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2-25-19

Dublin Gateway Preliminary Development Plan
Stormwater Management Plan

Schottenstein Real Estate Group

May 19, 2017
Revised July 18, 2017
Revised February 25, 2019

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2017-0464

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1.0 INTRODUCTION

The following report summarizes the preliminary stormwater report for the Hyland-Croy Gateway East single family attached/detached units and adult congregate living facility development. The project is located along the east side of Hyland-Croy just north of Post Road. The site is mainly tributary to Tri-County Ditch, which is part of the South Fork Indian Run watershed number 2350. A small portion at the very north tip of the development is tributary to North Fork Indian Run watershed number 8360. At the very southern end of the development a small area is within South Fork Indian Run watershed number 2370, which is directly tributary to South Fork Indian Run.

2.0 PREDEVELOPED CONDITIONS

The site has been primarily used as agricultural land with three old homesteads. The soil type is Brookstone silty clay loam and Crosby silt loam. Both of these soils are hydrologic C/D soils. We will assume they are in a drained condition and use Type C soil as the predeveloped condition RCN = 78. Exhibit 1 shows the predeveloped tributary boundaries for the City of Dublin watershed overlain by the anticipated onsite tributary boundaries. We do not anticipate draining to North Fork Indian Run, therefore an allowable release rate for Subarea 8360 is not being calculated. Table 1 lists the predeveloped release rates to South Fork Indian Run watersheds 2350 and 2370.

Table 1
Predeveloped Release Rates

Allowable Release Rates					South Fork Indian Run		
Sub-Basin	1-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
2350	0.2	0.2	0.3	0.3	0.4	0.6	0.8
2370	0.2	0.2	0.3	0.5	0.7	1.2	1.7

Sub-Basin	Area (ac)	1-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
2350	28.94	5.79	5.79	8.68	8.68	11.58	17.36	23.15
2370	1.05	0.21	0.21	0.32	0.53	0.74	1.26	1.79

3.0 POST-DEVELOPED CONDITIONS

The site is proposing (3) stormwater management areas (SWMA) as shown on Exhibit 2. There are no offsite areas tributary to the SWMA. The Hyland-Croy road frontage will be intercepted by the existing ditch and/or supplemental grass ditch and convey the runoff directly to Tri-County Ditch or Post Road. Table 2 lists the subarea characteristics for each area. The proposed plan is for each SWMA to provide water quality and detention for its own area independent of the other facilities so that when the site is built in phases, each SWMA can provide compliance for its area on its own. The critical storm calculation is provided on Table 3 for each area. Table 4 calculates the allowable release rate for each area based on the critical storm and City of Dublin Master Plan release rates.

Table 2
Post-Developed Areas

Subarea Identifier	Post Area (acres)	Land Usage	% Impervious	Runoff Curve Number	Runoff Volume (ac-ft)	Time of Concentration (min)	Tributary to:
Subarea "B" North	11.54	Single-family residential	65	90	1.218	10	North SWMA
Subarea "B" South	15.73	Single-family residential	65	90	1.660	10	South SWMA
Subarea "A"	9.33	Adult Congregate Living Facility	85	94	1.232	5	Subarea A SWMA
Total	**36.48**						

Table 3
Post-Developed Areas

Subarea Identifier	Pre Area (acres)	Pre RCN	Pre Runoff Volume (ac-ft)	Post Runoff Volume (ac-ft)	% Increase	Critical Storm
Subarea "B" North	6.25	76	0.271	1.218	349%	50-year
Subarea "B" South	15.73	78	0.734	1.660	126%	25-year
Subarea "A"	9.33	77	0.435	1.232	183%	25-year
Total	**36.48**					

Table 4 - Allowable and Proposed Release Rates

	Subarea "B" North SWMA			Subarea "B" South SWMA		
Storm	Allowable (cfs/acre)	Allowable (cfs)	Proposed (cfs)	Allowable (cfs/acre)	Allowable (cfs)	Proposed (cfs)
1	0.2	1.25	0.56	0.2	6.29	0.66
2	0.2	1.25	0.66	0.2	6.29	1.43
5	0.3	1.25	0.78	0.3	6.29	3.13
10	0.3	1.25	0.87	0.3	6.29	4.47
25	0.4	1.25	0.98	0.4	6.29	5.84
50	0.6	1.25	1.06	0.6	9.44	7.01
100	0.8	5	1.95	0.8	12.58	11.54

Subarea "A" SWMA		
Allowable (cfs/acre)	Allowable (cfs)	Proposed (cfs)
0.2	1.87	0.49
0.2	1.87	0.84
0.3	1.87	1.25
0.3	1.87	1.49
0.4	1.87	1.76
0.6	7.46	2.65
0.8	7.46	5.36

The volumes needed in each SWMA were designed to provide water quality using the new EPA rainfall depth and runoff coefficient and peak flow rate control using the critical storm and Dublin Master Plan release rates are shown on Table 5. The volumes used are based on the preliminary grading of each SWMA. The resulting freeboard is shown from 100-year storm elevation to top of bank. For the north basin the freeboard is 0.45-ft and 1.0-ft for the south basin of Subarea "B". Water quality calculations are provided at the end of the report.

Table 5
Volume Summary for 100-year Storm

BMP	Volume Provided (cu-ft)	Volume Used (ac-ft)	100-year Elevation (ft)	Freeboard (ft)
Subarea "B" North SWMA	157,610	135,264	927.55	0.45
Subarea "B" South SWMA	213,101	147,532	927.00	1.00
Subarea "A" SWMA	159,374	103,312	932.76	1.24

4.0 STREAM CORRIDOR PROTECTION ZONE

The stream corridor protection zone for Tri-County ditch was determined by plotting the floodway that was produced with the original HEC-2 model for Tri-County ditch but wasn't published by FEMA. A 20-ft offset was then applied to the old floodway to get the SCPZ limits as shown on the development plan.

5.0 WATER QUALITY

Water quality calculations are provided with this report and are consistent with the new Ohio EPA standards.

Map Scale: 1:7,280 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

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 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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: Union County, Ohio
Survey Area Data: Version 15, Sep 23, 2016

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

Date(s) aerial images were photographed: Feb 27, 2012—Aug 27, 2014

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

Hydrologic Soil Group— Summary by Map Unit — Union County, Ohio (OH159)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
Bs	Brookston silty clay loam, fine texture, 0 to 2 percent slopes	C/D	27.7	35.4%
CrA	Crosby silt loam, Southern Ohio Till Plain, 0 to 2 percent slopes	C/D	50.7	64.6%
Totals for Area of Interest			**78.4**	**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:

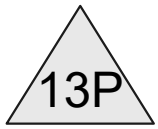
Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

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.



Subarea B north WQ

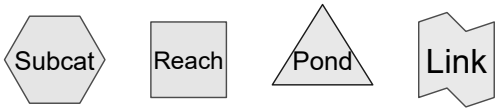
WQv =
0.64*0.9*11.54/12 =
0.55 ac-ft

Subarea B middle WQ

WQv = 0.64*0.9*15.73 /
12 = 0.76 ac-ft

Subarea A WQ

WQv = 0.77*0.9*9.33
/12 = 0.54 ac-ft



Routing Diagram for 20170646 prelim 2019-02-25
Prepared by Symanetc, Printed 2/25/2019

Summary for Pond 13P: Subarea B north WQ

Inflow	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Outflow	=	0.45 cfs @	0.00 hrs, Volume=	0.545 af, Atten= 0%, Lag= 0.0 min
Primary	=	0.45 cfs @	0.00 hrs, Volume=	0.545 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Starting Elev= 925.03' Surf.Area= 39,623 sf Storage= 24,277 cf
Peak Elev= 925.03' @ 0.00 hrs Surf.Area= 39,623 sf Storage= 24,277 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

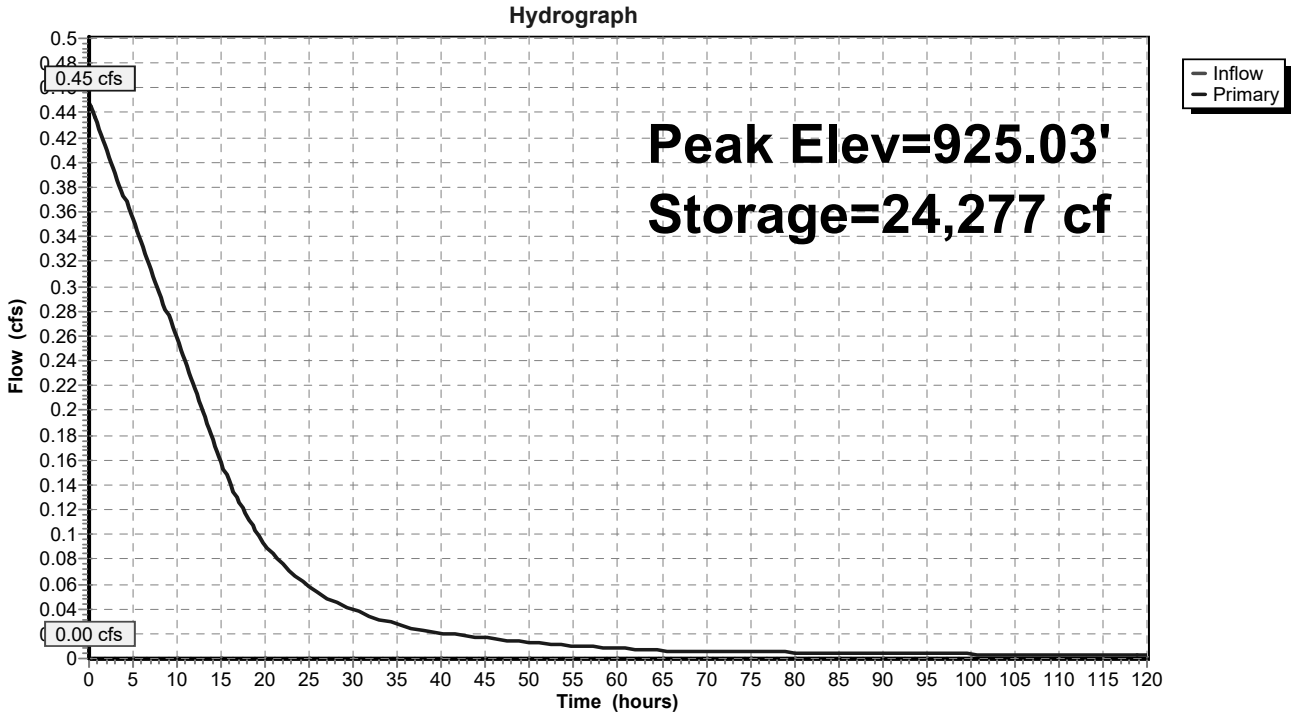
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	156,686 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	37,449	0	0
925.00	39,518	23,090	23,090
926.00	43,009	41,264	64,354
927.00	46,603	44,806	109,160
928.00	48,450	47,527	156,686

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**3.5" Vert. Orifice/Grate X 2.00** C= 0.600

Primary OutFlow Max=0.45 cfs @ 0.00 hrs HW=925.03' (Free Discharge)
↑**1=Orifice/Grate** (Orifice Controls 0.45 cfs @ 3.35 fps)

Pond 13P: Subarea B north WQ



Summary for Pond 14P: Subarea B middle WQ

Inflow	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Outflow	=	0.29 cfs @	0.00 hrs, Volume=	0.706 af, Atten= 0%, Lag= 0.0 min
Primary	=	0.29 cfs @	0.00 hrs, Volume=	0.706 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Starting Elev= 925.04' Surf.Area= 53,568 sf Storage= 33,317 cf
Peak Elev= 925.04' @ 0.00 hrs Surf.Area= 53,568 sf Storage= 33,317 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

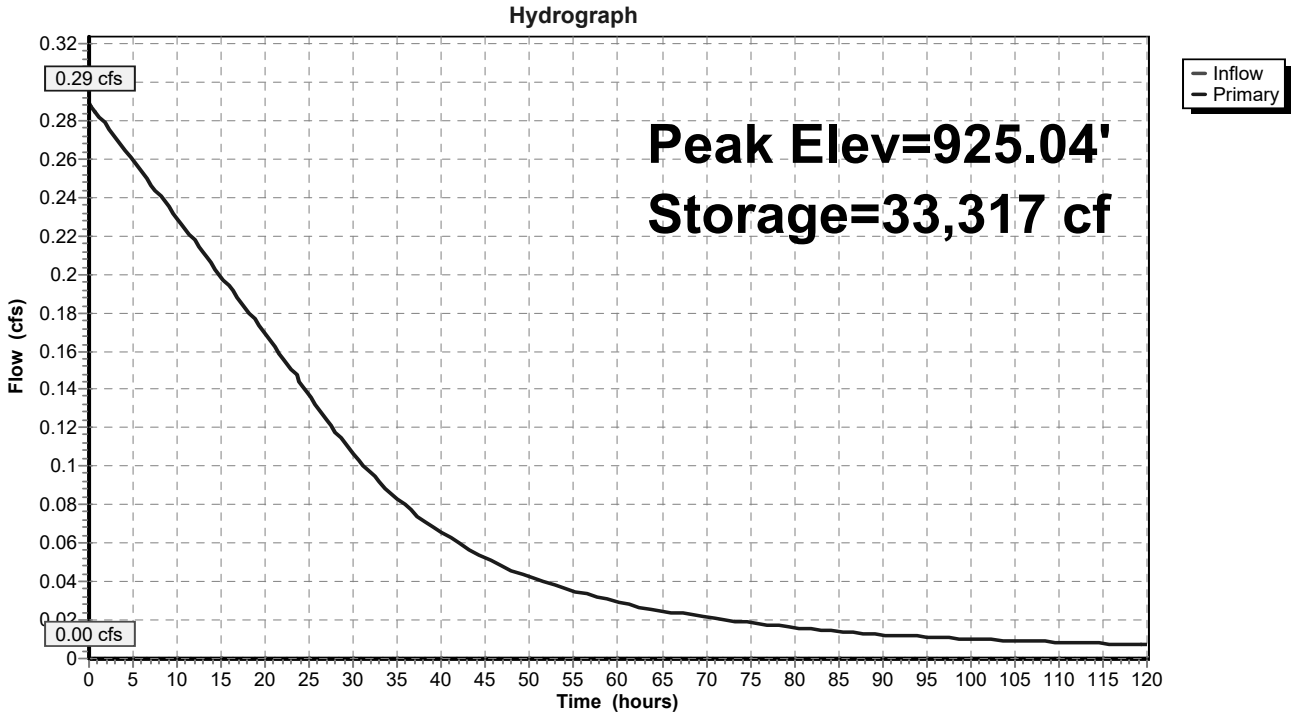
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	213,101 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	50,550	0	0
925.00	53,377	31,178	31,178
926.00	58,164	55,771	86,949
927.00	63,051	60,608	147,556
928.00	68,038	65,545	213,101

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**4.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.29 cfs @ 0.00 hrs HW=925.04' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.29 cfs @ 3.31 fps)

Pond 14P: Subarea B middle WQ



Summary for Pond 17P: Subarea A WQ

Inflow	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Outflow	=	0.31 cfs @	0.00 hrs, Volume=	0.524 af, Atten= 0%, Lag= 0.0 min
Primary	=	0.31 cfs @	0.00 hrs, Volume=	0.524 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Starting Elev= 930.71' Surf.Area= 34,863 sf Storage= 23,814 cf
Peak Elev= 930.71' @ 0.00 hrs Surf.Area= 34,863 sf Storage= 23,814 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

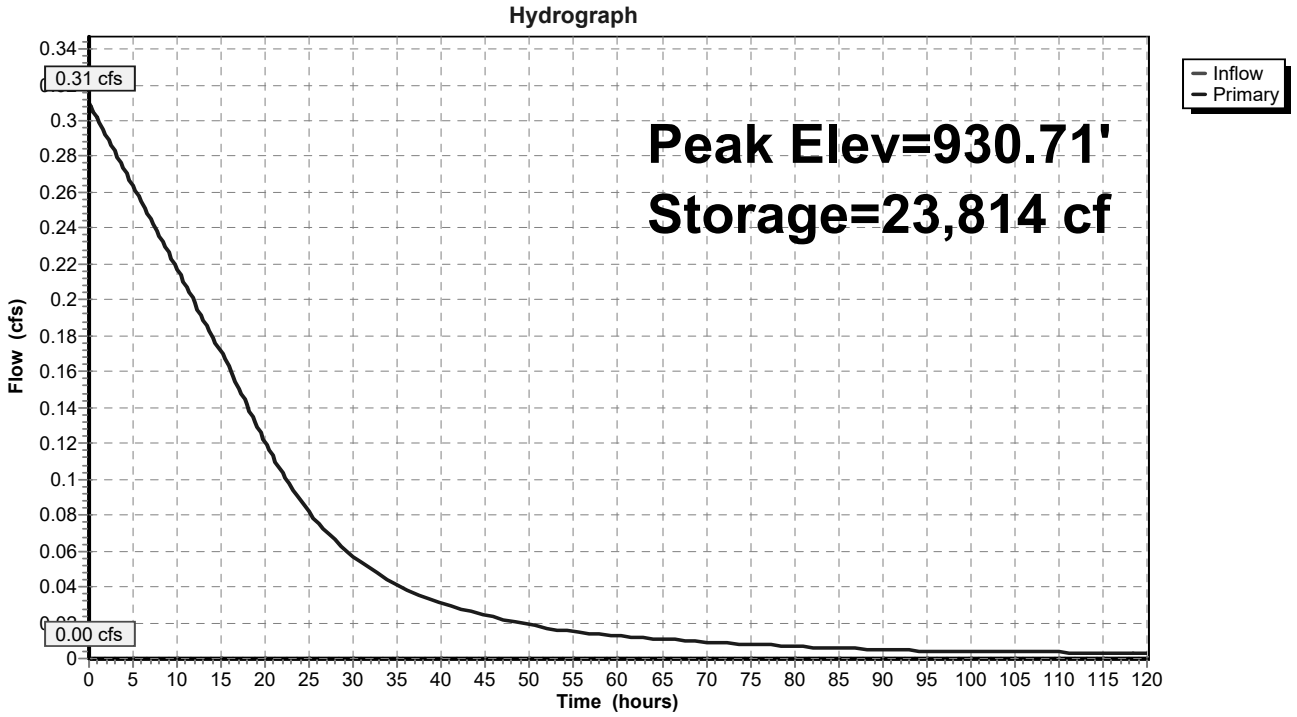
Volume	Invert	Avail.Storage	Storage Description
#1	930.00'	159,374 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

