' / 357.00' S= 0.0080 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=9.76 cfs @ 12.14 hrs HW=360.14' TW=359.48' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 9.76 cfs @ 3.11 fps)

Pond 1.11P: Catch Basin

Hydrograph



Summary for Pond 1.1AP: Sediment Forebay

Inflow Area = 6.166 ac, 34.38% Impervious, Inflow Depth = 1.96" for 50-YR event
 Inflow = 10.28 cfs @ 12.14 hrs, Volume= 1.008 af
 Outflow = 10.05 cfs @ 12.16 hrs, Volume= 0.954 af, Atten= 2%, Lag= 1.5 min
 Primary = 10.05 cfs @ 12.16 hrs, Volume= 0.954 af
 Routed to Pond 1.1P : Infiltration Basin A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 360.00' @ 13.52 hrs Surf.Area= 3,421 sf Storage= 5,214 cf
 Flood Elev= 361.00' Surf.Area= 4,693 sf Storage= 9,274 cf

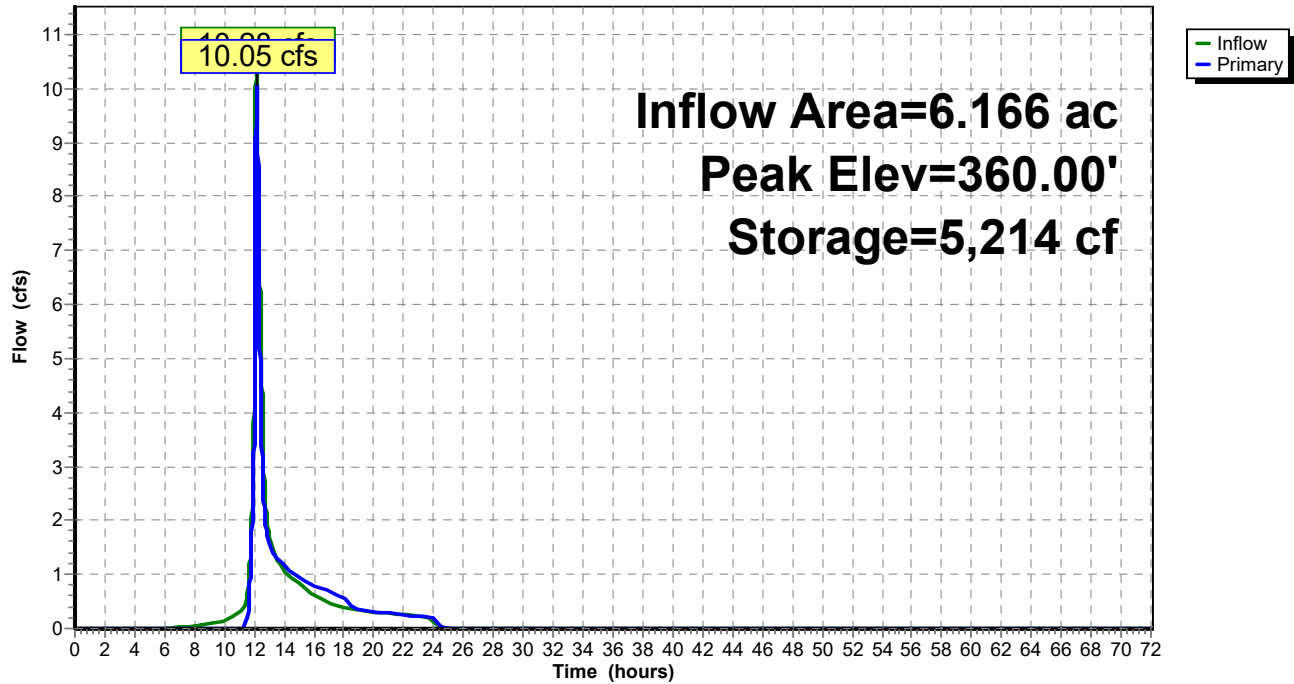
Plug-Flow detention time= 61.2 min calculated for 0.954 af (95% of inflow)
 Center-of-Mass det. time= 32.4 min (884.7 - 852.3)

Volume	Invert	Avail.Storage	Storage Description
#1	357.00'	9,274 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
357.00	313	317.0	0	0	313
359.00	2,359	365.0	2,354	2,354	3,006
361.00	4,693	413.0	6,920	9,274	6,078

Device	Routing	Invert	Outlet Devices
#1	Primary	359.00'	10.0' long + 3.0 ' SideZ x 14.0' breadth FOREBAY Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.64 2.67 2.70 2.65 2.64 2.65 2.65 2.63

Primary OutFlow Max=10.04 cfs @ 12.16 hrs HW=359.48' TW=358.39' (Dynamic Tailwater)
 ↑1=FOREBAY (Weir Controls 10.04 cfs @ 1.82 fps)

Pond 1.1AP: Sediment Forebay**Hydrograph**

Summary for Pond 1.1P: Infiltration Basin A

Inflow Area = 6.166 ac, 34.38% Impervious, Inflow Depth = 1.86" for 50-YR event
 Inflow = 10.05 cfs @ 12.16 hrs, Volume= 0.954 af
 Outflow = 1.29 cfs @ 13.51 hrs, Volume= 0.954 af, Atten= 87%, Lag= 80.7 min
 Discarded = 1.21 cfs @ 13.51 hrs, Volume= 0.941 af
 Primary = 0.08 cfs @ 13.51 hrs, Volume= 0.013 af
 Routed to Reach OP-1 : Observation Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 360.00' @ 13.51 hrs Surf.Area= 6,108 sf Storage= 13,769 cf
 Flood Elev= 361.00' Surf.Area= 7,245 sf Storage= 20,470 cf

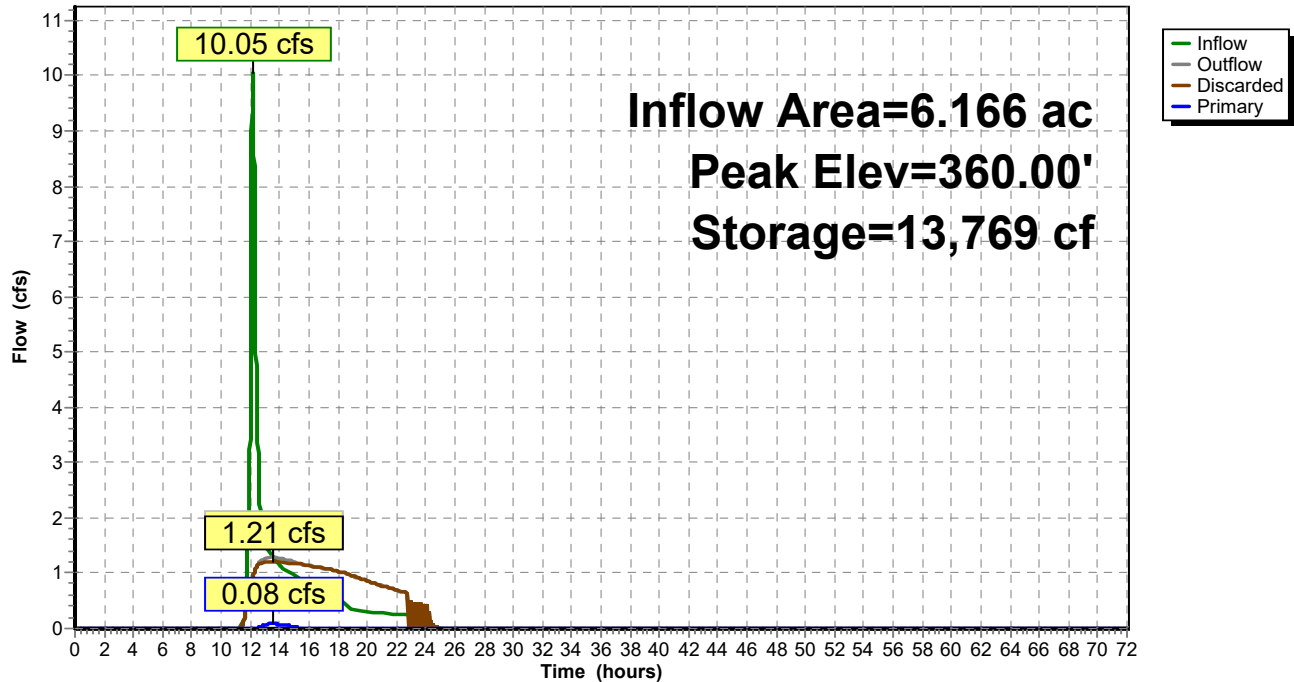
Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 131.9 min (1,016.6 - 884.7)

Volume	Invert	Avail.Storage	Storage Description		
#1	357.00'	20,470 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
357.00	3,206	281.5	0	0	3,206
359.00	5,077	338.5	8,212	8,212	6,086
361.00	7,245	383.4	12,258	20,470	8,764

Device	Routing	Invert	Outlet Devices
#1	Discarded	357.00'	8.530 in/hr Exfiltration over Surface area
#2	Primary	357.00'	18.0" Round Culvert L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 357.00' / 356.50' S= 0.0200 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Primary	360.50'	10.0' long + 3.0 ' SideZ x 7.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78
#4	Device 2	360.50'	24.0" x 24.0" Horiz. RIM C= 0.600 Limited to weir flow at low heads
#5	Primary	359.75'	3.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=1.21 cfs @ 13.51 hrs HW=360.00' (Free Discharge)
 ↳ **1=Exfiltration** (Exfiltration Controls 1.21 cfs)

Primary OutFlow Max=0.08 cfs @ 13.51 hrs HW=360.00' TW=0.00' (Dynamic Tailwater)
 ↳ **2=Culvert** (Passes 0.00 cfs of 10.07 cfs potential flow)
 ↳ **4=RIM** (Controls 0.00 cfs)
 ↳ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
 ↳ **5=Orifice/Grate** (Orifice Controls 0.08 cfs @ 1.69 fps)

Pond 1.1P: Infiltration Basin A**Hydrograph**

Summary for Pond 1.2P: Catch Basin

Inflow Area = 1.763 ac, 22.17% Impervious, Inflow Depth = 0.99" for 50-YR event
 Inflow = 1.27 cfs @ 12.17 hrs, Volume= 0.145 af
 Outflow = 1.27 cfs @ 12.17 hrs, Volume= 0.145 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.27 cfs @ 12.17 hrs, Volume= 0.145 af
 Routed to Pond 1.11P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