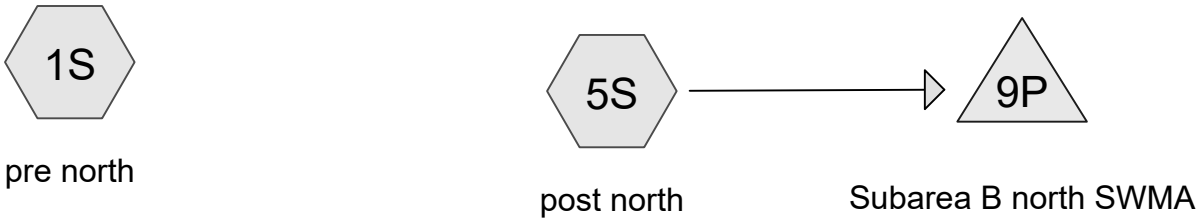
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
930.00	32,218	0	0
931.00	35,943	34,081	34,081
932.00	39,768	37,856	71,936
933.00	43,694	41,731	113,667
934.00	47,719	45,707	159,374

Device	Routing	Invert	Outlet Devices
#1	Primary	930.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	931.00'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	932.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

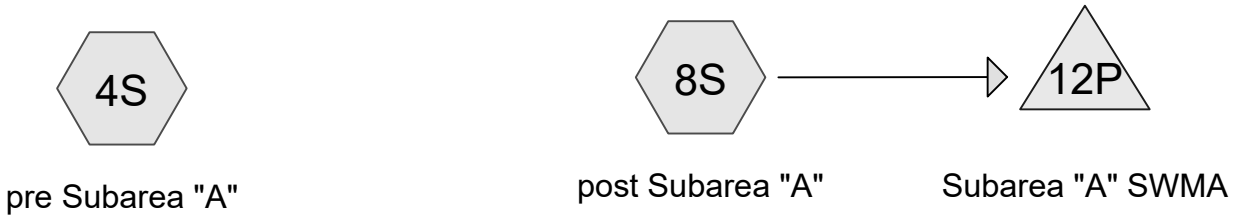
Primary OutFlow Max=0.31 cfs @ 0.00 hrs HW=930.71' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.31 cfs @ 3.55 fps)
- **2=Orifice/Grate** (Controls 0.00 cfs)
- **3=Orifice/Grate** (Controls 0.00 cfs)

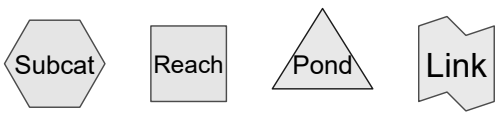
Pond 17P: Subarea A WQ





25-year critical,
allowable = 0.4 cfs/acre
* 15.74 = 6.30 cfs.
100-year allowable =
12.59 cfs





Routing Diagram for 20170646 prelim 2019-02-25
Prepared by Symanetc, Printed 2/25/2019

Summary for Subcatchment 1S: pre north

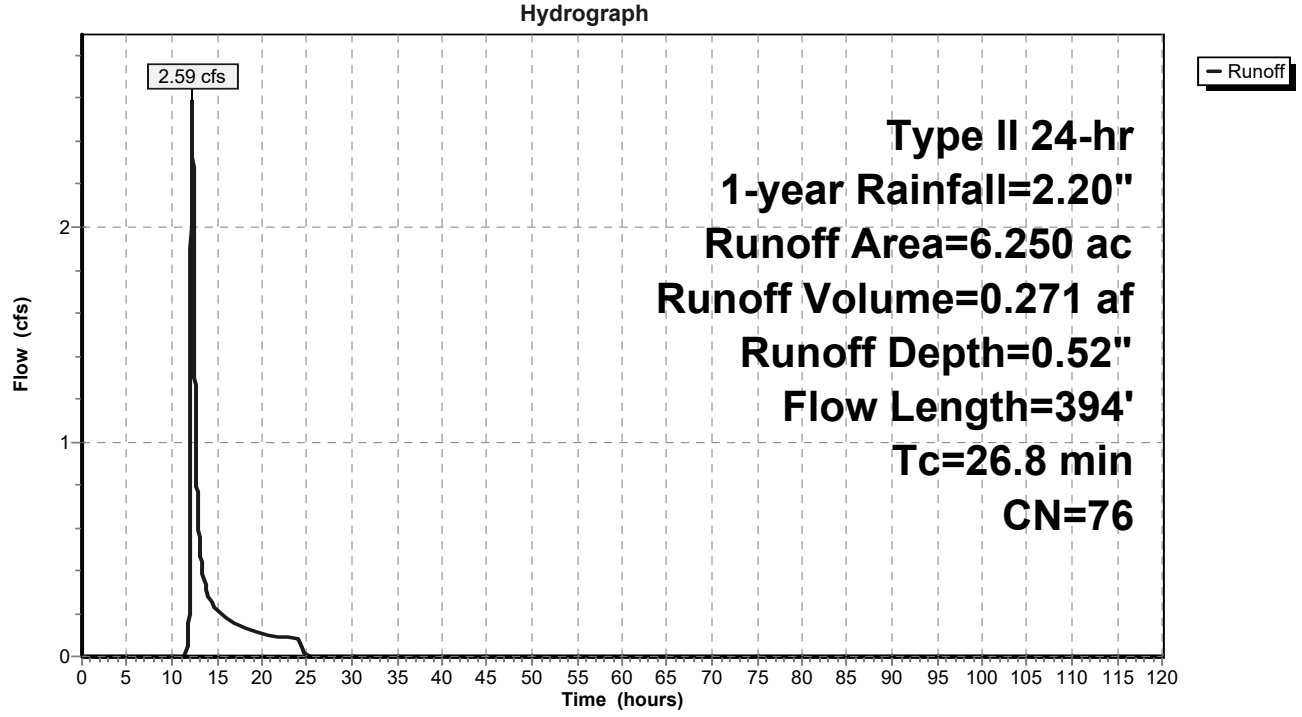
Runoff = 2.59 cfs @ 12.24 hrs, Volume= 0.271 af, Depth= 0.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-year Rainfall=2.20"

	Area (ac)	CN	Description
*	3.710	78	
*	2.540	74	
	6.250	76	Weighted Average
	6.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
6.0	294	0.0136	0.82		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
26.8	394	Total			

Subcatchment 1S: pre north



Summary for Subcatchment 2S: pre middle

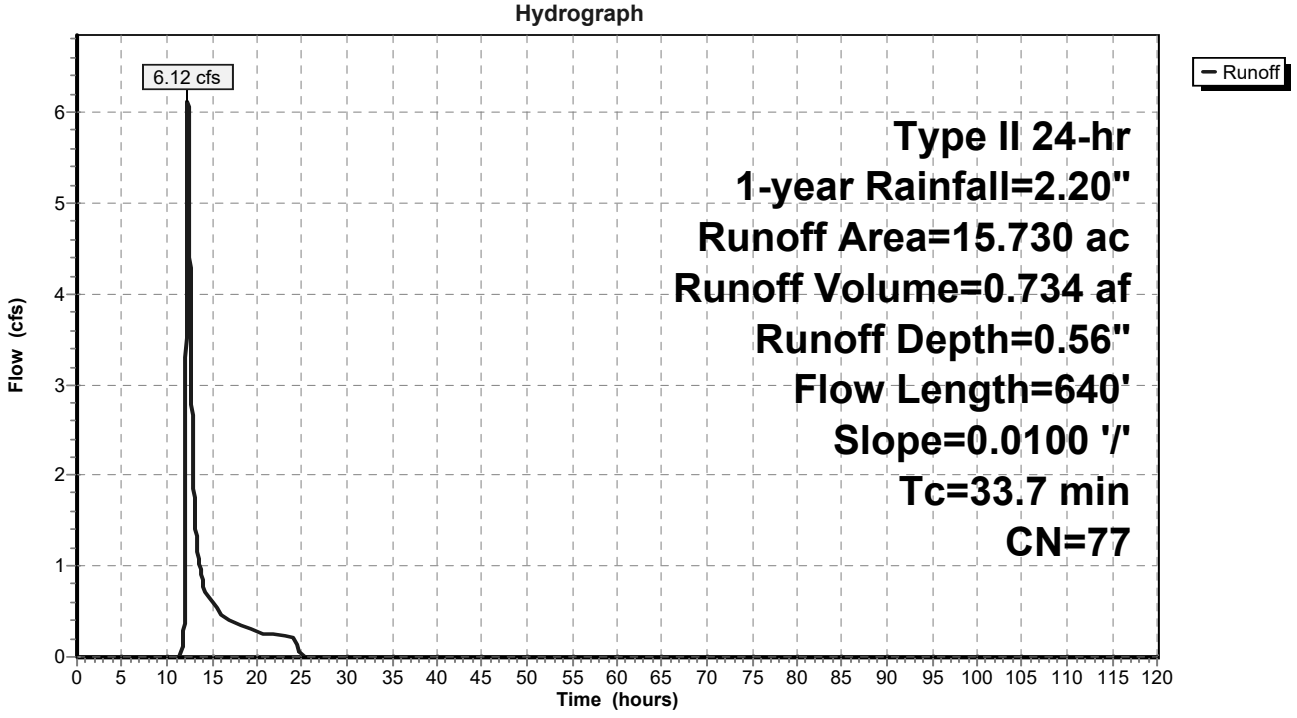
Runoff = 6.12 cfs @ 12.32 hrs, Volume= 0.734 af, Depth= 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-year Rainfall=2.20"

	Area (ac)	CN	Description
*	8.860	78	
*	3.080	74	
*	3.790	78	
	15.730	77	Weighted Average
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
12.9	540	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
33.7	640	Total			

Subcatchment 2S: pre middle



Summary for Subcatchment 4S: pre Subarea "A"

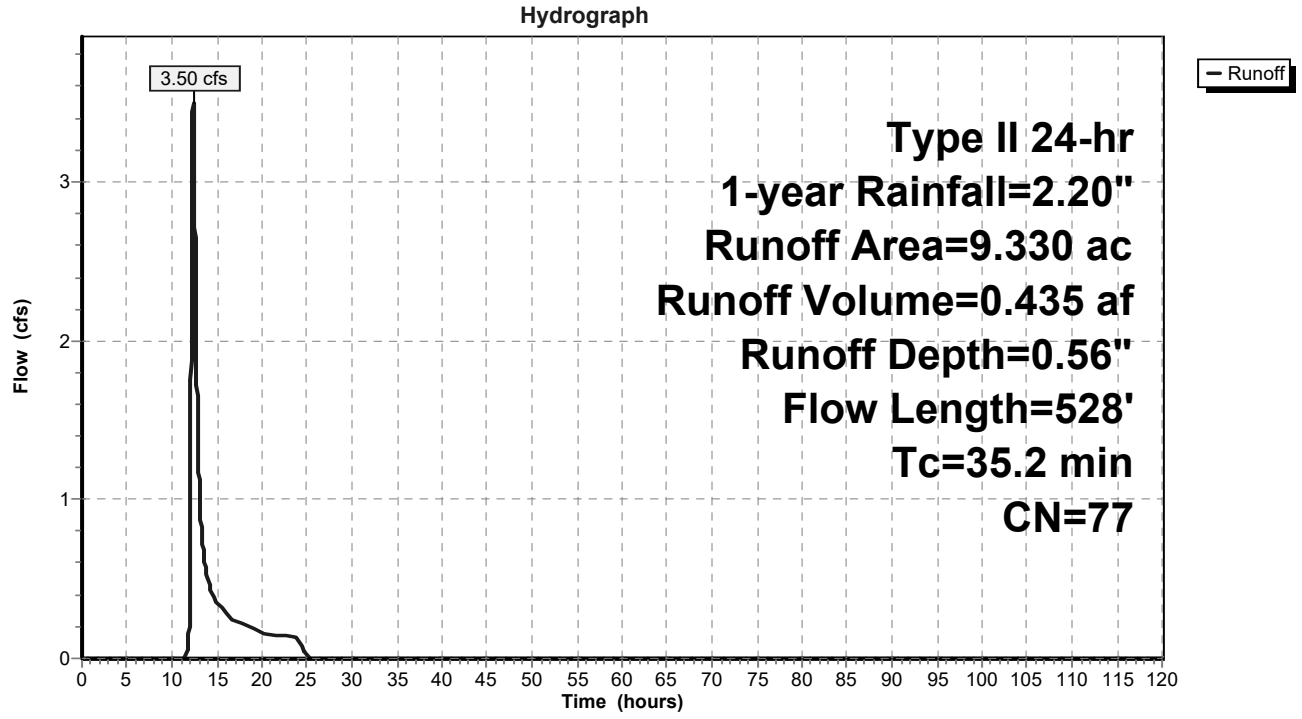
Runoff = 3.50 cfs @ 12.35 hrs, Volume= 0.435 af, Depth= 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-year Rainfall=2.20"

	Area (ac)	CN	Description
*	7.180	78	
*	2.150	74	
	9.330	77	Weighted Average
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
14.4	428	0.0050	0.49		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
35.2	528	Total			

Subcatchment 4S: pre Subarea "A"



Summary for Subcatchment 5S: post north

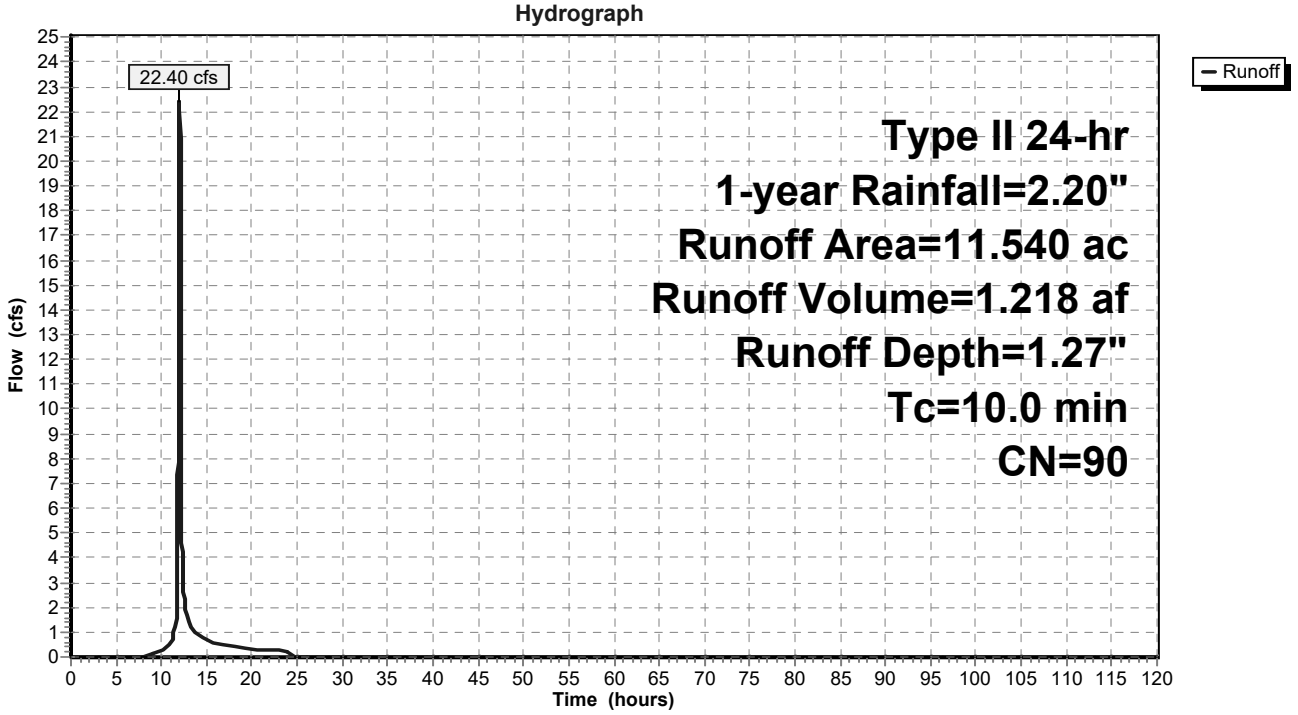
Runoff = 22.40 cfs @ 12.02 hrs, Volume= 1.218 af, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-year Rainfall=2.20"

	Area (ac)	CN	Description
*	11.540	90	
	11.540		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 5S: post north



Summary for Subcatchment 6S: post middle

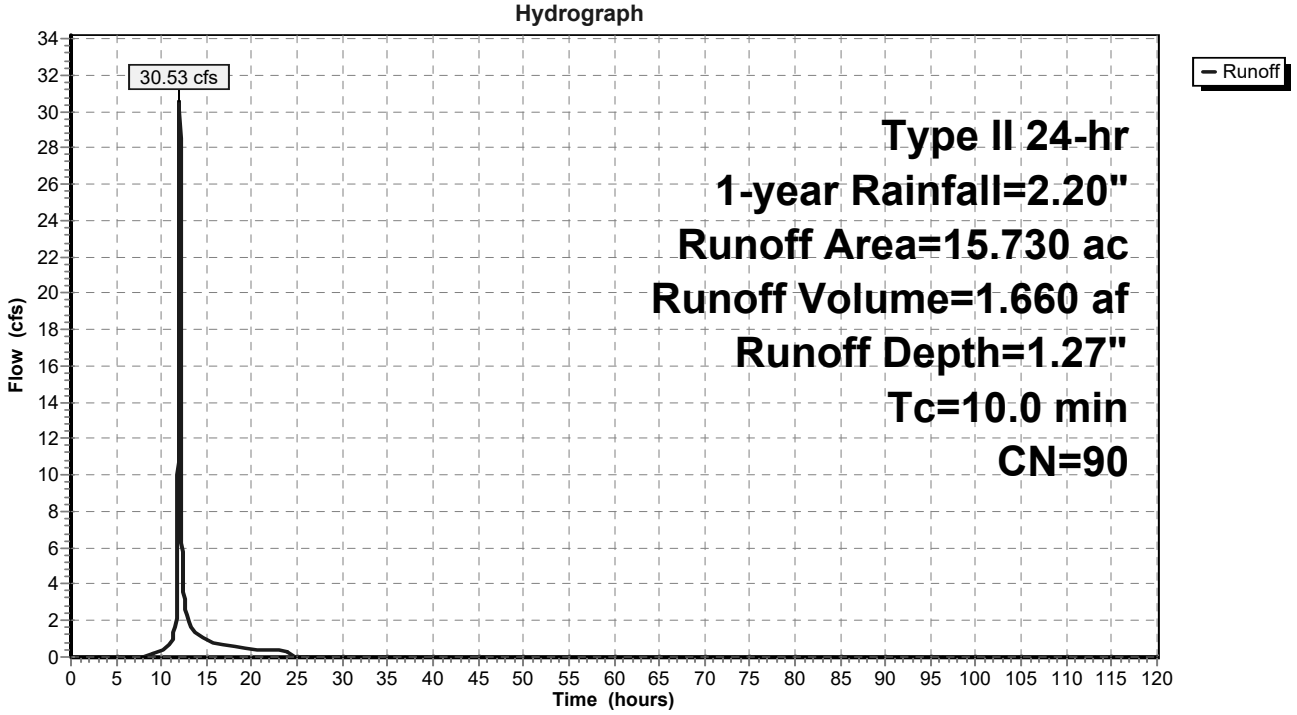
Runoff = 30.53 cfs @ 12.02 hrs, Volume= 1.660 af, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-year Rainfall=2.20"

	Area (ac)	CN	Description
*	15.730	90	
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 6S: post middle



Summary for Subcatchment 8S: post Subarea "A"

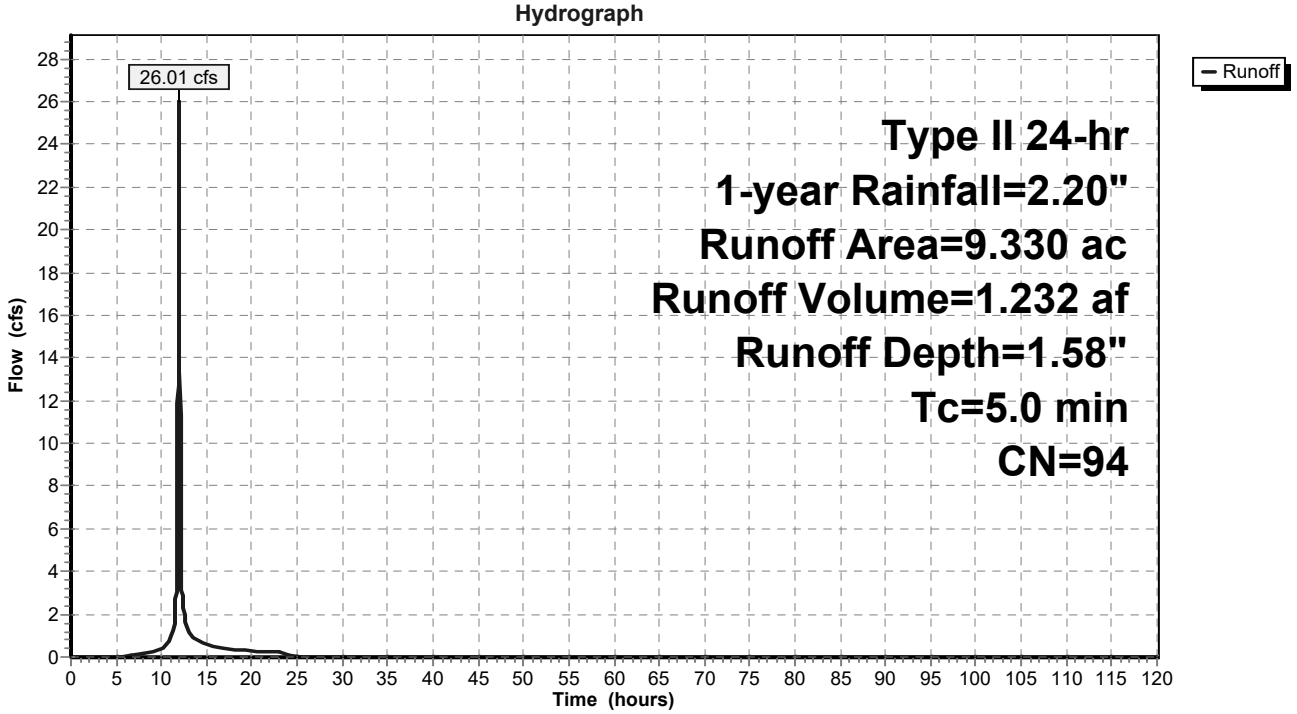
Runoff = 26.01 cfs @ 11.96 hrs, Volume= 1.232 af, Depth= 1.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-year Rainfall=2.20"

	Area (ac)	CN	Description
*	9.330	94	
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 8S: post Subarea "A"



Summary for Pond 9P: Subarea B north SWMA

Inflow Area = 11.540 ac, 0.00% Impervious, Inflow Depth = 1.27" for 1-year event
Inflow = 22.40 cfs @ 12.02 hrs, Volume= 1.218 af
Outflow = 0.56 cfs @ 15.73 hrs, Volume= 1.198 af, Atten= 98%, Lag= 223.1 min
Primary = 0.56 cfs @ 15.73 hrs, Volume= 1.198 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 925.30' @ 15.73 hrs Surf.Area= 40,575 sf Storage= 35,210 cf

Plug-Flow detention time= 924.9 min calculated for 1.198 af (98% of inflow)
Center-of-Mass det. time= 914.9 min (1,737.8 - 822.8)

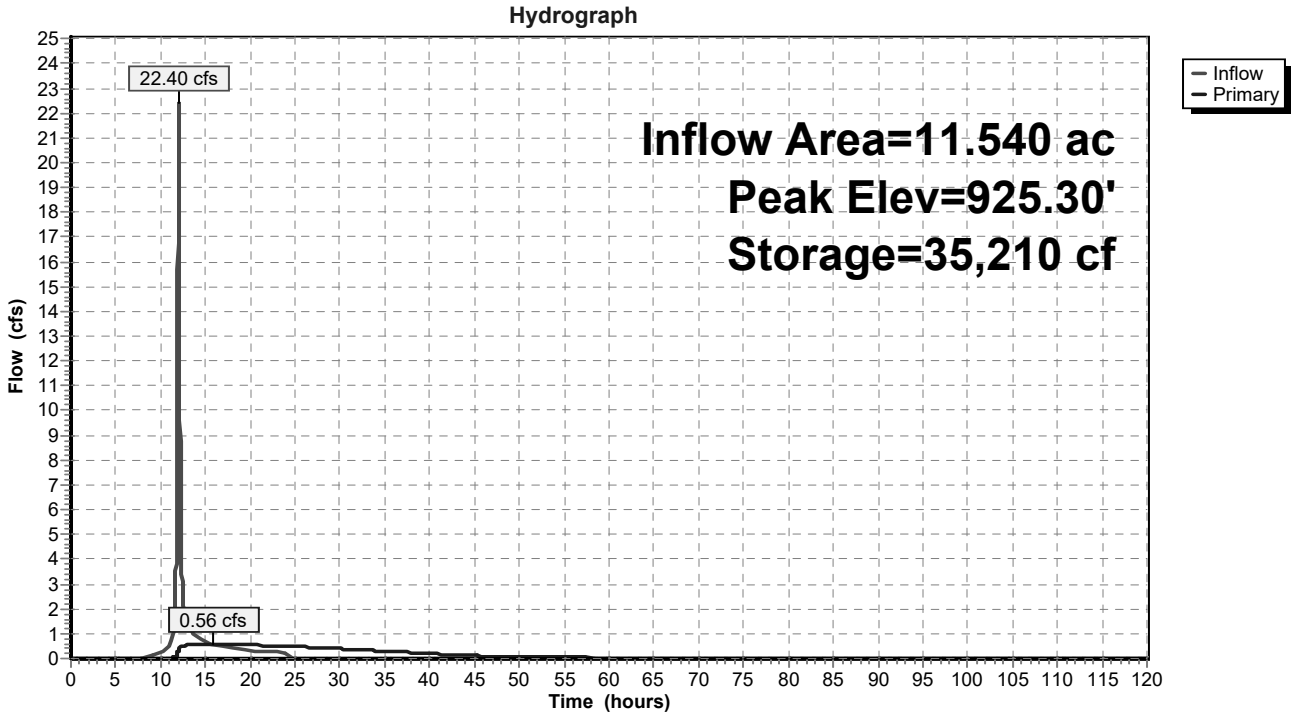
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	157,610 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	37,449	0	0
925.00	39,518	23,090	23,090
926.00	43,009	41,264	64,354
927.00	46,603	44,806	109,160
928.00	50,297	48,450	157,610

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**3.5" Vert. Orifice/Grate X 2.00** C= 0.600
#2	Primary	927.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads
#3	Primary	927.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.56 cfs @ 15.73 hrs HW=925.30' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.56 cfs @ 4.19 fps)
- **2=Orifice/Grate** (Controls 0.00 cfs)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 9P: Subarea B north SWMA



Summary for Pond 10P: Subarea B middle SWMA

Inflow Area = 15.730 ac, 0.00% Impervious, Inflow Depth = 1.27" for 1-year event
Inflow = 30.53 cfs @ 12.02 hrs, Volume= 1.660 af
Outflow = 0.66 cfs @ 16.36 hrs, Volume= 1.571 af, Atten= 98%, Lag= 260.8 min
Primary = 0.66 cfs @ 16.36 hrs, Volume= 1.571 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 925.38' @ 16.36 hrs Surf.Area= 55,175 sf Storage= 51,559 cf

Plug-Flow detention time= 1,494.0 min calculated for 1.571 af (95% of inflow)
Center-of-Mass det. time= 1,464.0 min (2,286.8 - 822.8)

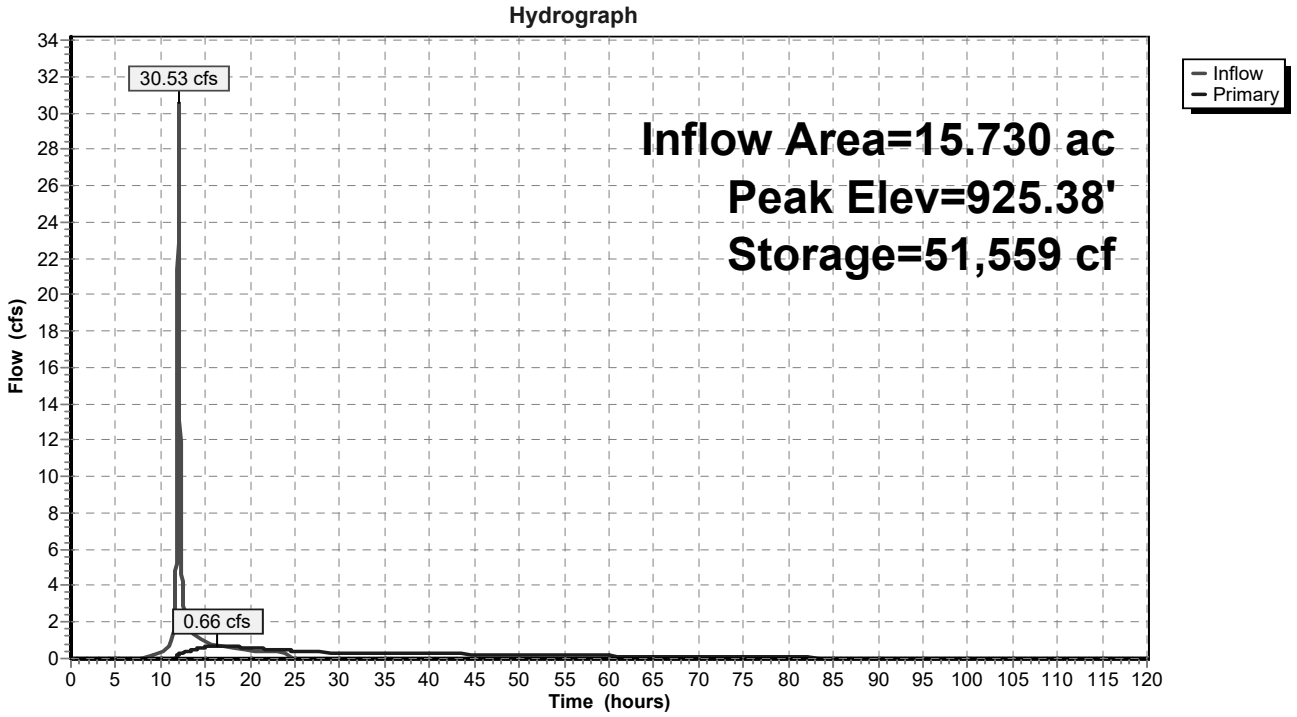
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	213,101 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	50,550	0	0
925.00	53,377	31,178	31,178
926.00	58,164	55,771	86,949
927.00	63,051	60,608	147,556
928.00	68,038	65,545	213,101

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	925.25'	**24.0" W x 7.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	926.70'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=0.66 cfs @ 16.36 hrs HW=925.38' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.38 cfs @ 4.33 fps)
- **2=Orifice/Grate** (Orifice Controls 0.29 cfs @ 1.14 fps)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 10P: Subarea B middle SWMA



Summary for Pond 12P: Subarea "A" SWMA

Inflow Area = 9.330 ac, 0.00% Impervious, Inflow Depth = 1.58" for 1-year event
Inflow = 26.01 cfs @ 11.96 hrs, Volume= 1.232 af
Outflow = 0.49 cfs @ 15.73 hrs, Volume= 1.199 af, Atten= 98%, Lag= 226.3 min
Primary = 0.49 cfs @ 15.73 hrs, Volume= 1.199 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 931.11' @ 15.73 hrs Surf.Area= 36,373 sf Storage= 38,150 cf

Plug-Flow detention time= 1,222.5 min calculated for 1.199 af (97% of inflow)
Center-of-Mass det. time= 1,206.2 min (2,002.3 - 796.1)

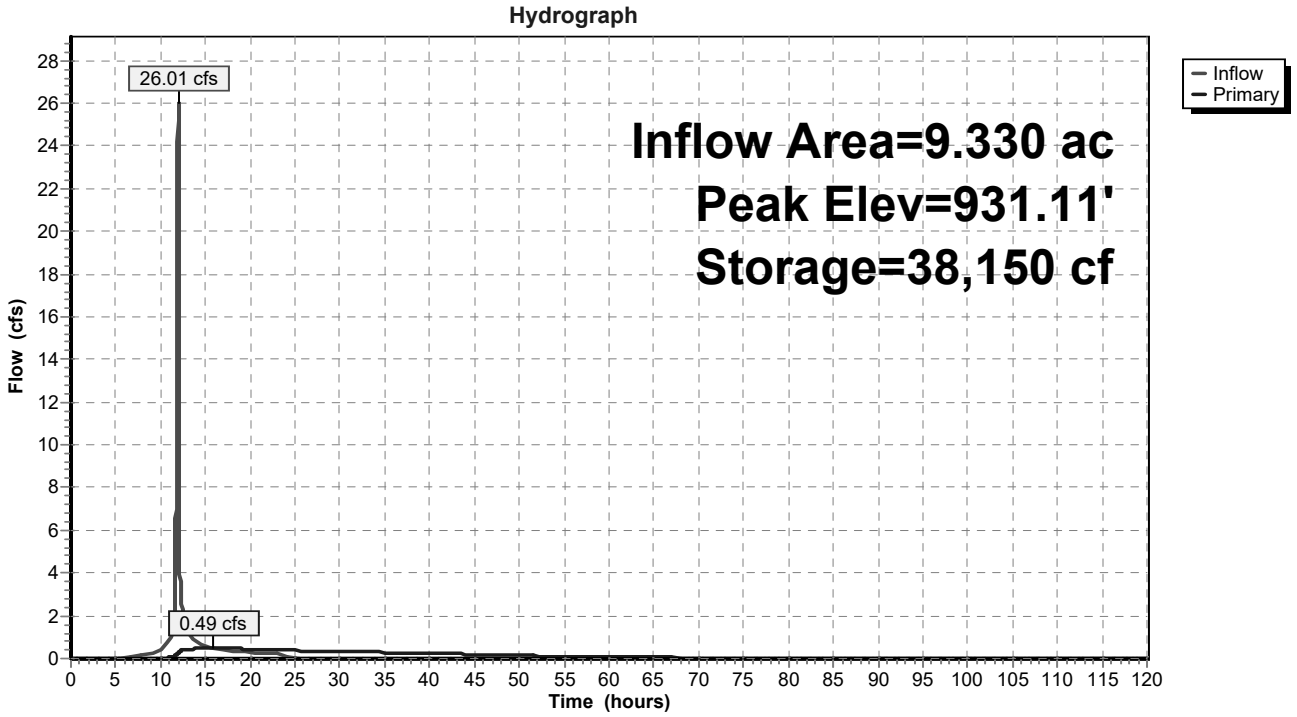
Volume	Invert	Avail.Storage	Storage Description
#1	930.00'	159,374 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
930.00	32,218	0	0
931.00	35,943	34,081	34,081
932.00	39,768	37,856	71,936
933.00	43,694	41,731	113,667
934.00	47,719	45,707	159,374

Device	Routing	Invert	Outlet Devices
#1	Primary	930.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	931.00'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	932.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=0.49 cfs @ 15.73 hrs HW=931.11' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.41 cfs @ 4.68 fps)
- **2=Orifice/Grate** (Orifice Controls 0.08 cfs @ 1.08 fps)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 12P: Subarea "A" SWMA