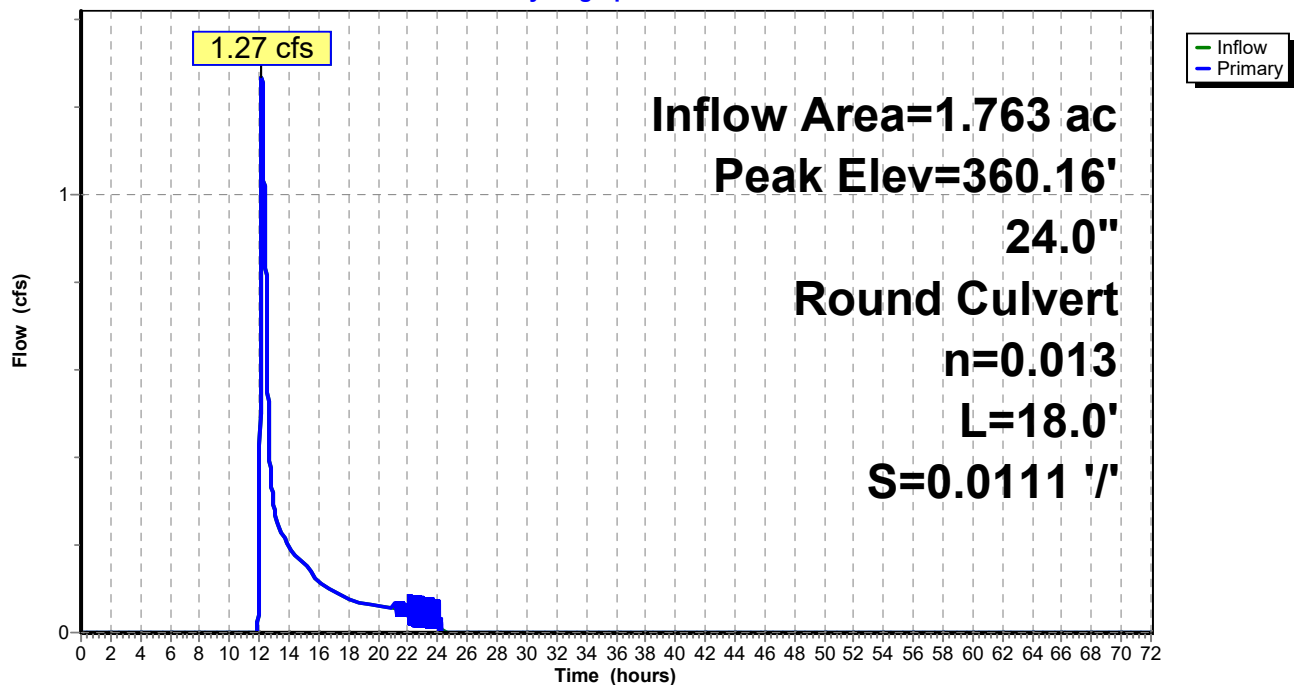
Peak Elev= 360.16' @ 12.15 hrs

Flood Elev= 362.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	357.35'	24.0" Round Culvert L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 357.35' / 357.15' S= 0.0111 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=2.23 cfs @ 12.17 hrs HW=360.14' TW=360.10' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 2.23 cfs @ 0.71 fps)

Pond 1.2P: Catch Basin**Hydrograph**

Summary for Pond 1.3P: Catch Basin

Inflow Area = 3.919 ac, 40.69% Impervious, Inflow Depth = 2.32" for 50-YR event
 Inflow = 7.96 cfs @ 12.14 hrs, Volume= 0.758 af
 Outflow = 7.96 cfs @ 12.14 hrs, Volume= 0.758 af, Atten= 0%, Lag= 0.0 min
 Primary = 7.96 cfs @ 12.14 hrs, Volume= 0.758 af
 Routed to Pond 1.11P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

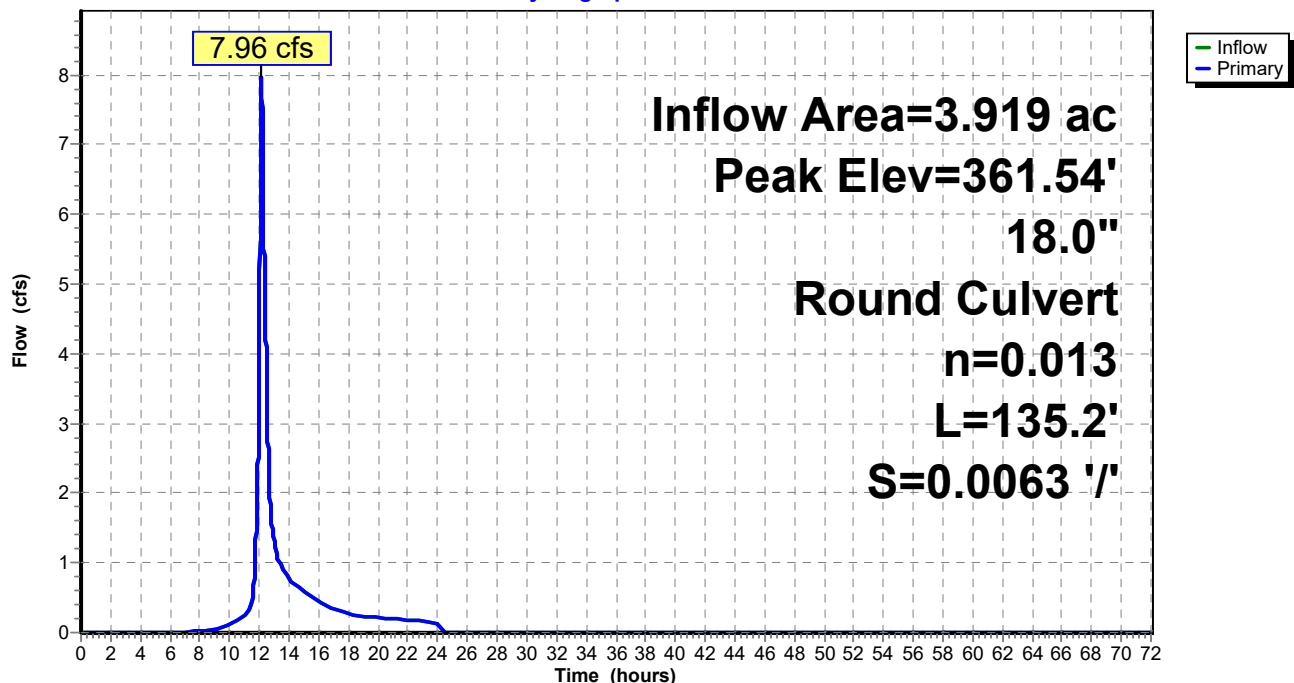
Peak Elev= 361.54' @ 12.14 hrs

Flood Elev= 362.99'

Device	Routing	Invert	Outlet Devices
#1	Primary	358.10'	18.0" Round Culvert L= 135.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 358.10' / 357.25' S= 0.0063 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=7.91 cfs @ 12.14 hrs HW=361.53' TW=360.14' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 7.91 cfs @ 4.48 fps)

Pond 1.3P: Catch Basin**Hydrograph**

Summary for Pond 1.41P: Catch Basin

Inflow Area = 1.671 ac, 34.57% Impervious, Inflow Depth = 2.16" for 50-YR event
 Inflow = 3.61 cfs @ 12.14 hrs, Volume= 0.300 af
 Outflow = 3.61 cfs @ 12.15 hrs, Volume= 0.300 af, Atten= 0%, Lag= 0.3 min
 Primary = 3.61 cfs @ 12.15 hrs, Volume= 0.300 af
 Routed to Pond 1.42P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 358.00' @ 12.15 hrs

Flood Elev= 357.65'

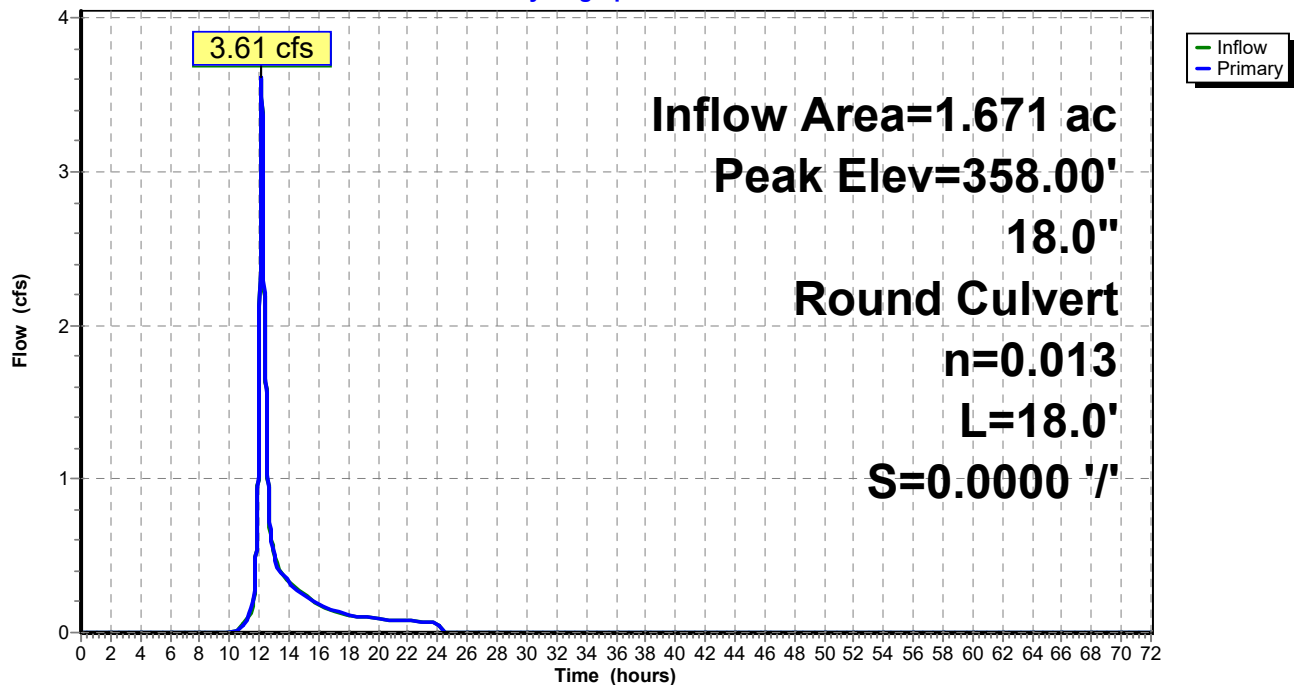
Device	Routing	Invert	Outlet Devices
#1	Primary	353.15'	18.0" Round Culvert L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 353.15' / 353.15' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=3.60 cfs @ 12.15 hrs HW=358.00' TW=357.71' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 3.60 cfs @ 2.04 fps)

Pond 1.41P: Catch Basin

Hydrograph



Summary for Pond 1.42P: Catch Basin

Inflow Area = 2.694 ac, 43.96% Impervious, Inflow Depth = 2.80" for 50-YR event
 Inflow = 7.69 cfs @ 12.13 hrs, Volume= 0.629 af
 Outflow = 7.69 cfs @ 12.13 hrs, Volume= 0.629 af, Atten= 0%, Lag= 0.0 min
 Primary = 7.69 cfs @ 12.13 hrs, Volume= 0.629 af
 Routed to Pond 2P : Sediment Forebay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 357.71' @ 12.14 hrs

Flood Elev= 357.65'

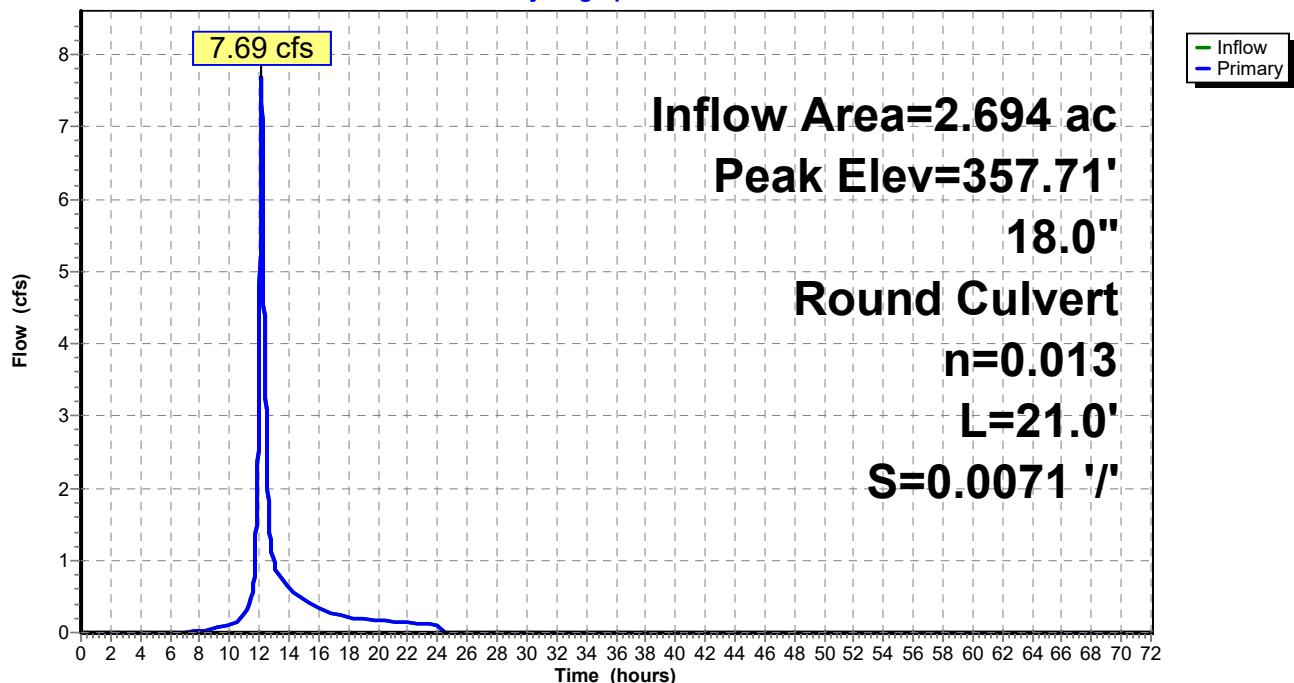
Device	Routing	Invert	Outlet Devices
#1	Primary	353.15'	18.0" Round Culvert L= 21.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 353.15' / 353.00' S= 0.0071 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=7.64 cfs @ 12.13 hrs HW=357.71' TW=356.42' (Dynamic Tailwater)

↑ **1=Culvert** (Inlet Controls 7.64 cfs @ 4.32 fps)

Pond 1.42P: Catch Basin

Hydrograph



Summary for Pond 1.43P: Infiltration Basin B

Inflow Area = 3.126 ac, 39.42% Impervious, Inflow Depth = 2.24" for 50-YR event
 Inflow = 7.90 cfs @ 12.17 hrs, Volume= 0.583 af
 Outflow = 0.62 cfs @ 14.22 hrs, Volume= 0.583 af, Atten= 92%, Lag= 123.4 min
 Discarded = 0.59 cfs @ 14.22 hrs, Volume= 0.581 af
 Primary = 0.03 cfs @ 14.22 hrs, Volume= 0.002 af
 Routed to Reach OP-1 : Observation Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 356.52' @ 14.22 hrs Surf.Area= 4,676 sf Storage= 10,421 cf
 Flood Elev= 357.00' Surf.Area= 5,210 sf Storage= 12,808 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 231.9 min (1,118.3 - 886.5)

Volume	Invert	Avail.Storage	Storage Description		
#1	353.00'	12,808 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
353.00	1,423	271.5	0	0	1,423
355.00	3,187	315.6	4,493	4,493	3,565
357.00	5,210	358.3	8,315	12,808	5,952

Device	Routing	Invert	Outlet Devices												
#1	Primary	356.50'	5.0' long + 3.0 ' SideZ x 7.0' breadth Broad-Crested Rectangular Weir												
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00												
			2.50 3.00 3.50 4.00 4.50 5.00 5.50												
			Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65												
			2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78												
#2	Discarded	353.00'	5.490 in/hr Exfiltration over Surface area												

Discarded OutFlow Max=0.59 cfs @ 14.22 hrs HW=356.52' (Free Discharge)

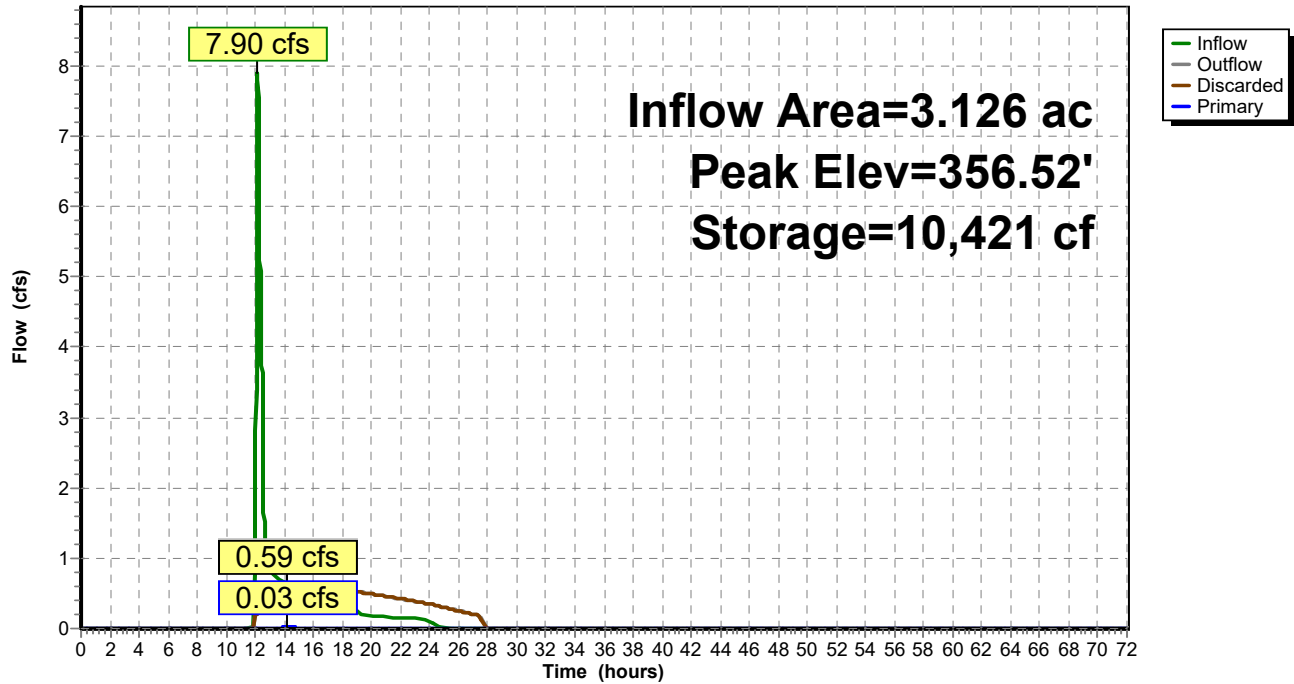
↑**2=Exfiltration** (Exfiltration Controls 0.59 cfs)

Primary OutFlow Max=0.03 cfs @ 14.22 hrs HW=356.52' TW=0.00' (Dynamic Tailwater)

↑**1=Broad-Crested Rectangular Weir** (Weir Controls 0.03 cfs @ 0.31 fps)

Pond 1.43P: Infiltration Basin B

Hydrograph



Summary for Pond 1.4P: Catch Basin

Inflow Area = 3.915 ac, 40.62% Impervious, Inflow Depth = 2.32" for 50-YR event
 Inflow = 7.94 cfs @ 12.14 hrs, Volume= 0.756 af
 Outflow = 7.94 cfs @ 12.14 hrs, Volume= 0.756 af, Atten= 0%, Lag= 0.0 min
 Primary = 7.94 cfs @ 12.14 hrs, Volume= 0.756 af
 Routed to Pond 1.3P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 362.92' @ 12.15 hrs

Flood Elev= 363.27'