Summary for Subcatchment 1S: pre north

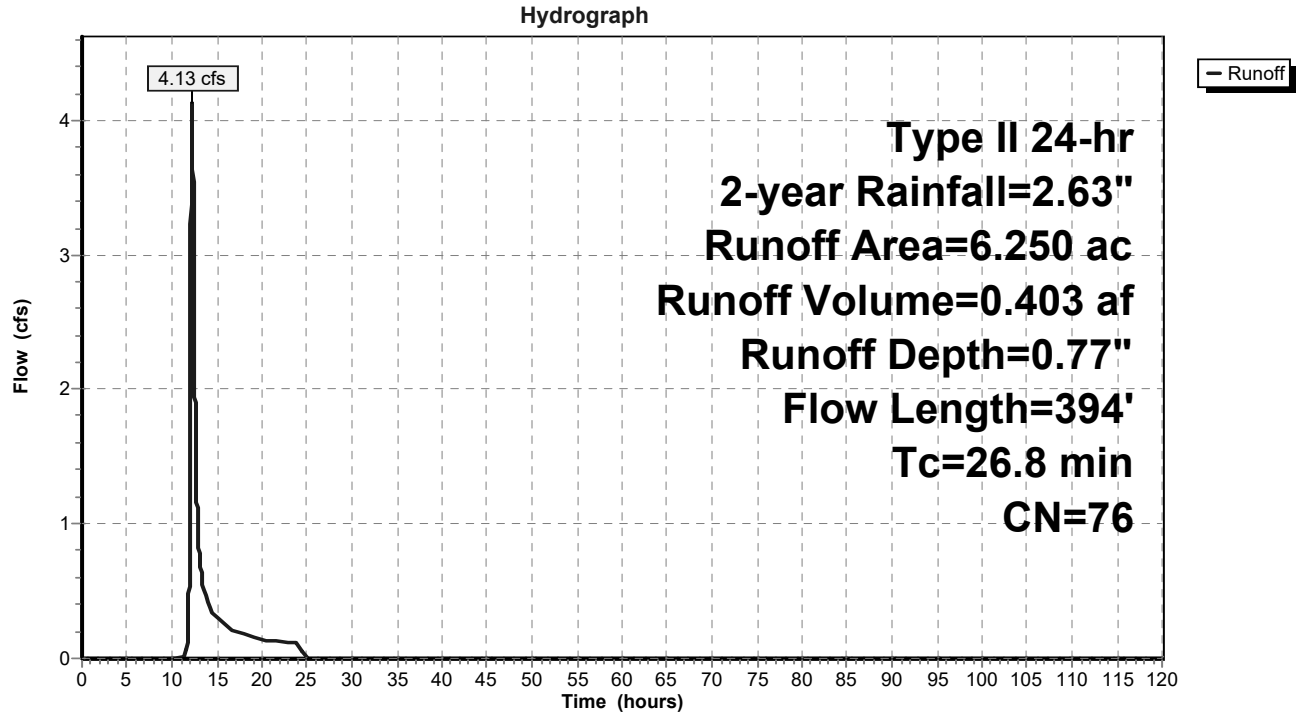
Runoff = 4.13 cfs @ 12.24 hrs, Volume= 0.403 af, Depth= 0.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-year Rainfall=2.63"

	Area (ac)	CN	Description
*	3.710	78	
*	2.540	74	
	6.250	76	Weighted Average
	6.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
6.0	294	0.0136	0.82		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
26.8	394	Total			

Subcatchment 1S: pre north



Summary for Subcatchment 2S: pre middle

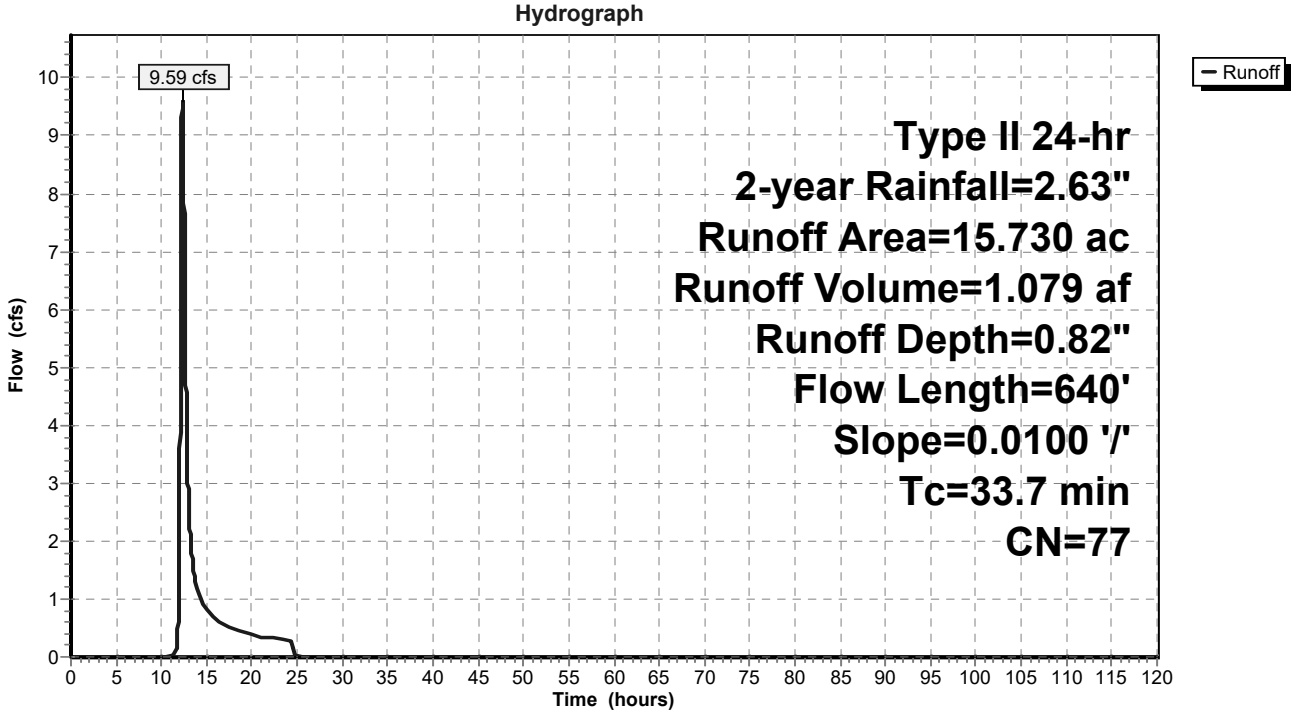
Runoff = 9.59 cfs @ 12.32 hrs, Volume= 1.079 af, Depth= 0.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-year Rainfall=2.63"

	Area (ac)	CN	Description
*	8.860	78	
*	3.080	74	
*	3.790	78	
	15.730	77	Weighted Average
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
12.9	540	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
33.7	640	Total			

Subcatchment 2S: pre middle



Summary for Subcatchment 4S: pre Subarea "A"

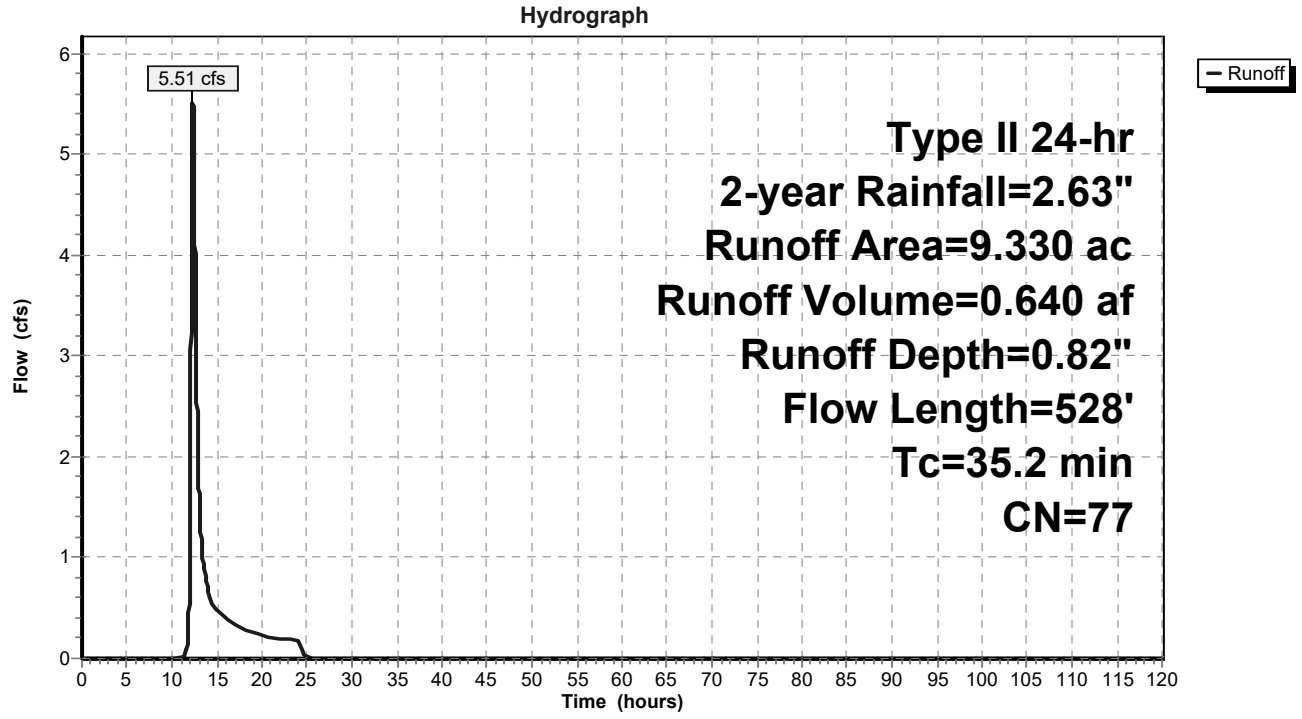
Runoff = 5.51 cfs @ 12.32 hrs, Volume= 0.640 af, Depth= 0.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-year Rainfall=2.63"

	Area (ac)	CN	Description
*	7.180	78	
*	2.150	74	
	9.330	77	Weighted Average
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
14.4	428	0.0050	0.49		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
35.2	528	Total			

Subcatchment 4S: pre Subarea "A"



Summary for Subcatchment 5S: post north

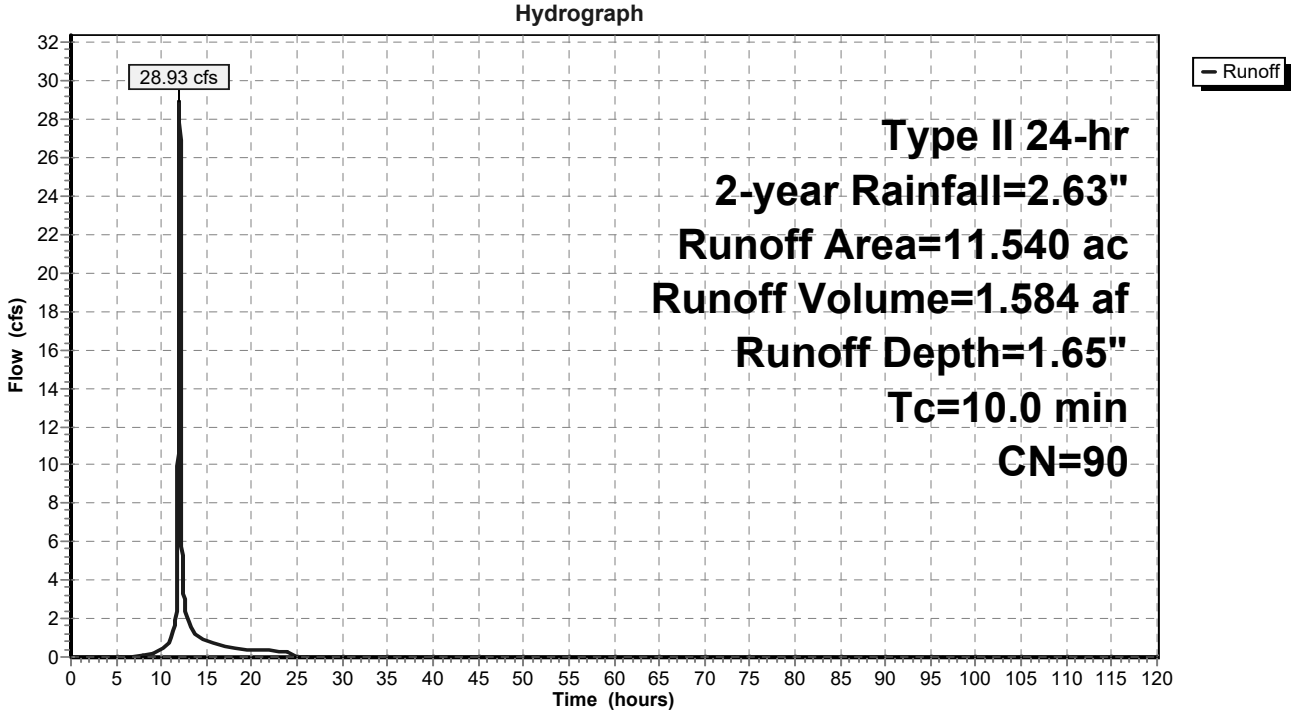
Runoff = 28.93 cfs @ 12.01 hrs, Volume= 1.584 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-year Rainfall=2.63"

	Area (ac)	CN	Description
*	11.540	90	
	11.540		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 5S: post north



Summary for Subcatchment 6S: post middle

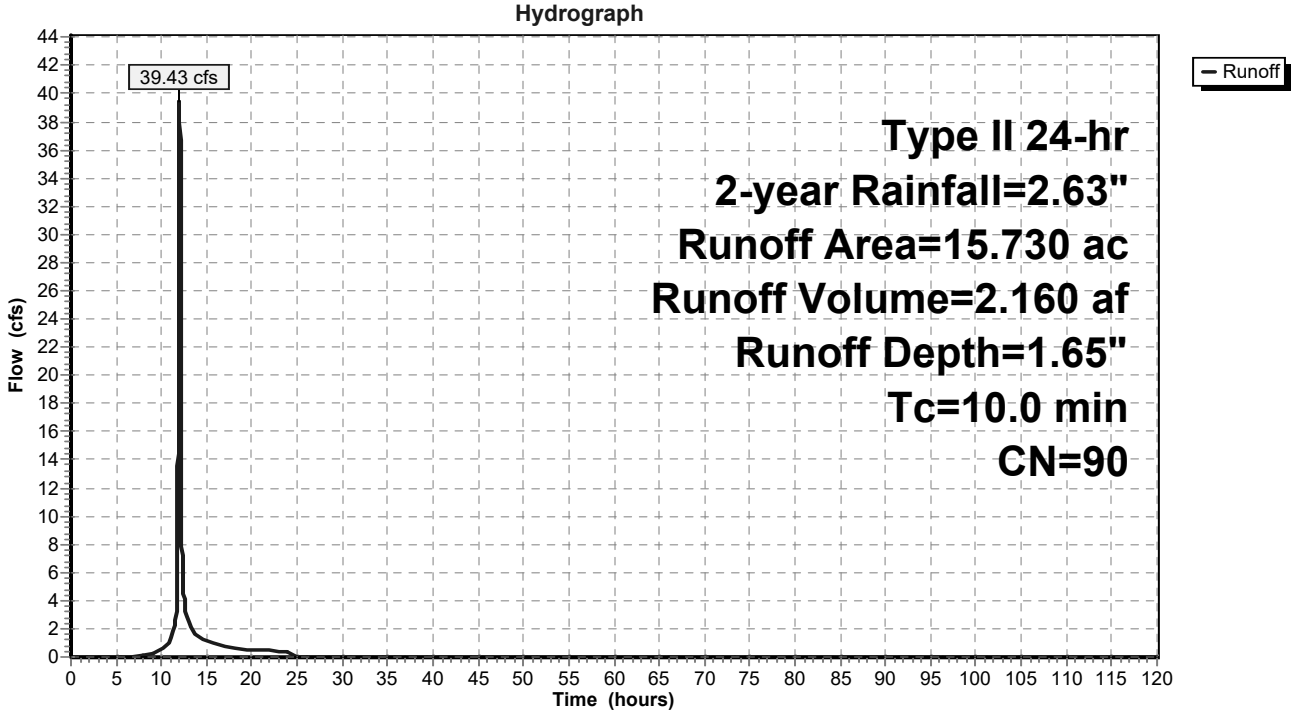
Runoff = 39.43 cfs @ 12.01 hrs, Volume= 2.160 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-year Rainfall=2.63"

	Area (ac)	CN	Description
*	15.730	90	
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 6S: post middle



Summary for Subcatchment 8S: post Subarea "A"