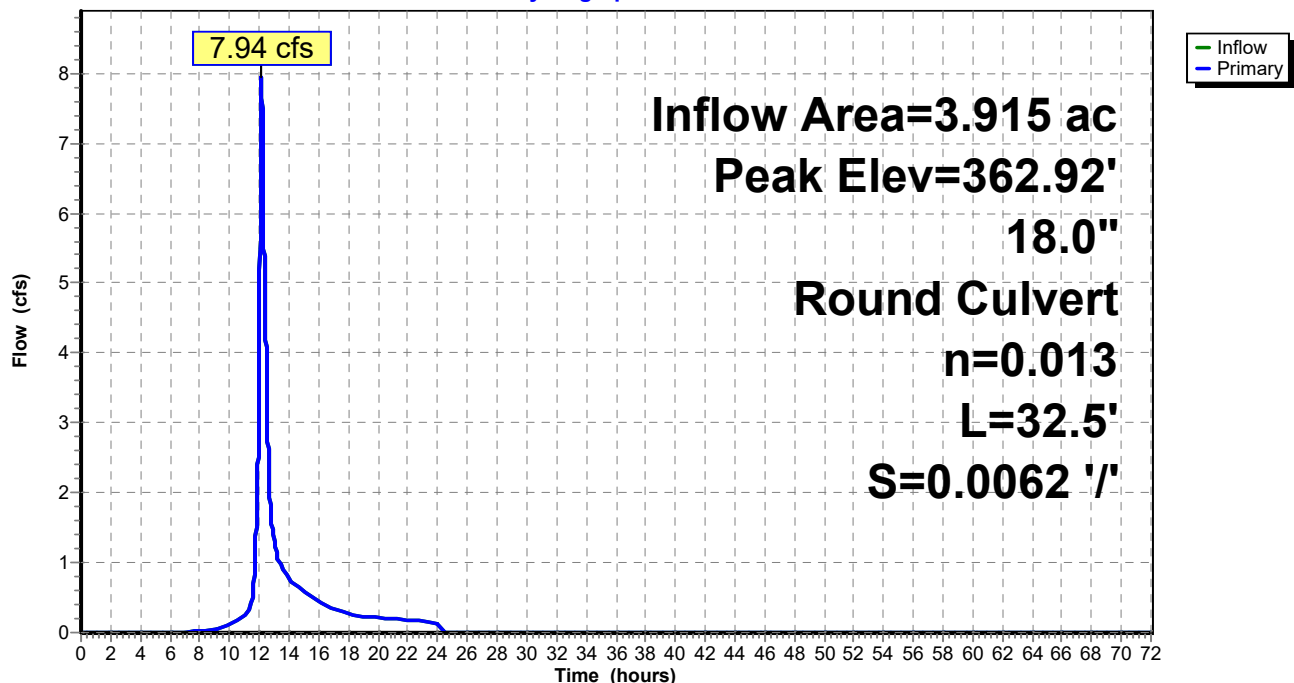
Device	Routing	Invert	Outlet Devices
#1	Primary	358.30'	18.0" Round Culvert L= 32.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 358.30' / 358.10' S= 0.0062 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=7.82 cfs @ 12.14 hrs HW=362.89' TW=361.53' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 7.82 cfs @ 4.43 fps)

Pond 1.4P: Catch Basin

Hydrograph



Summary for Pond 1.51P: Catch Basin

Inflow Area = 1.250 ac, 33.97% Impervious, Inflow Depth = 2.23" for 50-YR event
 Inflow = 1.91 cfs @ 12.12 hrs, Volume= 0.232 af
 Outflow = 1.91 cfs @ 12.12 hrs, Volume= 0.232 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.91 cfs @ 12.12 hrs, Volume= 0.232 af
 Routed to Pond 1.5P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 365.33' @ 12.14 hrs

Flood Elev= 368.68'

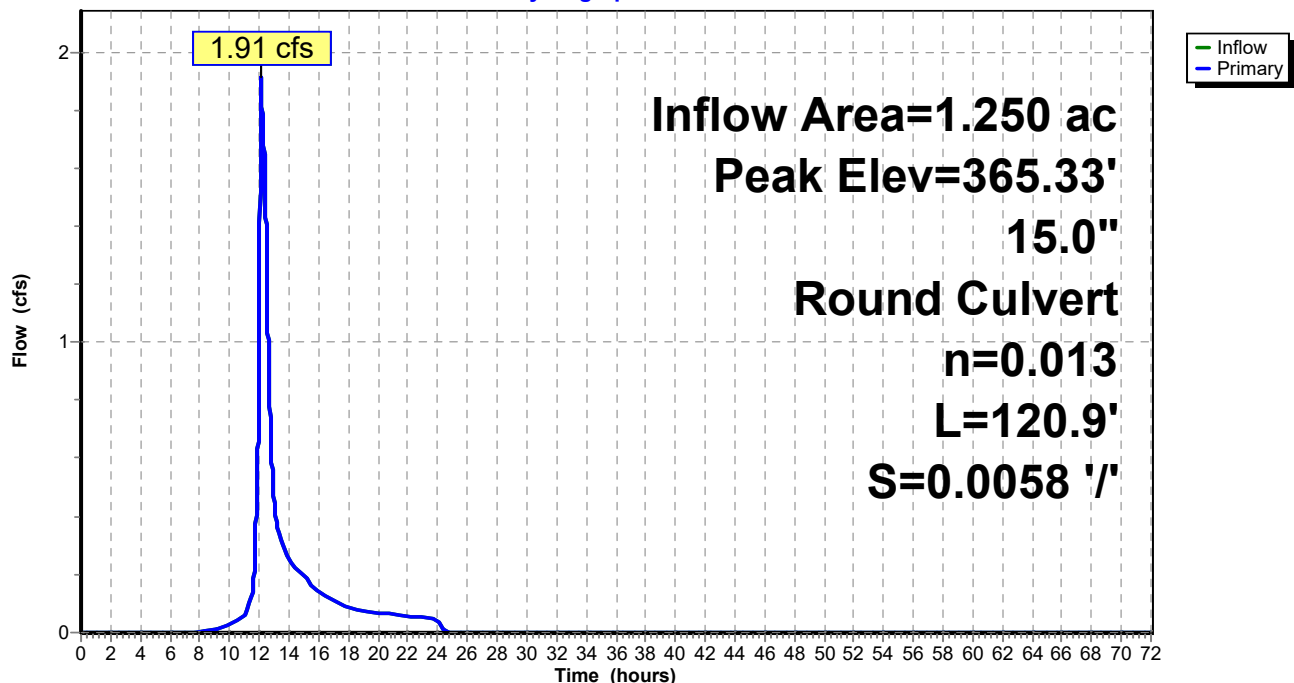
Device	Routing	Invert	Outlet Devices
#1	Primary	363.90'	15.0" Round Culvert L= 120.9' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 363.90' / 363.20' S= 0.0058 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.70 cfs @ 12.12 hrs HW=365.28' TW=365.13' (Dynamic Tailwater)

1=Culvert (Outlet Controls 1.70 cfs @ 1.56 fps)

Pond 1.51P: Catch Basin

Hydrograph



Summary for Pond 1.52P: Catch Basin

Inflow Area = 0.424 ac, 43.72% Impervious, Inflow Depth = 3.18" for 50-YR event
 Inflow = 1.49 cfs @ 12.10 hrs, Volume= 0.113 af
 Outflow = 1.49 cfs @ 12.10 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.49 cfs @ 12.10 hrs, Volume= 0.113 af
 Routed to Pond 1.51P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 366.18' @ 12.13 hrs

Flood Elev= 370.12'

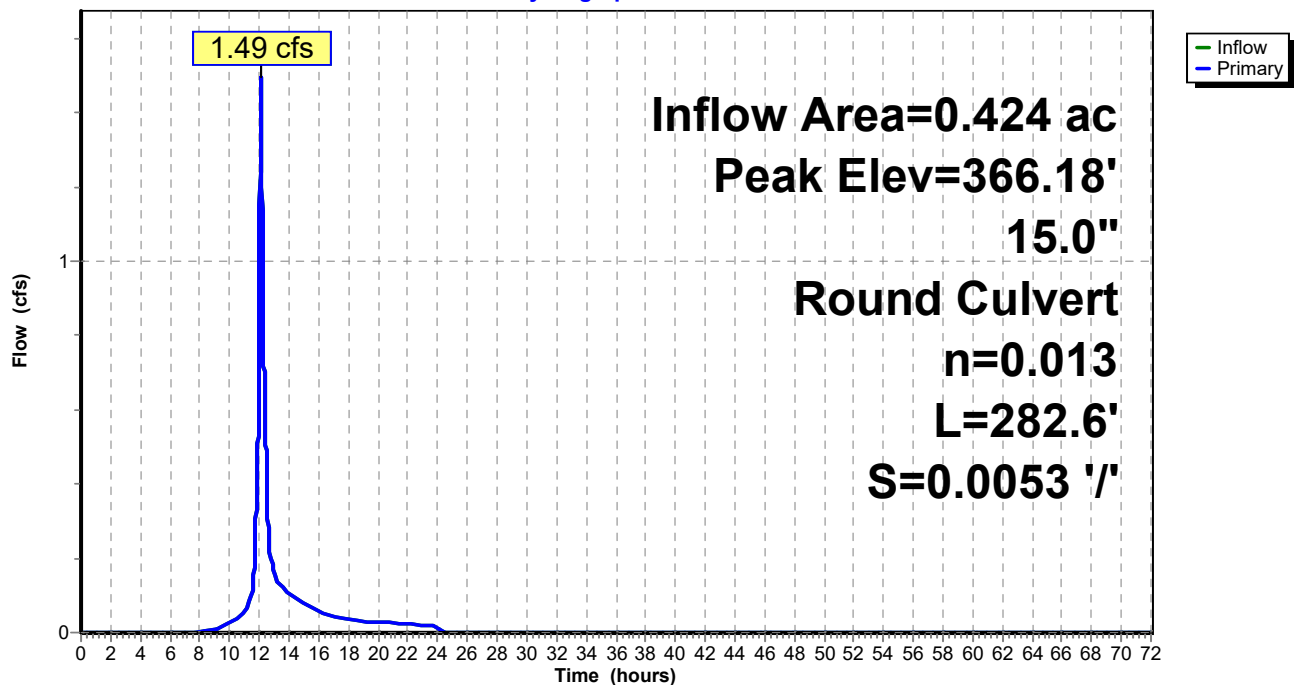
Device	Routing	Invert	Outlet Devices
#1	Primary	365.40'	15.0" Round Culvert L= 282.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 365.40' / 363.90' S= 0.0053 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.44 cfs @ 12.10 hrs HW=366.16' TW=365.19' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 1.44 cfs @ 2.64 fps)

Pond 1.52P: Catch Basin

Hydrograph



Summary for Pond 1.53P: Catch Basin

Inflow Area = 0.257 ac, 35.92% Impervious, Inflow Depth = 2.87" for 50-YR event
 Inflow = 0.80 cfs @ 12.12 hrs, Volume= 0.062 af
 Outflow = 0.80 cfs @ 12.12 hrs, Volume= 0.062 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.80 cfs @ 12.12 hrs, Volume= 0.062 af
 Routed to Pond 1.52P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 366.26' @ 12.13 hrs

Flood Elev= 370.17'

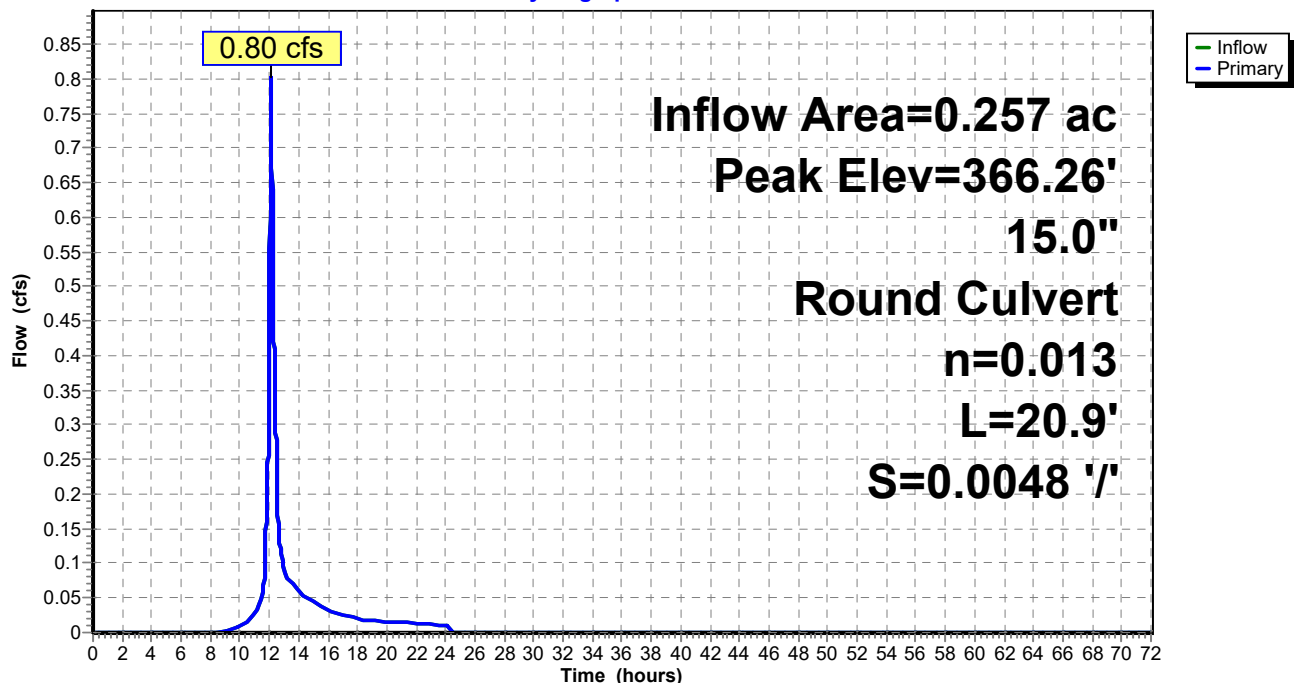
Device	Routing	Invert	Outlet Devices
#1	Primary	365.50'	15.0" Round Culvert L= 20.9' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 365.50' / 365.40' S= 0.0048 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.76 cfs @ 12.12 hrs HW=366.25' TW=366.18' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 0.76 cfs @ 1.42 fps)

Pond 1.53P: Catch Basin

Hydrograph



Summary for Pond 1.5P: Catch Basin

Inflow Area = 3.544 ac, 41.87% Impervious, Inflow Depth = 2.39" for 50-YR event
 Inflow = 7.38 cfs @ 12.14 hrs, Volume= 0.707 af
 Outflow = 7.38 cfs @ 12.14 hrs, Volume= 0.707 af, Atten= 0%, Lag= 0.0 min
 Primary = 7.38 cfs @ 12.14 hrs, Volume= 0.707 af
 Routed to Pond 1.4P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

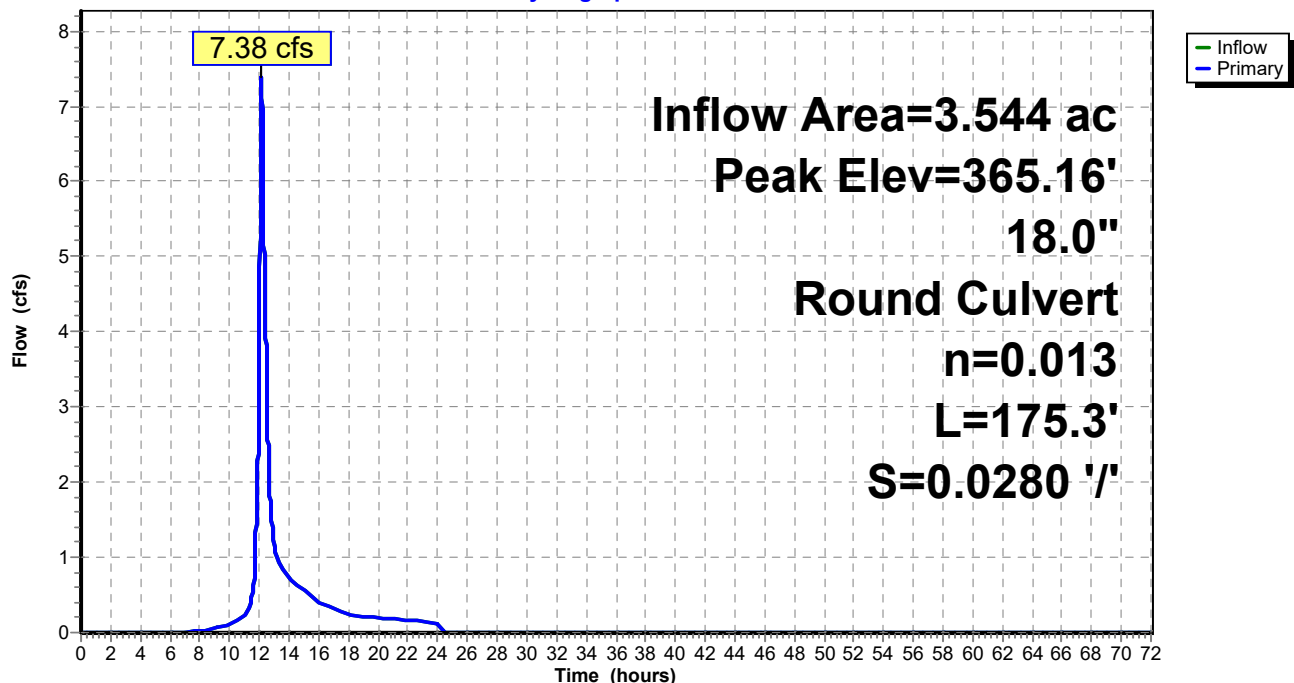
Peak Elev= 365.16' @ 12.14 hrs

Flood Elev= 367.78'

Device	Routing	Invert	Outlet Devices
#1	Primary	363.20'	18.0" Round Culvert L= 175.3' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 363.20' / 358.30' S= 0.0280 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=7.38 cfs @ 12.14 hrs HW=365.16' TW=362.89' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 7.38 cfs @ 4.17 fps)

Pond 1.5P: Catch Basin**Hydrograph**

Summary for Pond 1.6P: Catch Basin

Inflow Area = 0.874 ac, 66.59% Impervious, Inflow Depth = 3.57" for 50-YR event
 Inflow = 3.16 cfs @ 12.12 hrs, Volume= 0.260 af
 Outflow = 3.16 cfs @ 12.12 hrs, Volume= 0.260 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.16 cfs @ 12.12 hrs, Volume= 0.260 af
 Routed to Pond 1.5P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 365.37' @ 12.14 hrs

Flood Elev= 369.07'

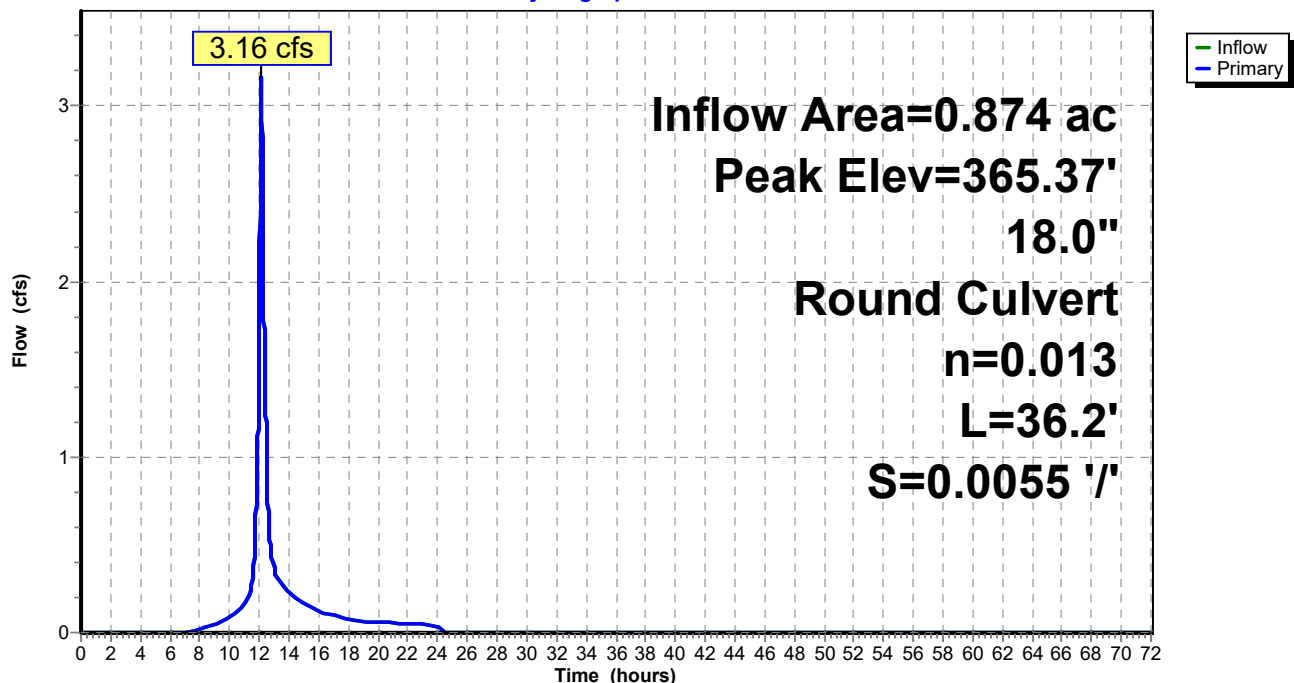
Device	Routing	Invert	Outlet Devices
#1	Primary	363.40'	18.0" Round Culvert L= 36.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 363.40' / 363.20' S= 0.0055 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.91 cfs @ 12.12 hrs HW=365.33' TW=365.14' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 2.91 cfs @ 1.65 fps)

Pond 1.6P: Catch Basin

Hydrograph



Summary for Pond 1.7P: Catch Basin

Inflow Area = 0.840 ac, 66.22% Impervious, Inflow Depth = 3.54" for 50-YR event
 Inflow = 3.02 cfs @ 12.13 hrs, Volume= 0.248 af
 Outflow = 3.02 cfs @ 12.13 hrs, Volume= 0.248 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.02 cfs @ 12.13 hrs, Volume= 0.248 af
 Routed to Pond 1.6P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