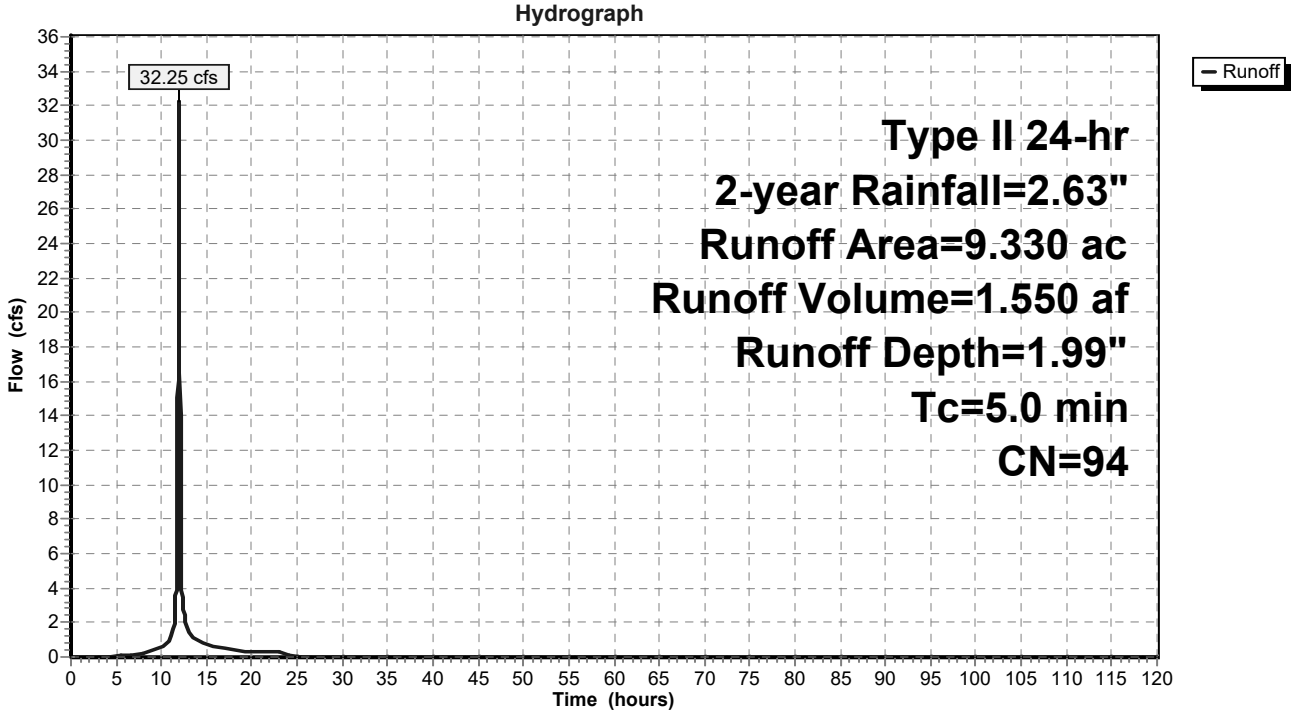
Runoff = 32.25 cfs @ 11.96 hrs, Volume= 1.550 af, Depth= 1.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-year Rainfall=2.63"

	Area (ac)	CN	Description
*	9.330	94	
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 8S: post Subarea "A"



Summary for Pond 9P: Subarea B north SWMA

Inflow Area = 11.540 ac, 0.00% Impervious, Inflow Depth = 1.65" for 2-year event
Inflow = 28.93 cfs @ 12.01 hrs, Volume= 1.584 af
Outflow = 0.66 cfs @ 15.94 hrs, Volume= 1.562 af, Atten= 98%, Lag= 235.7 min
Primary = 0.66 cfs @ 15.94 hrs, Volume= 1.562 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 925.59' @ 15.94 hrs Surf.Area= 41,589 sf Storage= 47,147 cf

Plug-Flow detention time= 998.8 min calculated for 1.562 af (99% of inflow)
Center-of-Mass det. time= 990.6 min (1,805.9 - 815.3)

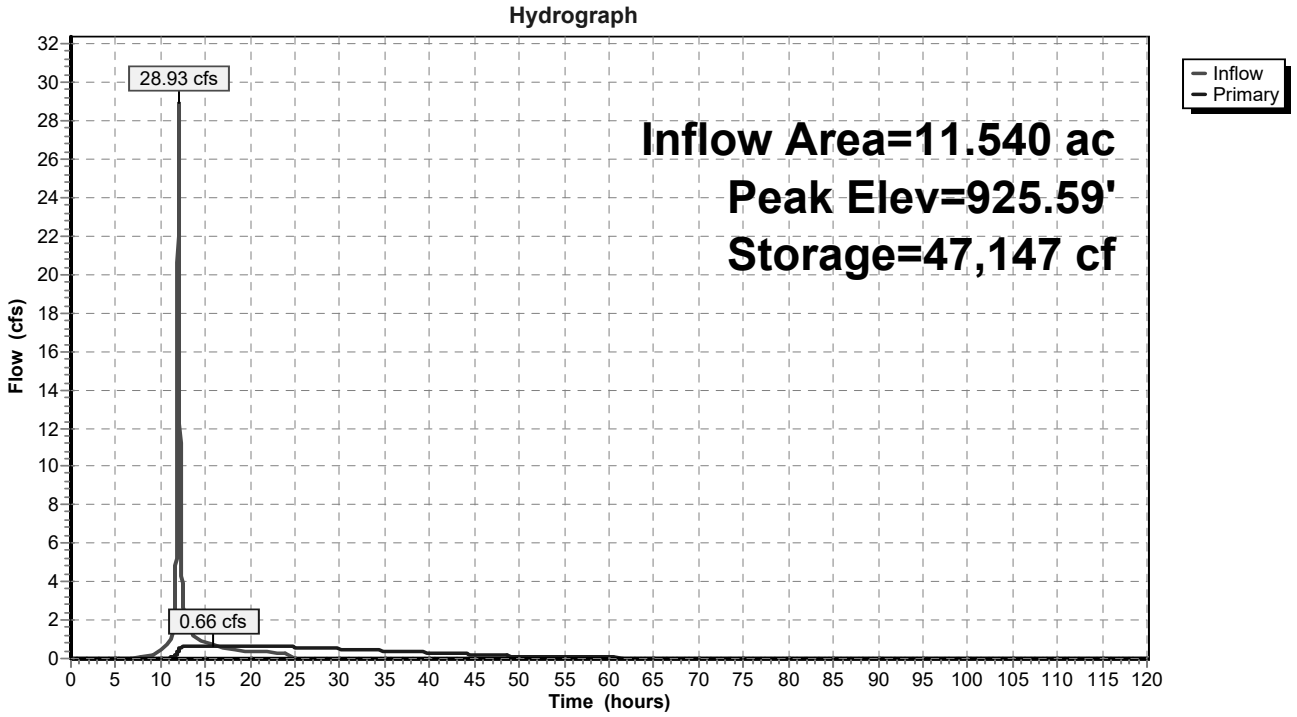
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	157,610 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	37,449	0	0
925.00	39,518	23,090	23,090
926.00	43,009	41,264	64,354
927.00	46,603	44,806	109,160
928.00	50,297	48,450	157,610

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**3.5" Vert. Orifice/Grate X 2.00** C= 0.600
#2	Primary	927.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads
#3	Primary	927.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.66 cfs @ 15.94 hrs HW=925.59' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.66 cfs @ 4.93 fps)
- **2=Orifice/Grate** (Controls 0.00 cfs)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 9P: Subarea B north SWMA



Summary for Pond 10P: Subarea B middle SWMA

Inflow Area = 15.730 ac, 0.00% Impervious, Inflow Depth = 1.65" for 2-year event
Inflow = 39.43 cfs @ 12.01 hrs, Volume= 2.160 af
Outflow = 1.43 cfs @ 14.02 hrs, Volume= 2.069 af, Atten= 96%, Lag= 120.2 min
Primary = 1.43 cfs @ 14.02 hrs, Volume= 2.069 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 925.54' @ 14.02 hrs Surf.Area= 55,977 sf Storage= 60,873 cf

Plug-Flow detention time= 1,225.2 min calculated for 2.069 af (96% of inflow)
Center-of-Mass det. time= 1,200.7 min (2,016.0 - 815.3)

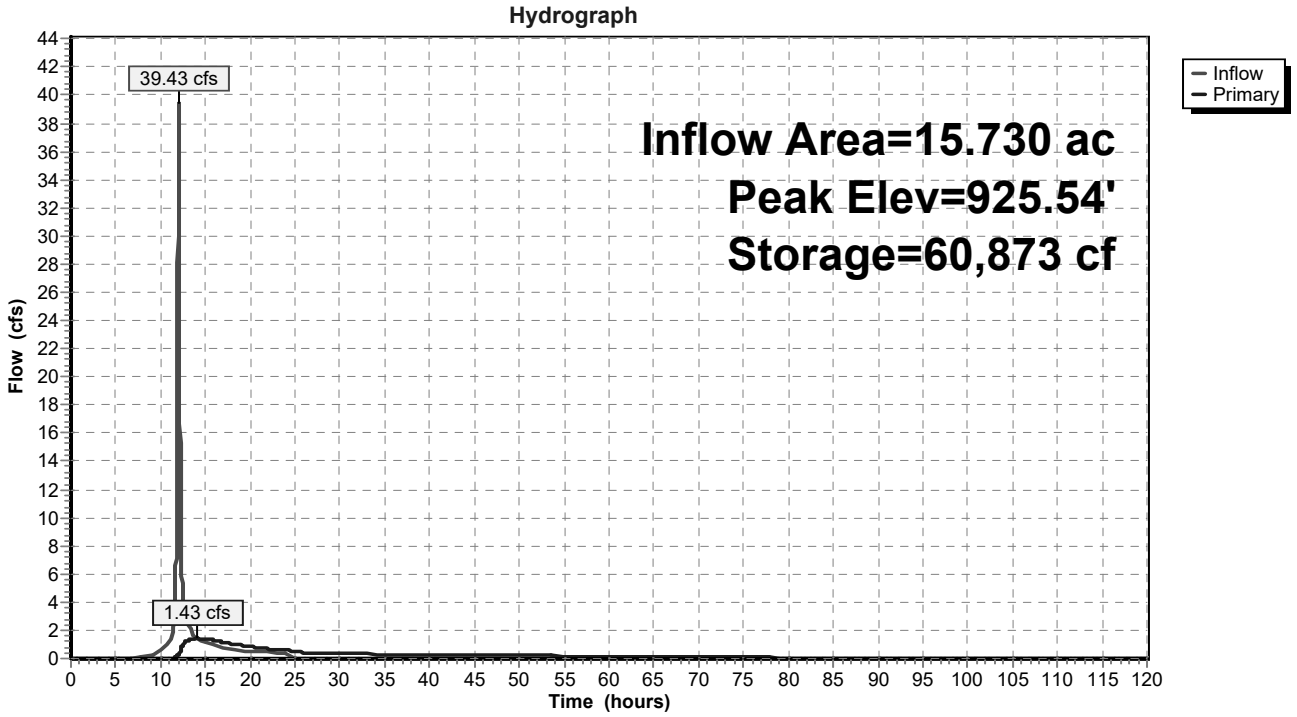
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	213,101 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	50,550	0	0
925.00	53,377	31,178	31,178
926.00	58,164	55,771	86,949
927.00	63,051	60,608	147,556
928.00	68,038	65,545	213,101

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	925.25'	**24.0" W x 7.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	926.70'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=1.43 cfs @ 14.02 hrs HW=925.54' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.42 cfs @ 4.76 fps)
- **2=Orifice/Grate** (Orifice Controls 1.02 cfs @ 1.74 fps)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 10P: Subarea B middle SWMA



Summary for Pond 12P: Subarea "A" SWMA

Inflow Area = 9.330 ac, 0.00% Impervious, Inflow Depth = 1.99" for 2-year event
Inflow = 32.25 cfs @ 11.96 hrs, Volume= 1.550 af
Outflow = 0.84 cfs @ 14.21 hrs, Volume= 1.516 af, Atten= 97%, Lag= 135.3 min
Primary = 0.84 cfs @ 14.21 hrs, Volume= 1.516 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 931.32' @ 14.21 hrs Surf.Area= 37,173 sf Storage= 45,832 cf

Plug-Flow detention time= 1,107.2 min calculated for 1.516 af (98% of inflow)
Center-of-Mass det. time= 1,093.6 min (1,883.2 - 789.6)

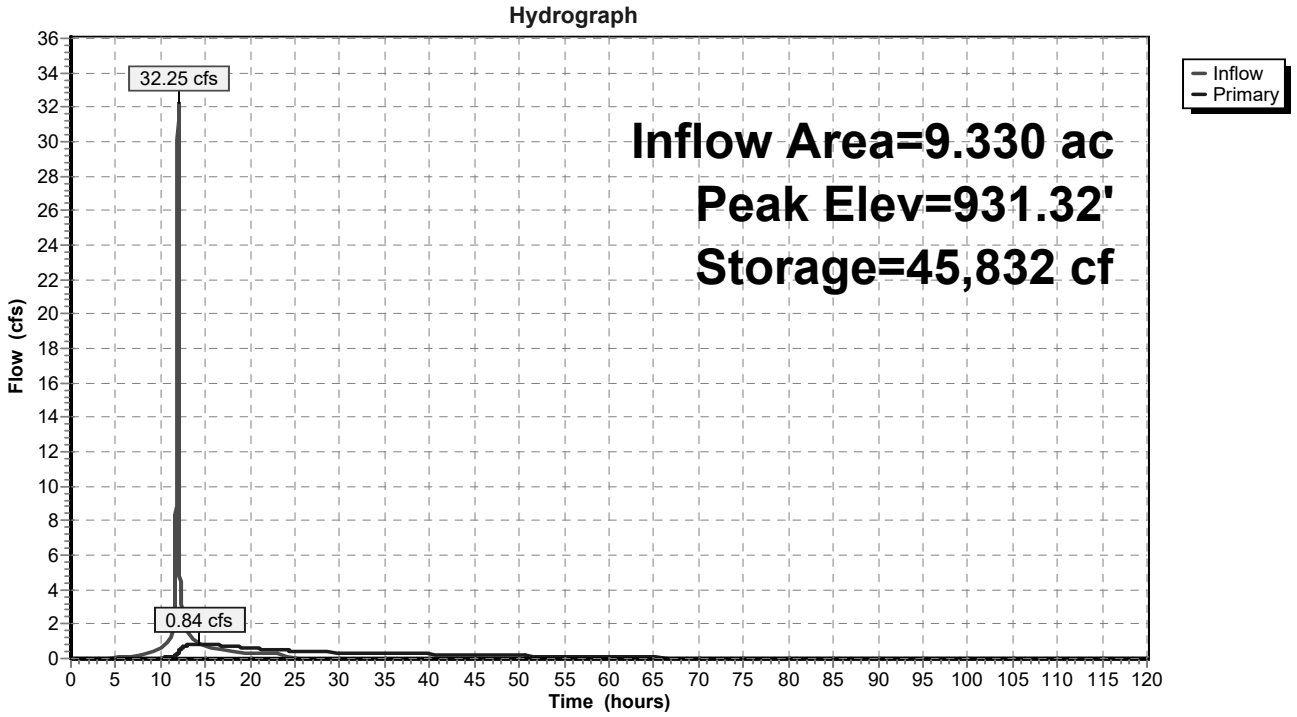
Volume	Invert	Avail.Storage	Storage Description
#1	930.00'	159,374 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
930.00	32,218	0	0
931.00	35,943	34,081	34,081
932.00	39,768	37,856	71,936
933.00	43,694	41,731	113,667
934.00	47,719	45,707	159,374

Device	Routing	Invert	Outlet Devices
#1	Primary	930.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	931.00'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	932.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=0.84 cfs @ 14.21 hrs HW=931.32' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.45 cfs @ 5.17 fps)
- **2=Orifice/Grate** (Orifice Controls 0.39 cfs @ 1.82 fps)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 12P: Subarea "A" SWMA



Summary for Subcatchment 1S: pre north

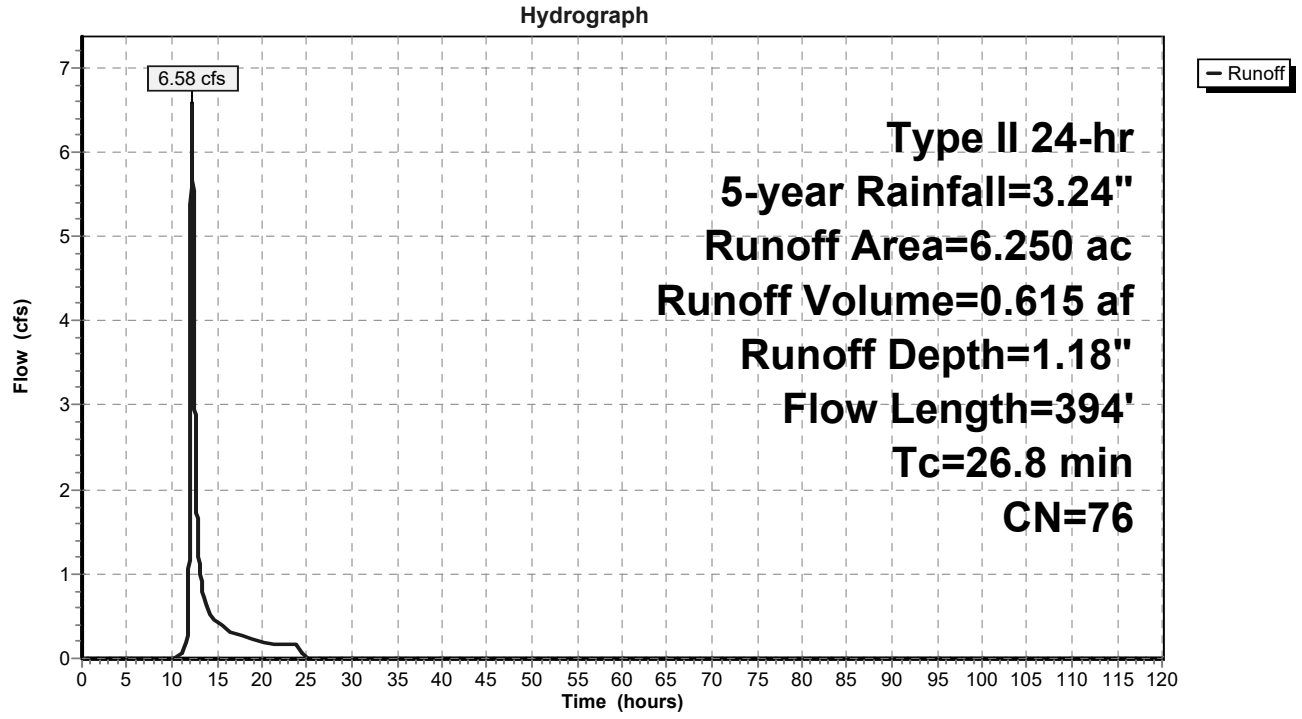
Runoff = 6.58 cfs @ 12.22 hrs, Volume= 0.615 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 5-year Rainfall=3.24"

	Area (ac)	CN	Description
*	3.710	78	
*	2.540	74	
	6.250	76	Weighted Average
	6.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
6.0	294	0.0136	0.82		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
26.8	394	Total			