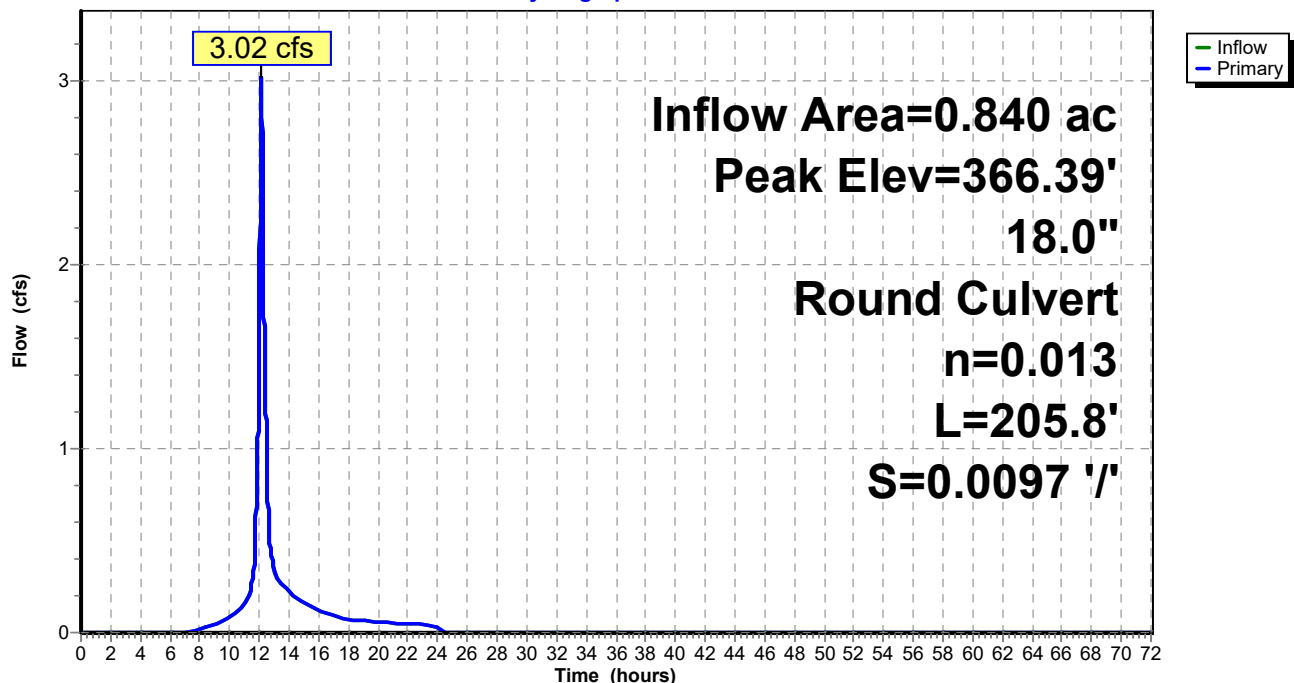
Peak Elev= 366.39' @ 12.14 hrs

Flood Elev= 372.97'

Device	Routing	Invert	Outlet Devices
#1	Primary	365.40'	18.0" Round Culvert L= 205.8' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 365.40' / 363.40' S= 0.0097 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.95 cfs @ 12.13 hrs HW=366.38' TW=365.34' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 2.95 cfs @ 3.42 fps)

Pond 1.7P: Catch Basin**Hydrograph**

Summary for Pond 1.8P: Catch Basin

Inflow Area = 0.717 ac, 71.65% Impervious, Inflow Depth = 3.89" for 50-YR event
 Inflow = 2.83 cfs @ 12.13 hrs, Volume= 0.233 af
 Outflow = 2.83 cfs @ 12.13 hrs, Volume= 0.233 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.83 cfs @ 12.13 hrs, Volume= 0.233 af
 Routed to Pond 1.7P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

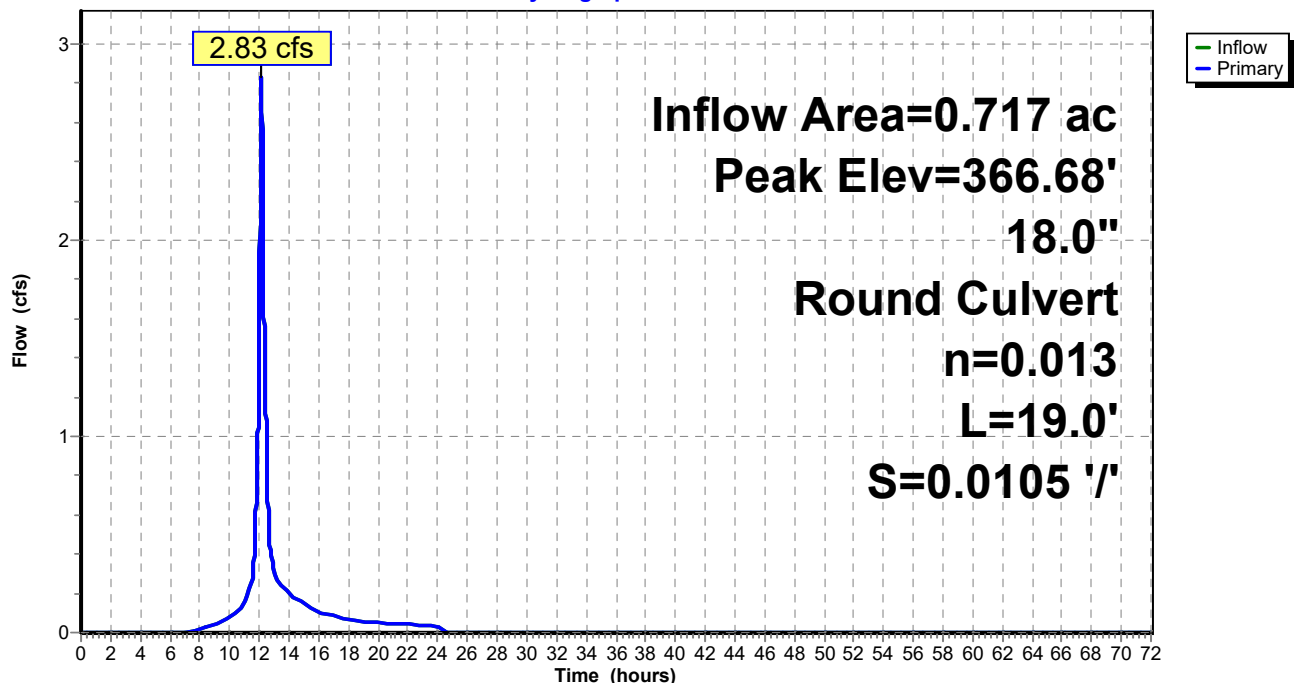
Peak Elev= 366.68' @ 12.14 hrs

Flood Elev= 372.95'

Device	Routing	Invert	Outlet Devices
#1	Primary	365.60'	18.0" Round Culvert L= 19.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 365.60' / 365.40' S= 0.0105 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.76 cfs @ 12.13 hrs HW=366.67' TW=366.38' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 2.76 cfs @ 2.04 fps)

Pond 1.8P: Catch Basin**Hydrograph**

Summary for Pond 2P: Sediment Forebay

Inflow Area = 3.126 ac, 39.42% Impervious, Inflow Depth = 2.61" for 50-YR event
 Inflow = 8.27 cfs @ 12.13 hrs, Volume= 0.680 af
 Outflow = 7.90 cfs @ 12.17 hrs, Volume= 0.583 af, Atten= 5%, Lag= 2.0 min
 Primary = 7.90 cfs @ 12.17 hrs, Volume= 0.583 af
 Routed to Pond 1.43P : Infiltration Basin B

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 356.52' @ 14.23 hrs Surf.Area= 3,403 sf Storage= 5,843 cf
 Flood Elev= 357.00' Surf.Area= 3,971 sf Storage= 7,622 cf

Plug-Flow detention time= 111.2 min calculated for 0.583 af (86% of inflow)
 Center-of-Mass det. time= 47.2 min (886.5 - 839.3)

Volume	Invert	Avail.Storage	Storage Description
#1	353.00'	7,622 cf	Custom Stage Data (Irregular) Listed below (Recalc)

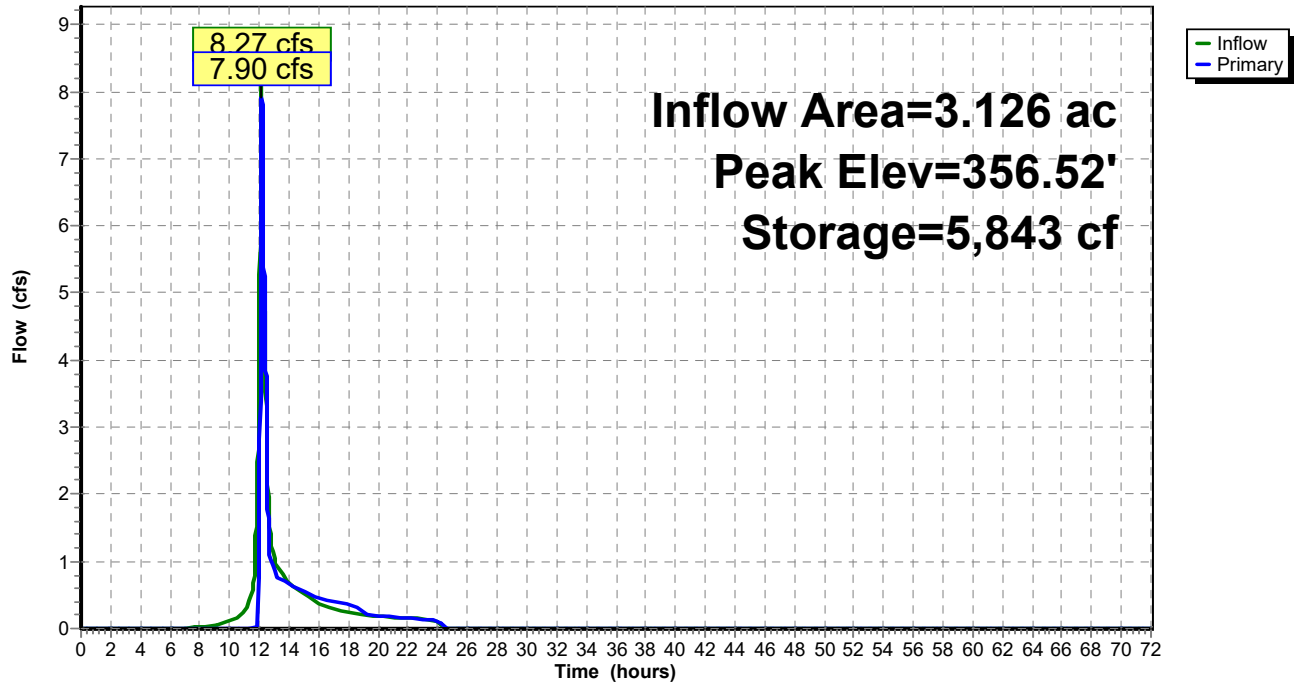
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
353.00	234	243.9	0	0	234
355.00	1,905	307.7	1,871	1,871	3,088
357.00	3,971	391.4	5,751	7,622	7,797

Device	Routing	Invert	Outlet Devices
#1	Primary	356.00'	10.0' long + 3.0 ' SideZ x 7.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=7.89 cfs @ 12.17 hrs HW=356.43' TW=354.43' (Dynamic Tailwater)
 ↑1=Broad-Crested Rectangular Weir (Weir Controls 7.89 cfs @ 1.63 fps)

Pond 2P: Sediment Forebay

Hydrograph



Summary for Pond 3.1P: Catch Basin

Inflow Area = 3.346 ac, 99.48% Impervious, Inflow Depth = 5.73" for 50-YR event
 Inflow = 19.58 cfs @ 12.08 hrs, Volume= 1.598 af
 Outflow = 19.58 cfs @ 12.08 hrs, Volume= 1.598 af, Atten= 0%, Lag= 0.0 min
 Primary = 19.58 cfs @ 12.08 hrs, Volume= 1.598 af
 Routed to Pond 7P : Sediment Forebay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

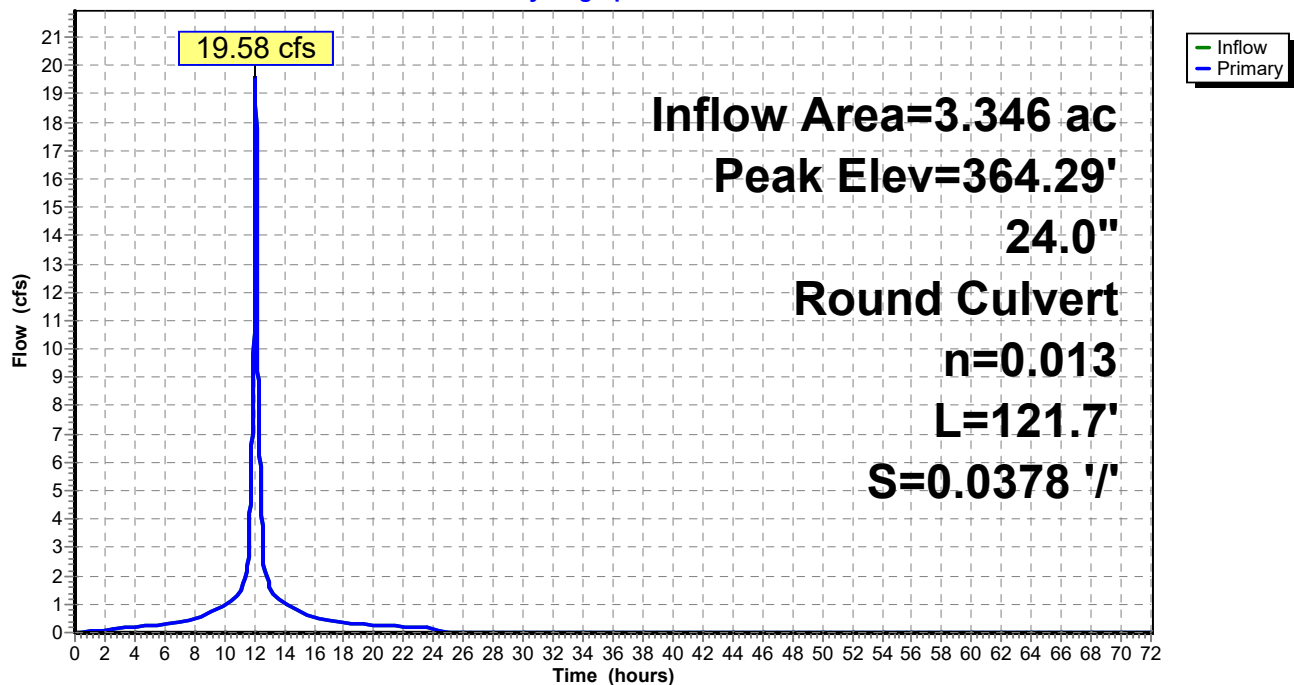
Peak Elev= 364.29' @ 12.08 hrs

Flood Elev= 365.61'

Device	Routing	Invert	Outlet Devices
#1	Primary	360.60'	24.0" Round Culvert L= 121.7' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 360.60' / 356.00' S= 0.0378 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=19.54 cfs @ 12.08 hrs HW=364.28' TW=355.74' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 19.54 cfs @ 6.22 fps)

Pond 3.1P: Catch Basin**Hydrograph**

Summary for Pond 3.21P: Catch Basin

Inflow Area = 0.703 ac, 36.87% Impervious, Inflow Depth = 1.66" for 50-YR event
 Inflow = 1.03 cfs @ 12.17 hrs, Volume= 0.097 af
 Outflow = 1.03 cfs @ 12.17 hrs, Volume= 0.097 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.03 cfs @ 12.17 hrs, Volume= 0.097 af
 Routed to Pond 3.2P : Catch Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 359.71' @ 12.14 hrs

Flood Elev= 365.24'

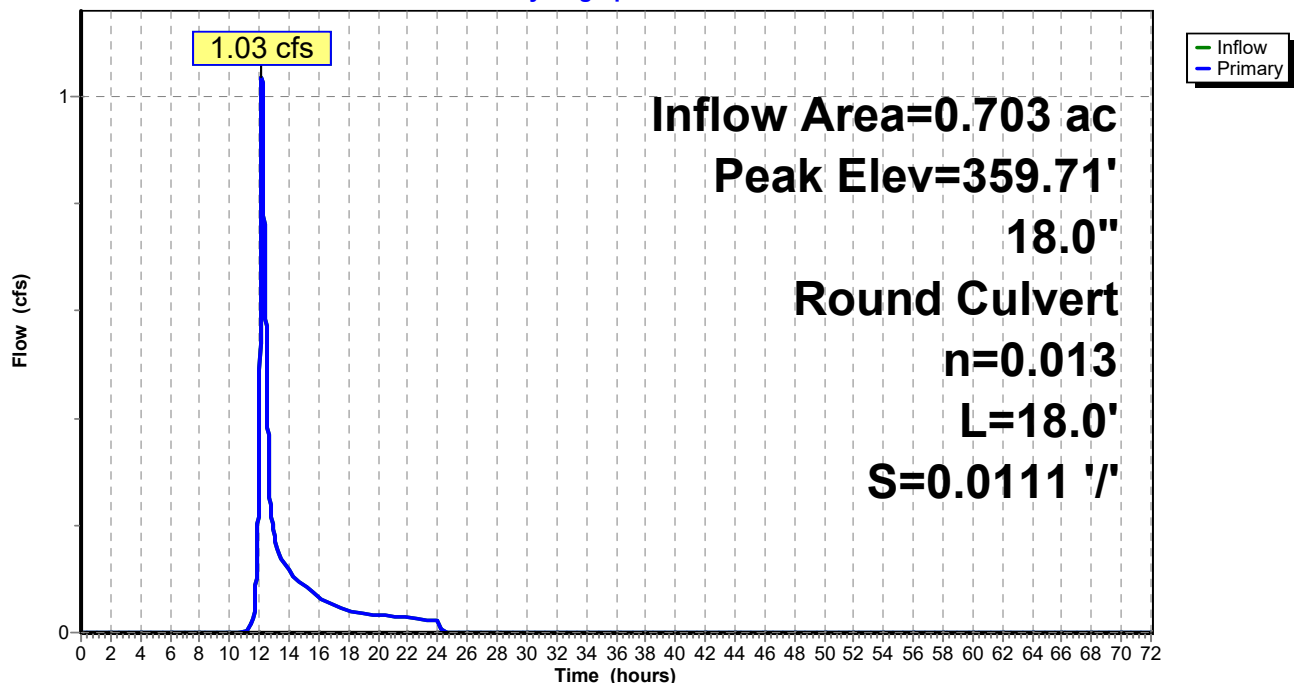
Device	Routing	Invert	Outlet Devices
#1	Primary	359.00'	18.0" Round Culvert L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 359.00' / 358.80' S= 0.0111 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.08 cfs @ 12.17 hrs HW=359.69' TW=359.55' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 1.08 cfs @ 1.99 fps)

Pond 3.21P: Catch Basin

Hydrograph



Summary for Pond 3.2P: Catch Basin

Inflow Area = 0.973 ac, 53.30% Impervious, Inflow Depth = 2.73" for 50-YR event
 Inflow = 2.36 cfs @ 12.11 hrs, Volume= 0.221 af
 Outflow = 2.36 cfs @ 12.11 hrs, Volume= 0.221 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.36 cfs @ 12.11 hrs, Volume= 0.221 af
 Routed to Pond 7P : Sediment Forebay

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 359.61' @ 12.11 hrs

Flood Elev= 365.24'

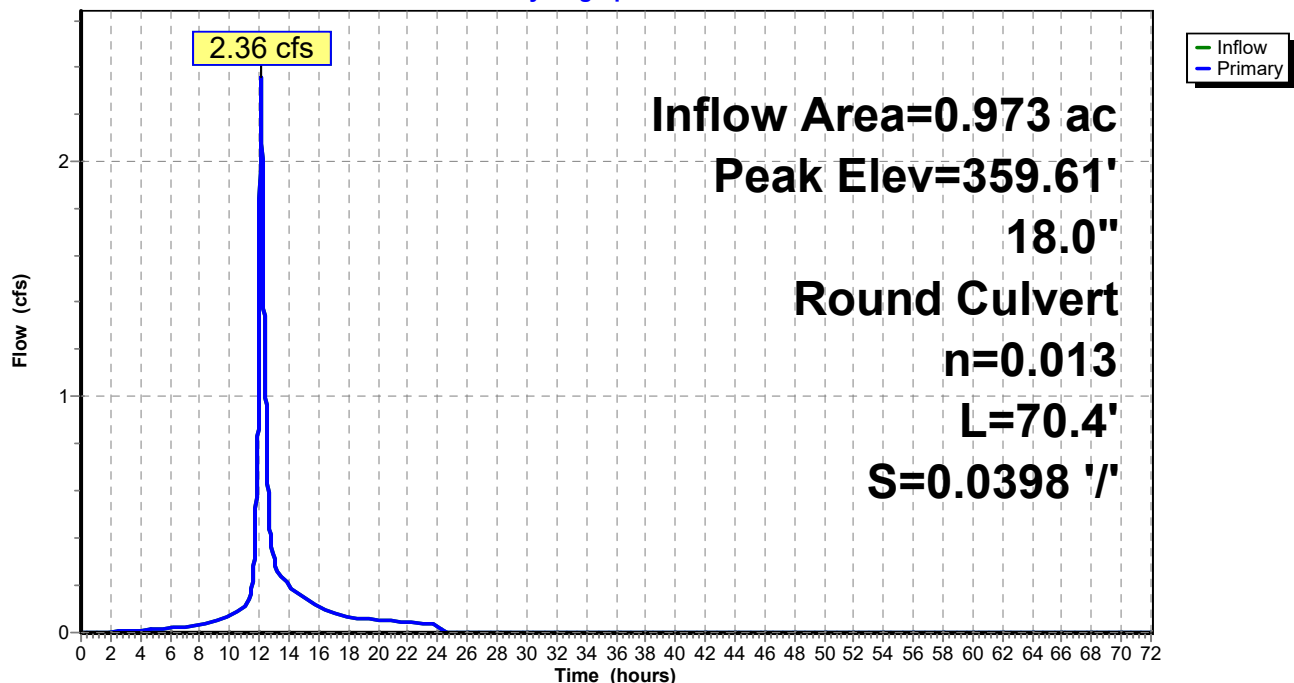
Device	Routing	Invert	Outlet Devices
#1	Primary	358.80'	18.0" Round Culvert L= 70.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 358.80' / 356.00' S= 0.0398 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.35 cfs @ 12.11 hrs HW=359.61' TW=355.76' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 2.35 cfs @ 2.42 fps)