Subcatchment 1S: pre north



Summary for Subcatchment 2S: pre middle

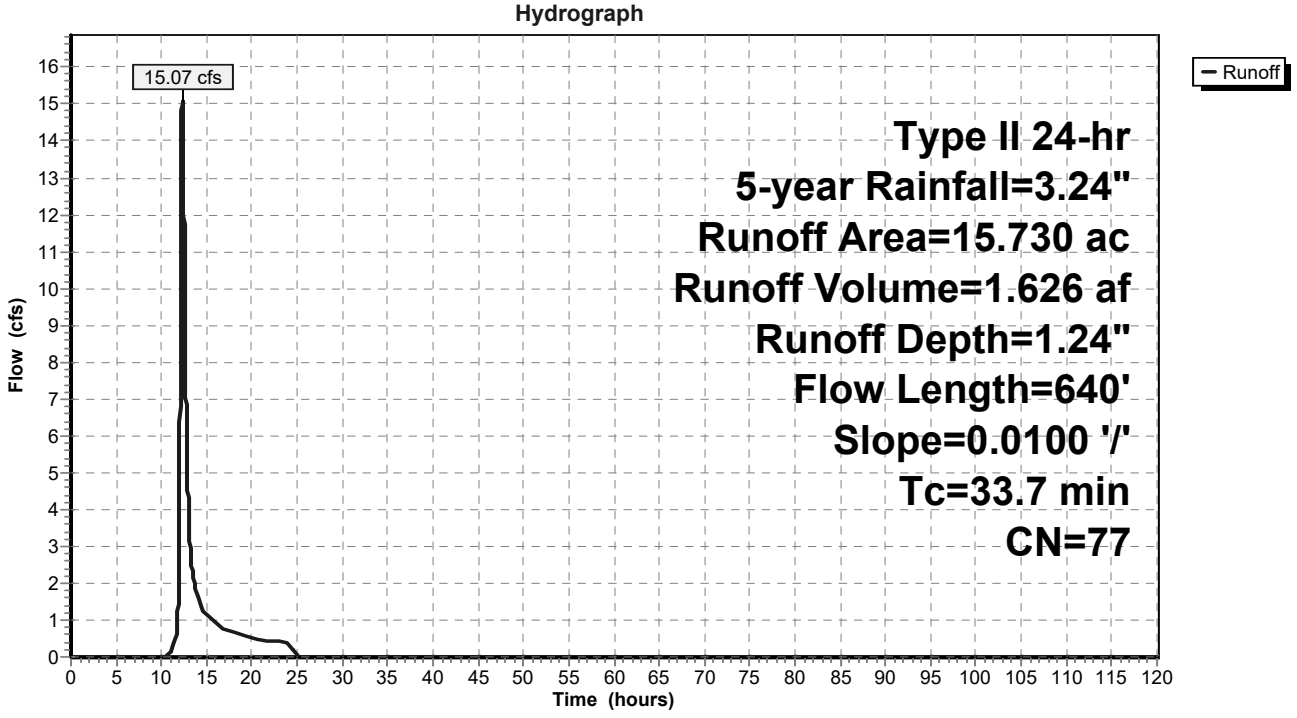
Runoff = 15.07 cfs @ 12.32 hrs, Volume= 1.626 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 5-year Rainfall=3.24"

	Area (ac)	CN	Description
*	8.860	78	
*	3.080	74	
*	3.790	78	
	15.730	77	Weighted Average
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
12.9	540	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
33.7	640	Total			

Subcatchment 2S: pre middle



Summary for Subcatchment 4S: pre Subarea "A"

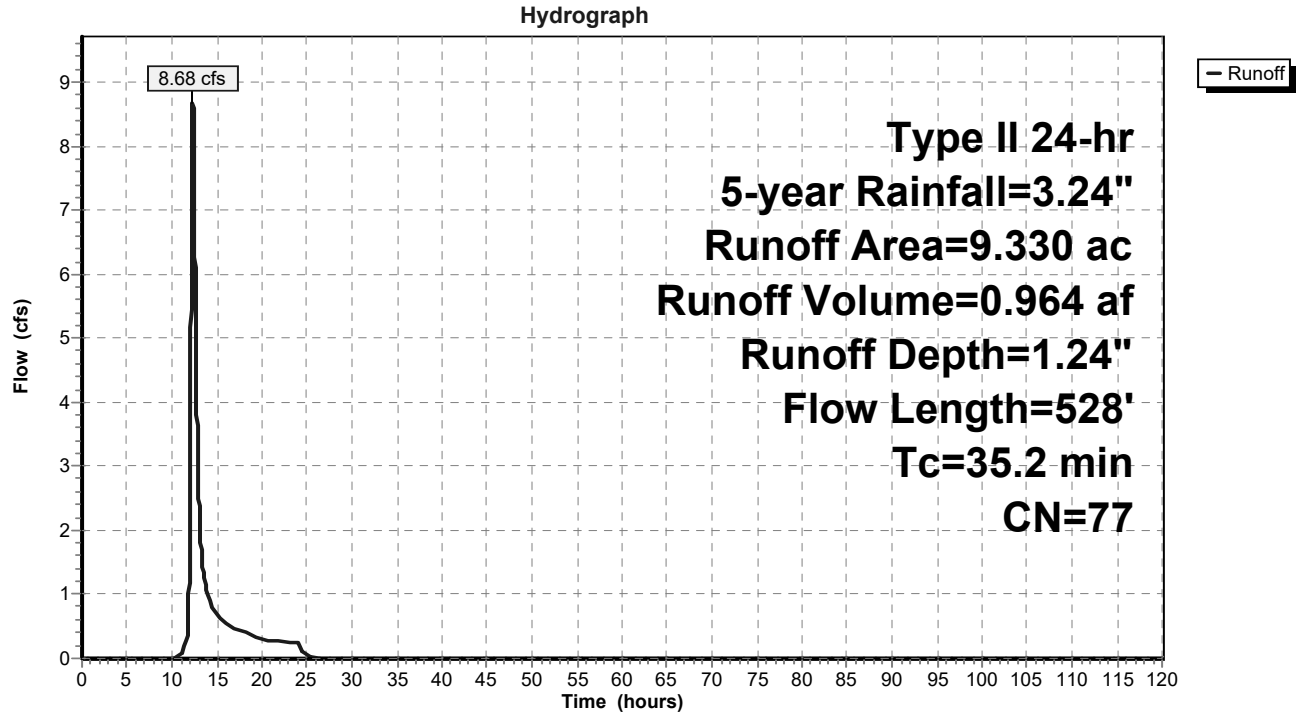
Runoff = 8.68 cfs @ 12.32 hrs, Volume= 0.964 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 5-year Rainfall=3.24"

	Area (ac)	CN	Description
*	7.180	78	
*	2.150	74	
	9.330	77	Weighted Average
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
14.4	428	0.0050	0.49		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
35.2	528	Total			

Subcatchment 4S: pre Subarea "A"



Summary for Subcatchment 5S: post north

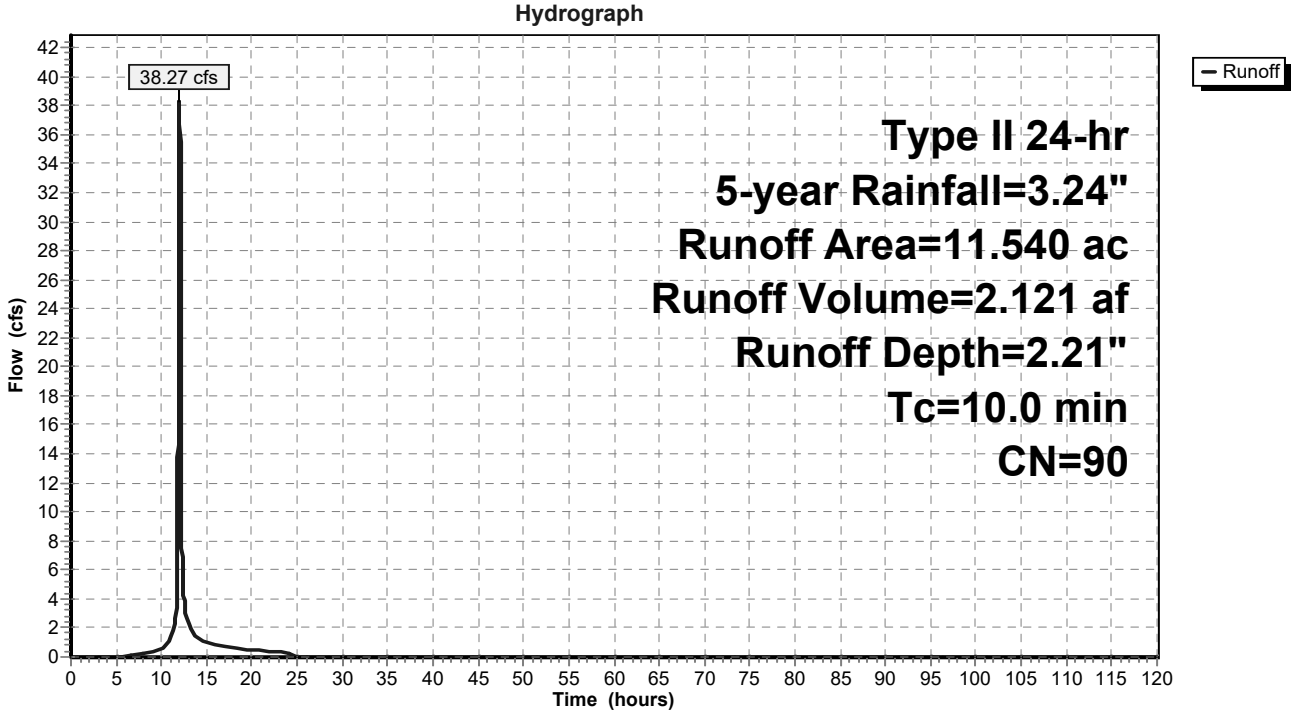
Runoff = 38.27 cfs @ 12.01 hrs, Volume= 2.121 af, Depth= 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 5-year Rainfall=3.24"

	Area (ac)	CN	Description
*	11.540	90	
	11.540		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 5S: post north



Summary for Subcatchment 6S: post middle

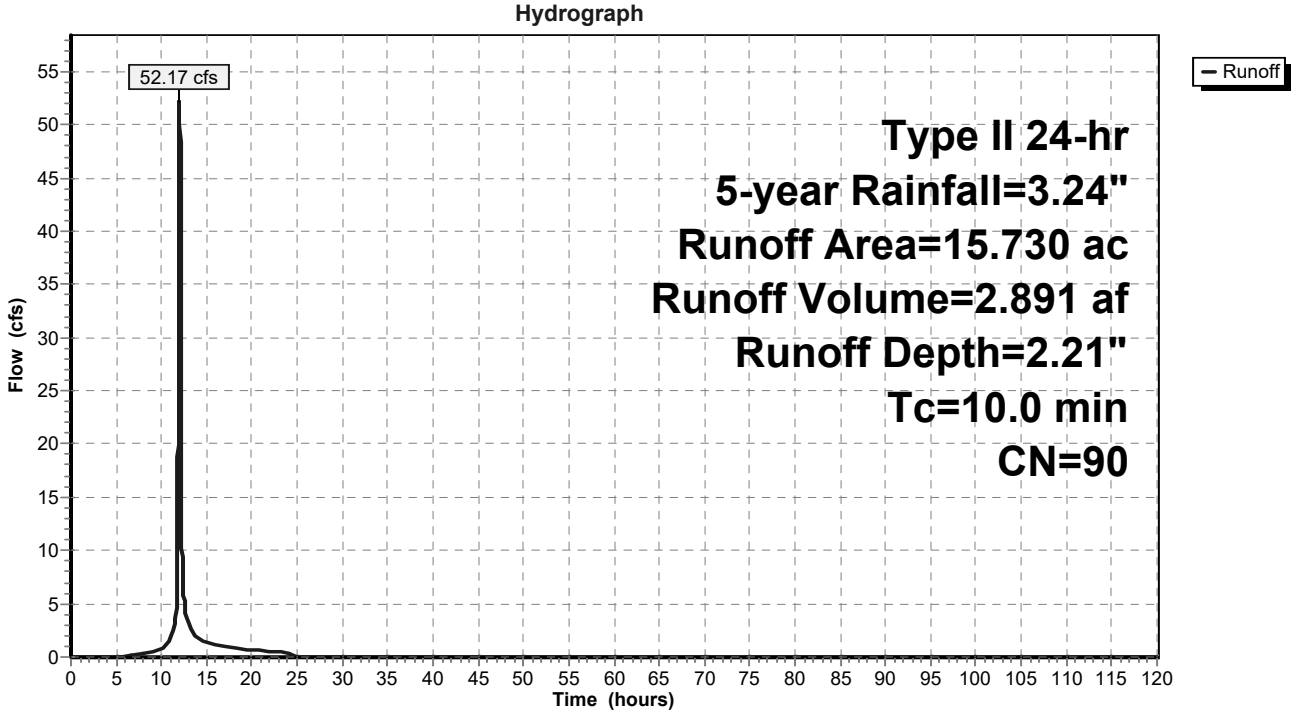
Runoff = 52.17 cfs @ 12.01 hrs, Volume= 2.891 af, Depth= 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 5-year Rainfall=3.24"

	Area (ac)	CN	Description
*	15.730	90	
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 6S: post middle



Summary for Subcatchment 8S: post Subarea "A"

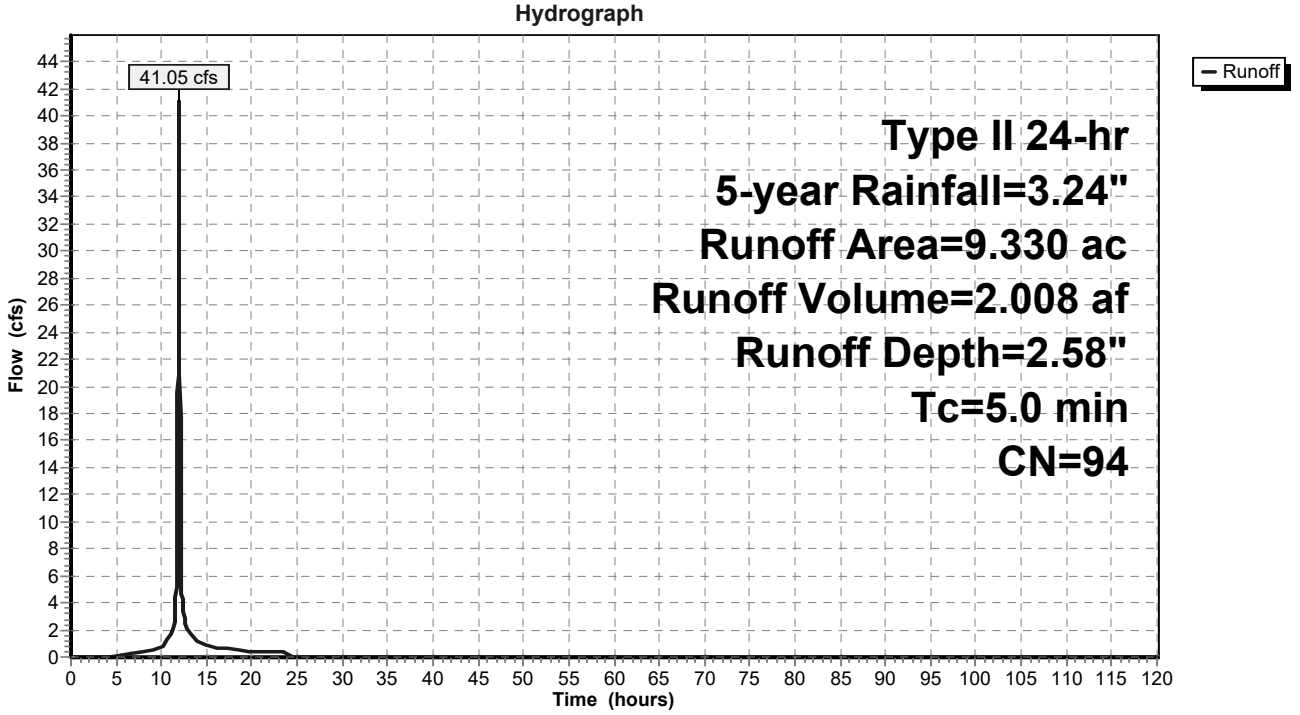
Runoff = 41.05 cfs @ 11.96 hrs, Volume= 2.008 af, Depth= 2.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 5-year Rainfall=3.24"

	Area (ac)	CN	Description
*	9.330	94	
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 8S: post Subarea "A"



Summary for Pond 9P: Subarea B north SWMA

Inflow Area = 11.540 ac, 0.00% Impervious, Inflow Depth = 2.21" for 5-year event
Inflow = 38.27 cfs @ 12.01 hrs, Volume= 2.121 af
Outflow = 0.78 cfs @ 16.29 hrs, Volume= 2.096 af, Atten= 98%, Lag= 256.7 min
Primary = 0.78 cfs @ 16.29 hrs, Volume= 2.096 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 926.01' @ 16.29 hrs Surf.Area= 43,062 sf Storage= 64,985 cf

Plug-Flow detention time= 1,109.5 min calculated for 2.096 af (99% of inflow)
Center-of-Mass det. time= 1,102.2 min (1,909.3 - 807.0)