Pond 3.2P: Catch Basin

Hydrograph



Summary for Pond 3P: Infiltration Basin C

Inflow Area = 4.702 ac, 81.82% Impervious, Inflow Depth = 3.21" for 50-YR event
 Inflow = 20.86 cfs @ 12.11 hrs, Volume= 1.256 af
 Outflow = 2.04 cfs @ 12.80 hrs, Volume= 1.256 af, Atten= 90%, Lag= 41.9 min
 Discarded = 1.20 cfs @ 12.80 hrs, Volume= 1.201 af
 Primary = 0.84 cfs @ 12.80 hrs, Volume= 0.055 af
 Routed to Reach OP-1 : Observation Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 355.61' @ 12.80 hrs Surf.Area= 10,415 sf Storage= 29,758 cf
 Flood Elev= 356.00' Surf.Area= 10,929 sf Storage= 33,970 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 240.0 min (992.3 - 752.3)

Volume	Invert	Avail.Storage	Storage Description
#1	352.00'	33,970 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
352.00	6,249	342.9	0	0	6,249
354.00	8,450	390.6	14,644	14,644	9,128
356.00	10,929	435.4	19,326	33,970	12,187

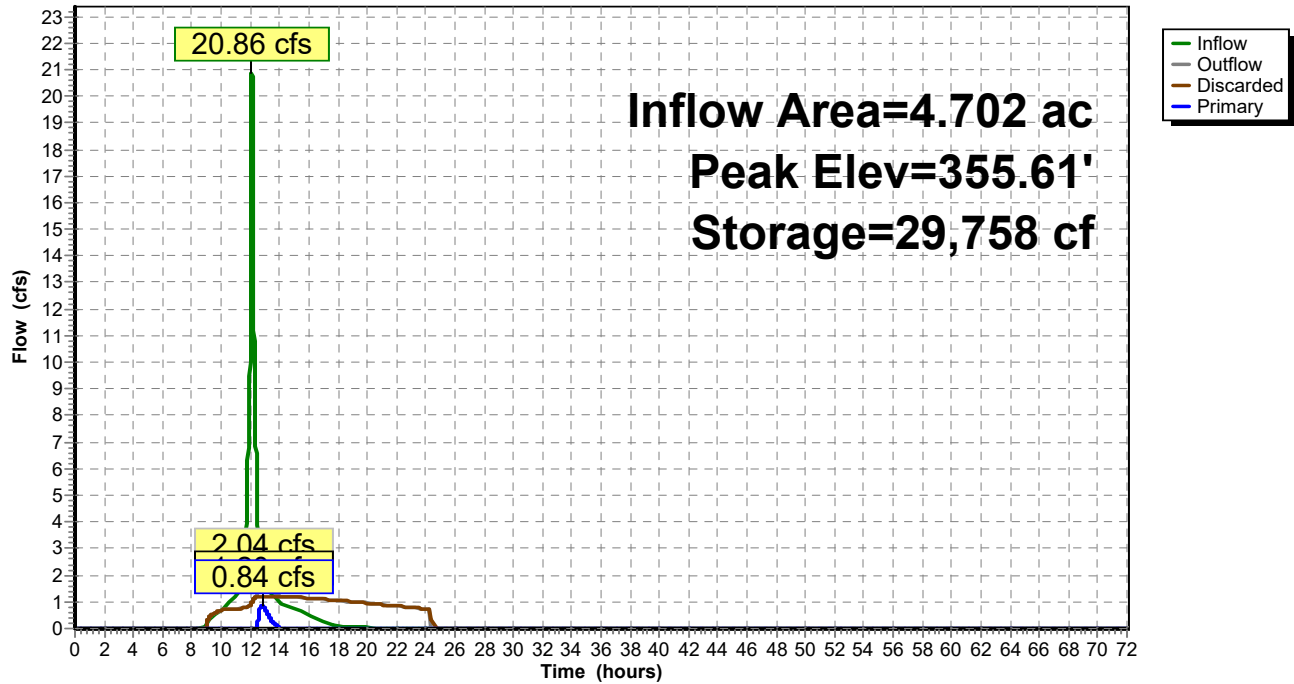
Device	Routing	Invert	Outlet Devices
#1	Discarded	352.00'	4.980 in/hr Exfiltration over Surface area
#2	Primary	355.50'	10.0' long + 3.0 ' SideZ x 7.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Discarded OutFlow Max=1.20 cfs @ 12.80 hrs HW=355.61' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 1.20 cfs)

Primary OutFlow Max=0.84 cfs @ 12.80 hrs HW=355.61' TW=0.00' (Dynamic Tailwater)

↑**2=Broad-Crested Rectangular Weir** (Weir Controls 0.84 cfs @ 0.77 fps)

Pond 3P: Infiltration Basin C**Hydrograph**

Summary for Pond 7P: Sediment Forebay

Inflow Area = 4.702 ac, 81.82% Impervious, Inflow Depth = 4.68" for 50-YR event
 Inflow = 21.88 cfs @ 12.09 hrs, Volume= 1.833 af
 Outflow = 21.25 cfs @ 12.11 hrs, Volume= 1.833 af, Atten= 3%, Lag= 1.2 min
 Discarded = 0.39 cfs @ 12.11 hrs, Volume= 0.577 af
 Primary = 20.86 cfs @ 12.11 hrs, Volume= 1.256 af
 Routed to Pond 3P : Infiltration Basin C

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 355.76' @ 12.11 hrs Surf.Area= 3,352 sf Storage= 6,225 cf
 Flood Elev= 356.00' Surf.Area= 3,607 sf Storage= 7,073 cf

Plug-Flow detention time= 63.8 min calculated for 1.833 af (100% of inflow)
 Center-of-Mass det. time= 63.8 min (818.5 - 754.7)

Volume	Invert	Avail.Storage	Storage Description		
#1	352.00'	7,073 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
352.00	233	237.5	0	0	233
354.00	1,791	281.3	1,780	1,780	2,114
356.00	3,607	323.9	5,293	7,073	4,253

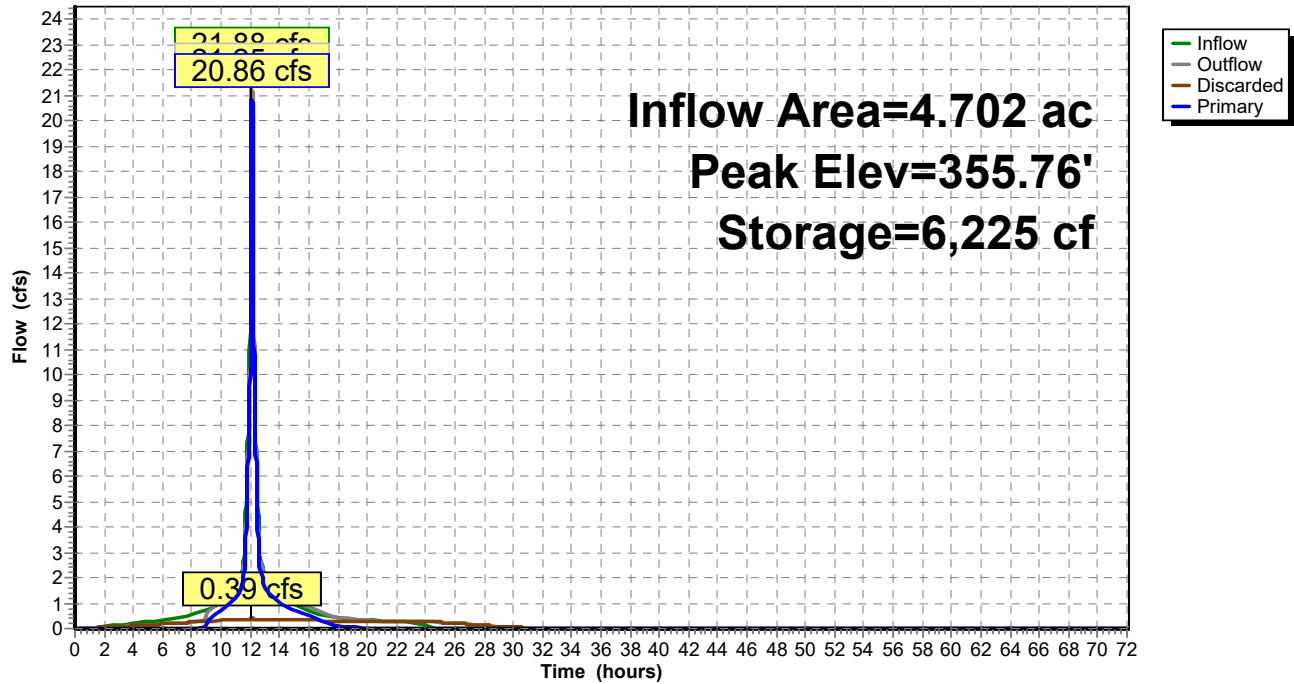
Device	Routing	Invert	Outlet Devices												
#1	Primary	355.00'	10.0' long + 3.0 ' SideZ x 7.0' breadth Broad-Crested Rectangular Weir												
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00												
			2.50 3.00 3.50 4.00 4.50 5.00 5.50												
			Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65												
			2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78												
#2	Discarded	352.00'	4.980 in/hr Exfiltration over Surface area												

Discarded OutFlow Max=0.39 cfs @ 12.11 hrs HW=355.76' (Free Discharge)

↑**2=Exfiltration** (Exfiltration Controls 0.39 cfs)

Primary OutFlow Max=20.83 cfs @ 12.11 hrs HW=355.76' TW=354.13' (Dynamic Tailwater)

↑**1=Broad-Crested Rectangular Weir** (Weir Controls 20.83 cfs @ 2.25 fps)

Pond 7P: Sediment Forebay**Hydrograph**

Section 3.0: Drainage Area Plans