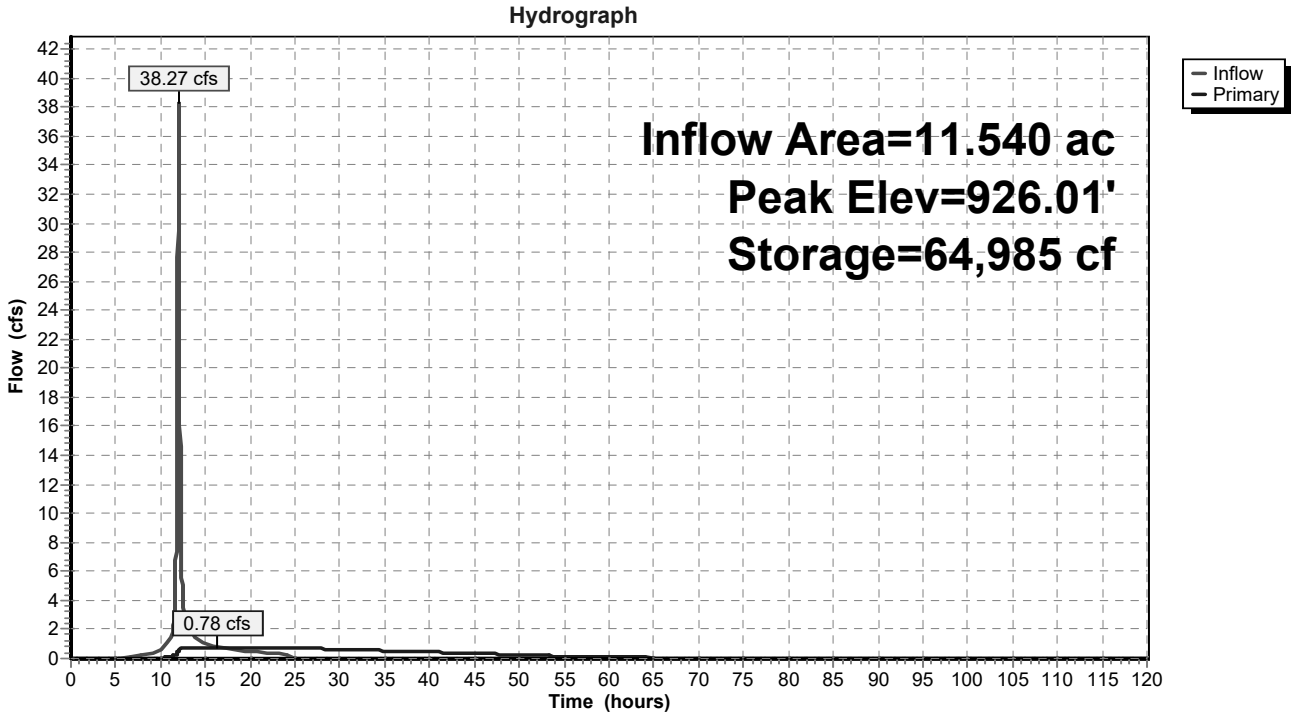
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	157,610 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	37,449	0	0
925.00	39,518	23,090	23,090
926.00	43,009	41,264	64,354
927.00	46,603	44,806	109,160
928.00	50,297	48,450	157,610

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**3.5" Vert. Orifice/Grate X 2.00** C= 0.600
#2	Primary	927.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads
#3	Primary	927.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.78 cfs @ 16.29 hrs HW=926.01' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.78 cfs @ 5.84 fps)
- **2=Orifice/Grate** (Controls 0.00 cfs)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 9P: Subarea B north SWMA



Summary for Pond 10P: Subarea B middle SWMA

Inflow Area = 15.730 ac, 0.00% Impervious, Inflow Depth = 2.21" for 5-year event
Inflow = 52.17 cfs @ 12.01 hrs, Volume= 2.891 af
Outflow = 3.13 cfs @ 13.01 hrs, Volume= 2.799 af, Atten= 94%, Lag= 60.0 min
Primary = 3.13 cfs @ 13.01 hrs, Volume= 2.799 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 925.81' @ 13.01 hrs Surf.Area= 57,236 sf Storage= 75,760 cf

Plug-Flow detention time= 972.6 min calculated for 2.799 af (97% of inflow)
Center-of-Mass det. time= 953.6 min (1,760.6 - 807.0)

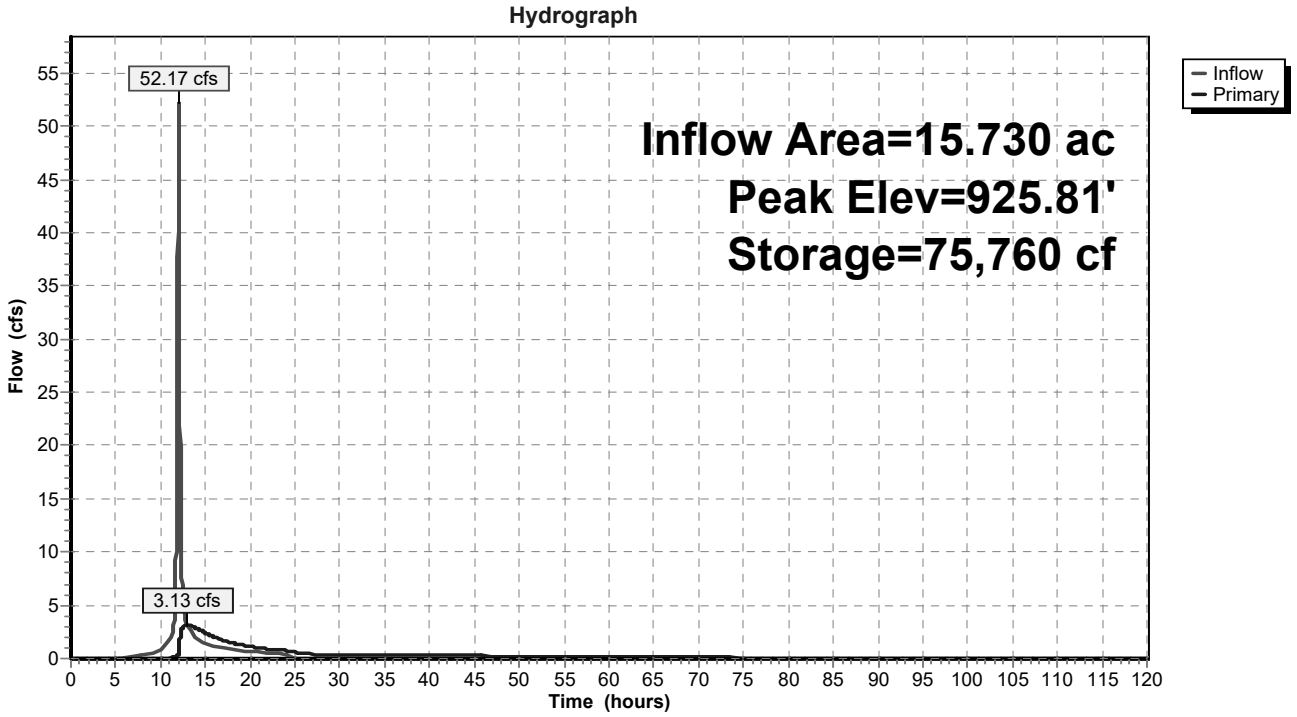
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	213,101 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	50,550	0	0
925.00	53,377	31,178	31,178
926.00	58,164	55,771	86,949
927.00	63,051	60,608	147,556
928.00	68,038	65,545	213,101

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	925.25'	**24.0" W x 7.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	926.70'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=3.13 cfs @ 13.01 hrs HW=925.81' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.47 cfs @ 5.36 fps)
- **2=Orifice/Grate** (Orifice Controls 2.66 cfs @ 2.39 fps)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 10P: Subarea B middle SWMA



Summary for Pond 12P: Subarea "A" SWMA

Inflow Area = 9.330 ac, 0.00% Impervious, Inflow Depth = 2.58" for 5-year event
Inflow = 41.05 cfs @ 11.96 hrs, Volume= 2.008 af
Outflow = 1.25 cfs @ 13.79 hrs, Volume= 1.973 af, Atten= 97%, Lag= 110.3 min
Primary = 1.25 cfs @ 13.79 hrs, Volume= 1.973 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 931.64' @ 13.79 hrs Surf.Area= 38,405 sf Storage= 58,010 cf

Plug-Flow detention time= 987.1 min calculated for 1.973 af (98% of inflow)
Center-of-Mass det. time= 976.5 min (1,759.0 - 782.5)

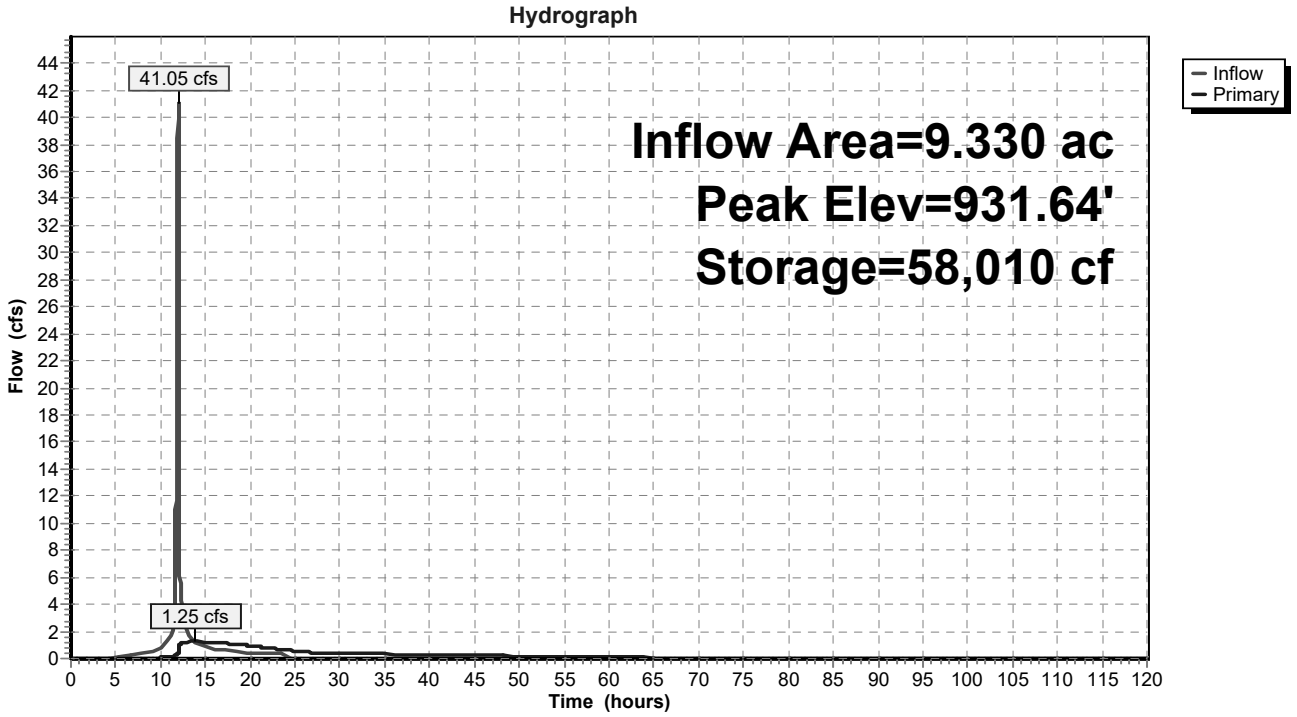
Volume	Invert	Avail.Storage	Storage Description
#1	930.00'	159,374 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
930.00	32,218	0	0
931.00	35,943	34,081	34,081
932.00	39,768	37,856	71,936
933.00	43,694	41,731	113,667
934.00	47,719	45,707	159,374

Device	Routing	Invert	Outlet Devices
#1	Primary	930.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	931.00'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	932.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=1.25 cfs @ 13.79 hrs HW=931.64' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.51 cfs @ 5.85 fps)
- **2=Orifice/Grate** (Orifice Controls 0.74 cfs @ 3.31 fps)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 12P: Subarea "A" SWMA



Summary for Subcatchment 1S: pre north

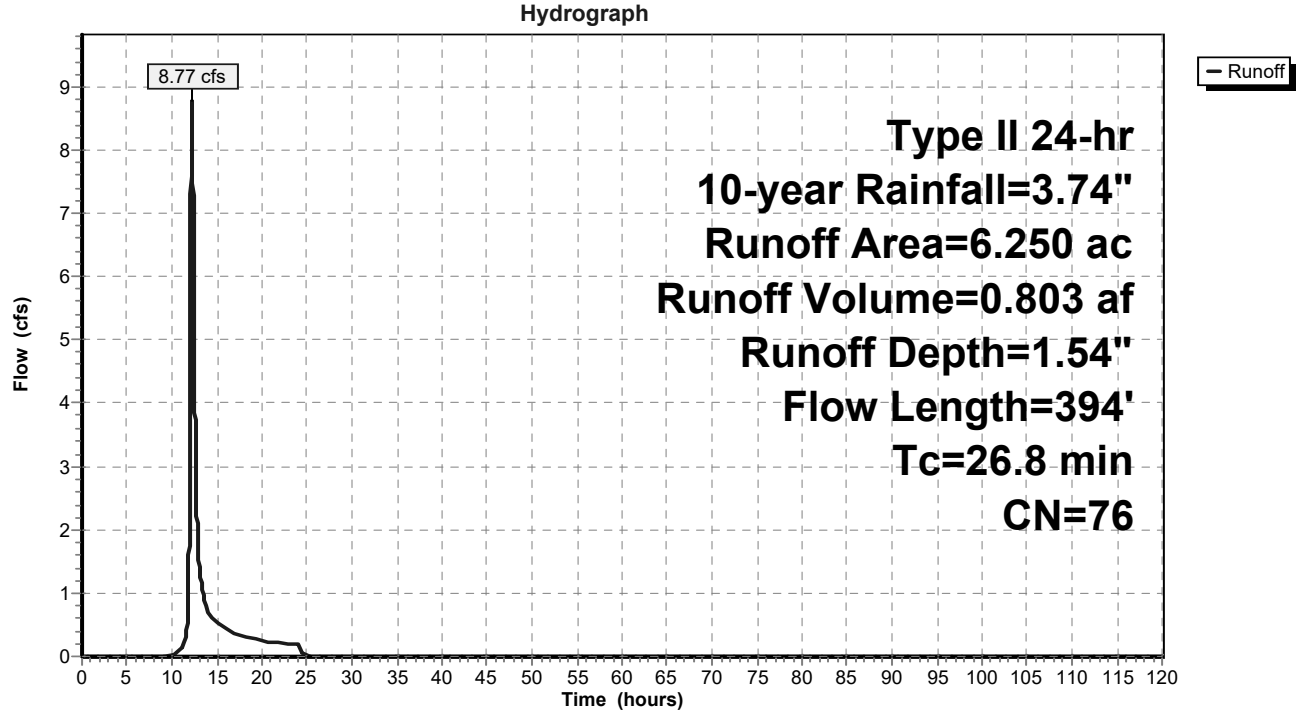
Runoff = 8.77 cfs @ 12.21 hrs, Volume= 0.803 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-year Rainfall=3.74"

	Area (ac)	CN	Description
*	3.710	78	
*	2.540	74	
	6.250	76	Weighted Average
	6.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
6.0	294	0.0136	0.82		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
26.8	394	Total			

Subcatchment 1S: pre north



Summary for Subcatchment 2S: pre middle

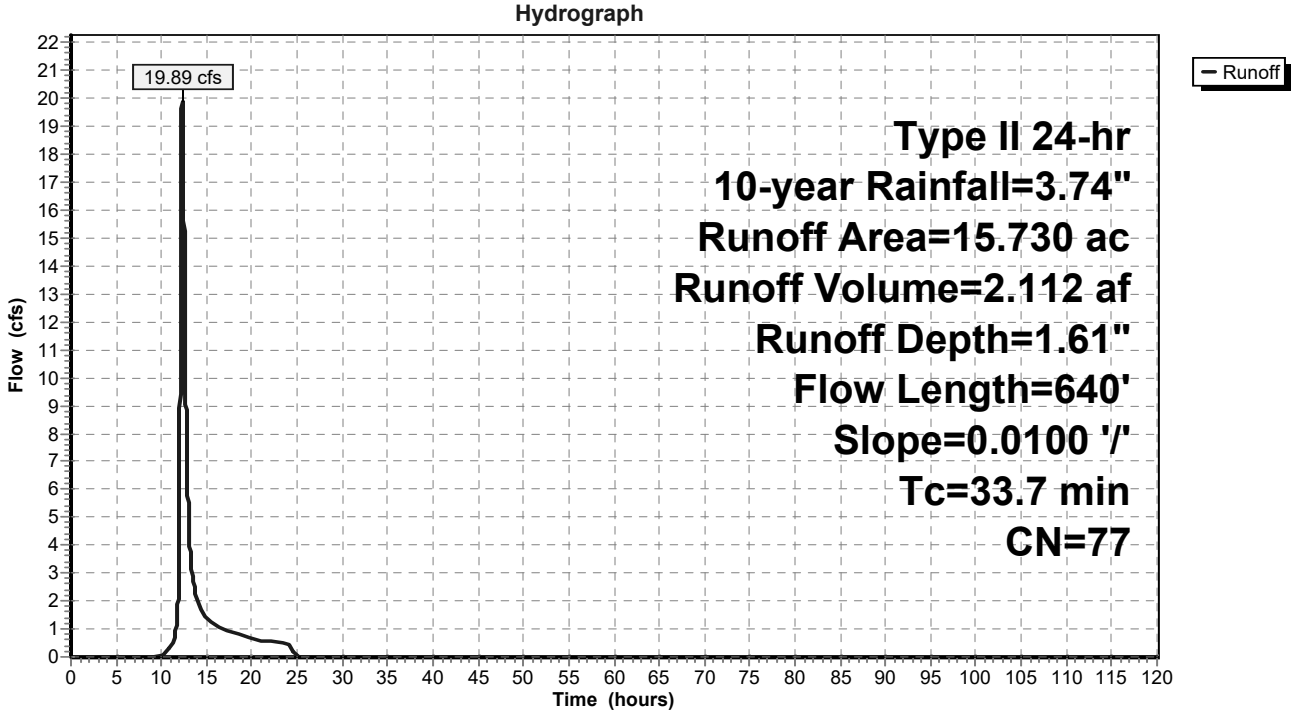
Runoff = 19.89 cfs @ 12.31 hrs, Volume= 2.112 af, Depth= 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-year Rainfall=3.74"

	Area (ac)	CN	Description
*	8.860	78	
*	3.080	74	
*	3.790	78	
	15.730	77	Weighted Average
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
12.9	540	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
33.7	640	Total			

Subcatchment 2S: pre middle



Summary for Subcatchment 4S: pre Subarea "A"

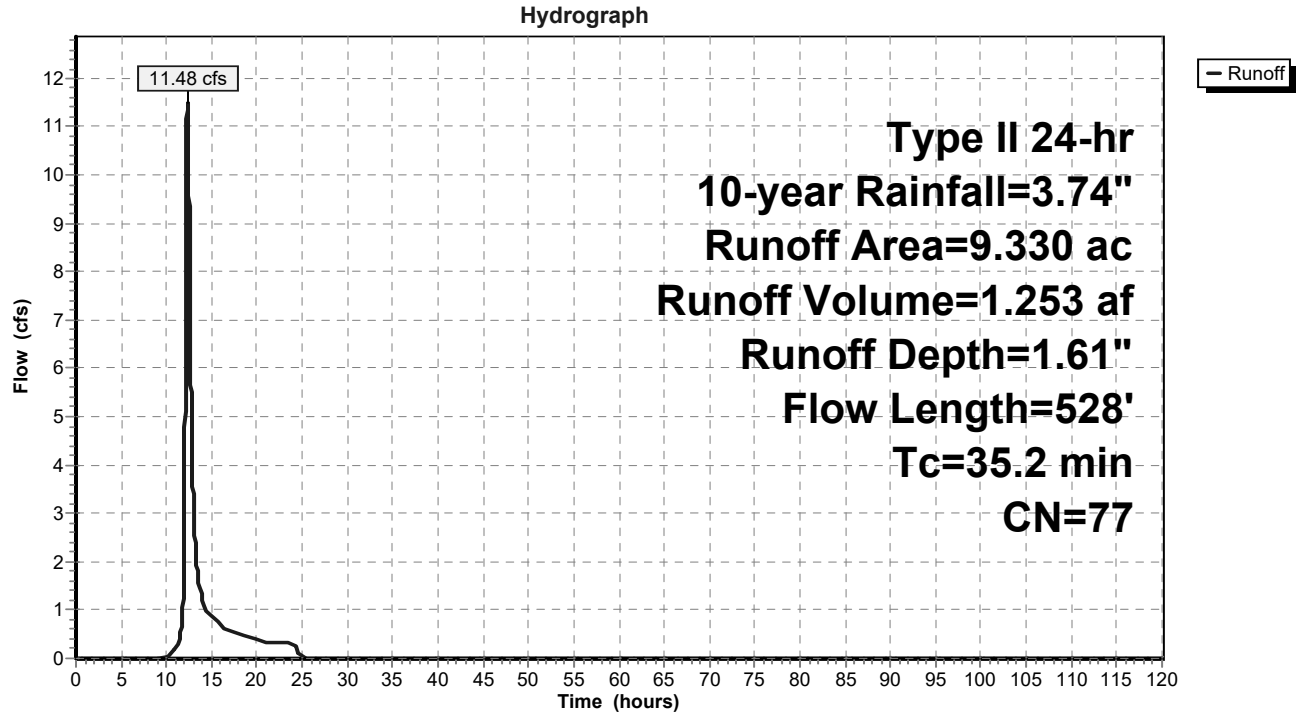
Runoff = 11.48 cfs @ 12.32 hrs, Volume= 1.253 af, Depth= 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-year Rainfall=3.74"

	Area (ac)	CN	Description
*	7.180	78	
*	2.150	74	
	9.330	77	Weighted Average
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
14.4	428	0.0050	0.49		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
35.2	528	Total			

Subcatchment 4S: pre Subarea "A"



Summary for Subcatchment 5S: post north

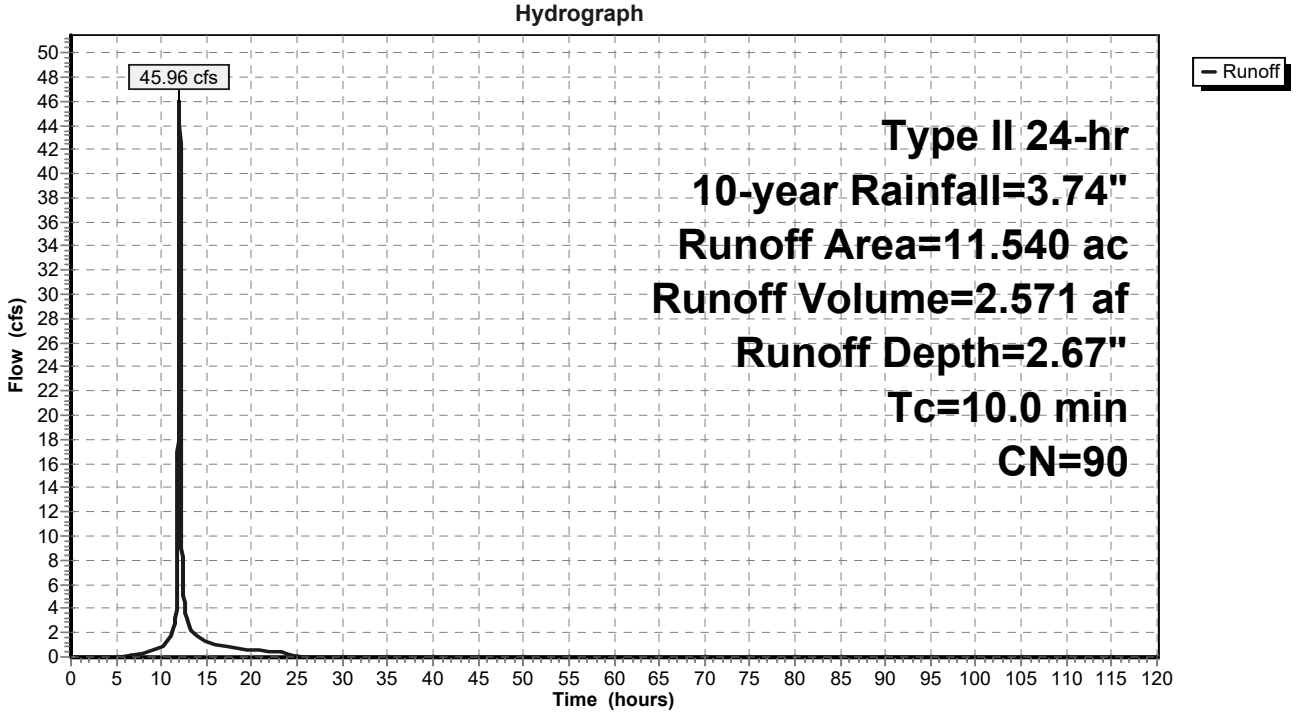
Runoff = 45.96 cfs @ 12.01 hrs, Volume= 2.571 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-year Rainfall=3.74"

	Area (ac)	CN	Description
*	11.540	90	
	11.540		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 5S: post north



Summary for Subcatchment 6S: post middle

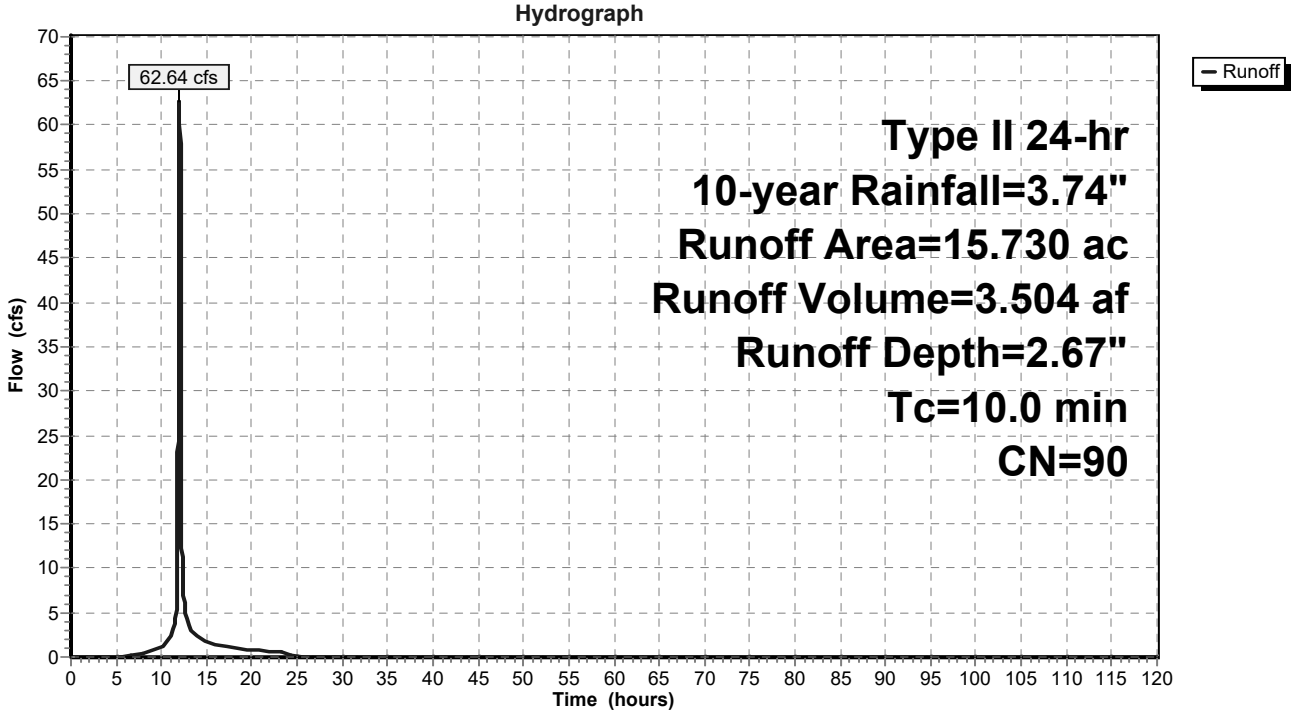
Runoff = 62.64 cfs @ 12.01 hrs, Volume= 3.504 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-year Rainfall=3.74"

	Area (ac)	CN	Description
*	15.730	90	
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 6S: post middle



Summary for Subcatchment 8S: post Subarea "A"

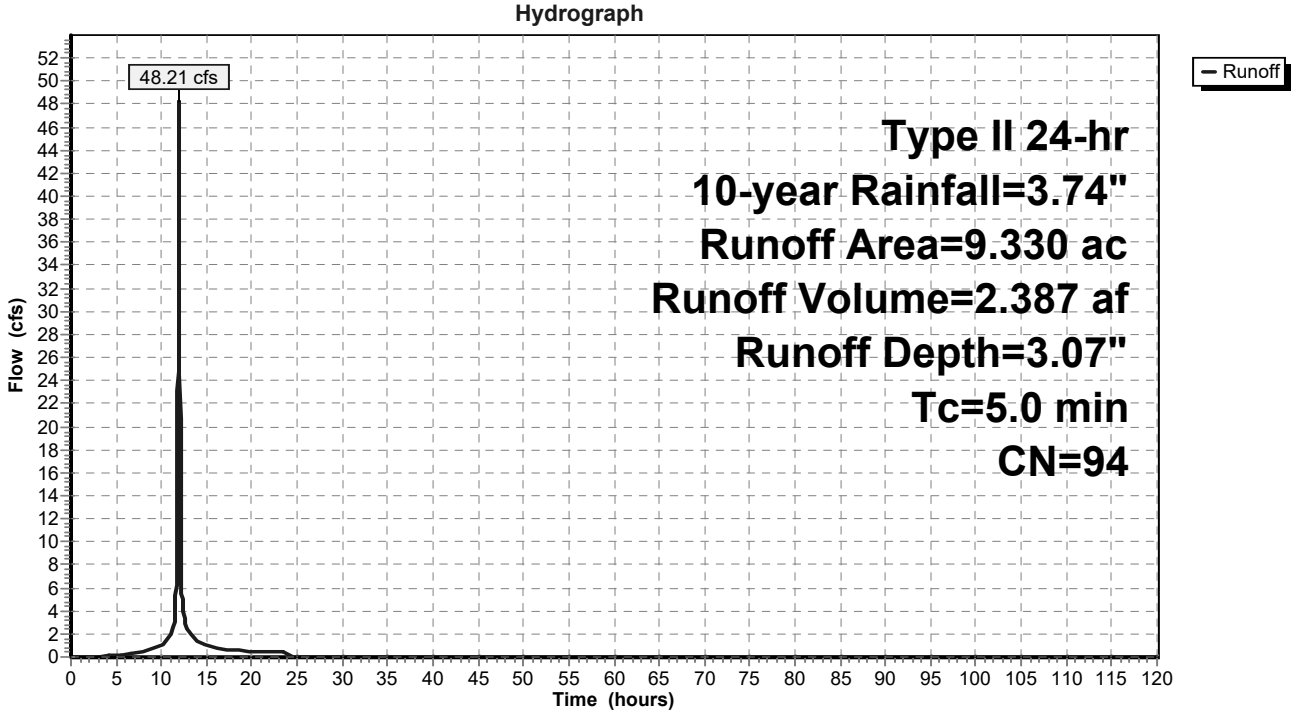
Runoff = 48.21 cfs @ 11.96 hrs, Volume= 2.387 af, Depth= 3.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-year Rainfall=3.74"

	Area (ac)	CN	Description
*	9.330	94	
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 8S: post Subarea "A"



Summary for Pond 9P: Subarea B north SWMA

Inflow Area = 11.540 ac, 0.00% Impervious, Inflow Depth = 2.67" for 10-year event
Inflow = 45.96 cfs @ 12.01 hrs, Volume= 2.571 af
Outflow = 0.87 cfs @ 16.79 hrs, Volume= 2.544 af, Atten= 98%, Lag= 286.8 min
Primary = 0.87 cfs @ 16.79 hrs, Volume= 2.544 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 926.36' @ 16.79 hrs Surf.Area= 44,314 sf Storage= 80,202 cf

Plug-Flow detention time= 1,199.2 min calculated for 2.544 af (99% of inflow)
Center-of-Mass det. time= 1,192.5 min (1,994.1 - 801.6)

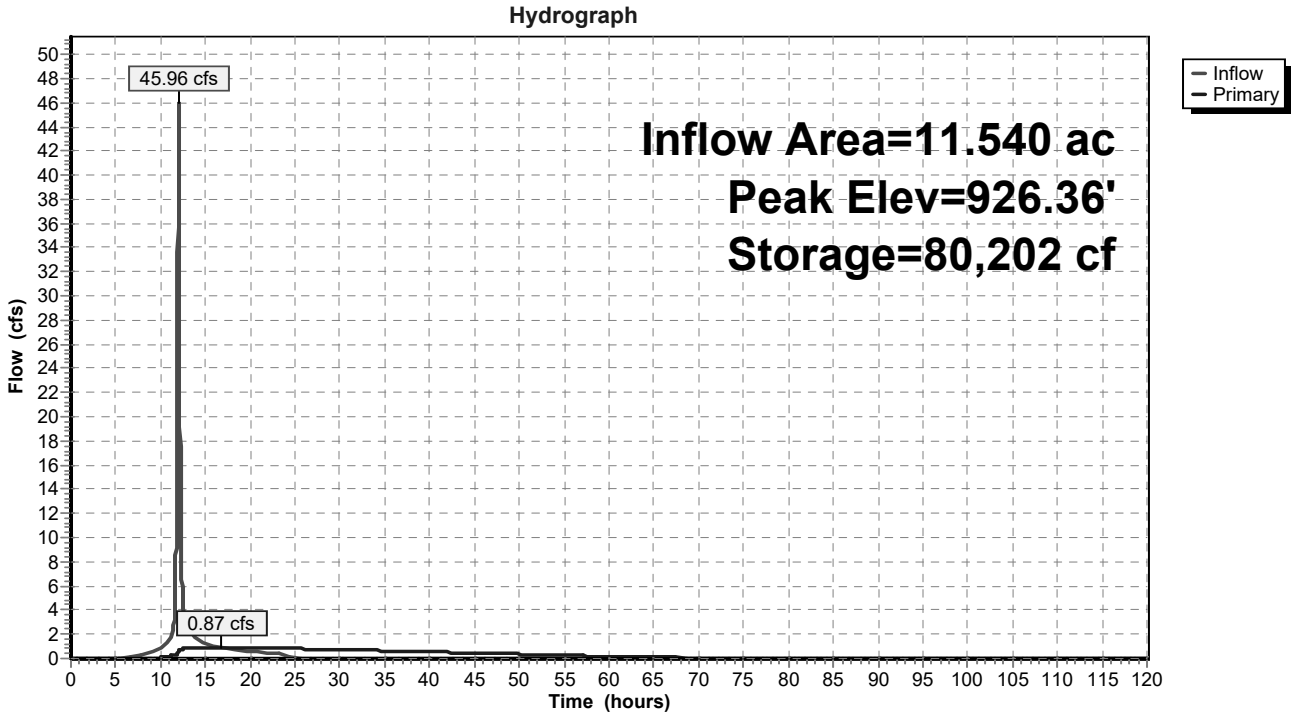
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	157,610 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	37,449	0	0
925.00	39,518	23,090	23,090
926.00	43,009	41,264	64,354
927.00	46,603	44,806	109,160
928.00	50,297	48,450	157,610

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**3.5" Vert. Orifice/Grate X 2.00** C= 0.600
#2	Primary	927.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads
#3	Primary	927.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.87 cfs @ 16.79 hrs HW=926.36' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.87 cfs @ 6.49 fps)
- **2=Orifice/Grate** (Controls 0.00 cfs)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 9P: Subarea B north SWMA



Summary for Pond 10P: Subarea B middle SWMA

Inflow Area = 15.730 ac, 0.00% Impervious, Inflow Depth = 2.67" for 10-year event
Inflow = 62.64 cfs @ 12.01 hrs, Volume= 3.504 af
Outflow = 4.47 cfs @ 12.75 hrs, Volume= 3.412 af, Atten= 93%, Lag= 44.4 min
Primary = 4.47 cfs @ 12.75 hrs, Volume= 3.412 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 926.05' @ 12.75 hrs Surf.Area= 58,422 sf Storage= 90,026 cf

Plug-Flow detention time= 839.3 min calculated for 3.411 af (97% of inflow)
Center-of-Mass det. time= 823.6 min (1,625.2 - 801.6)

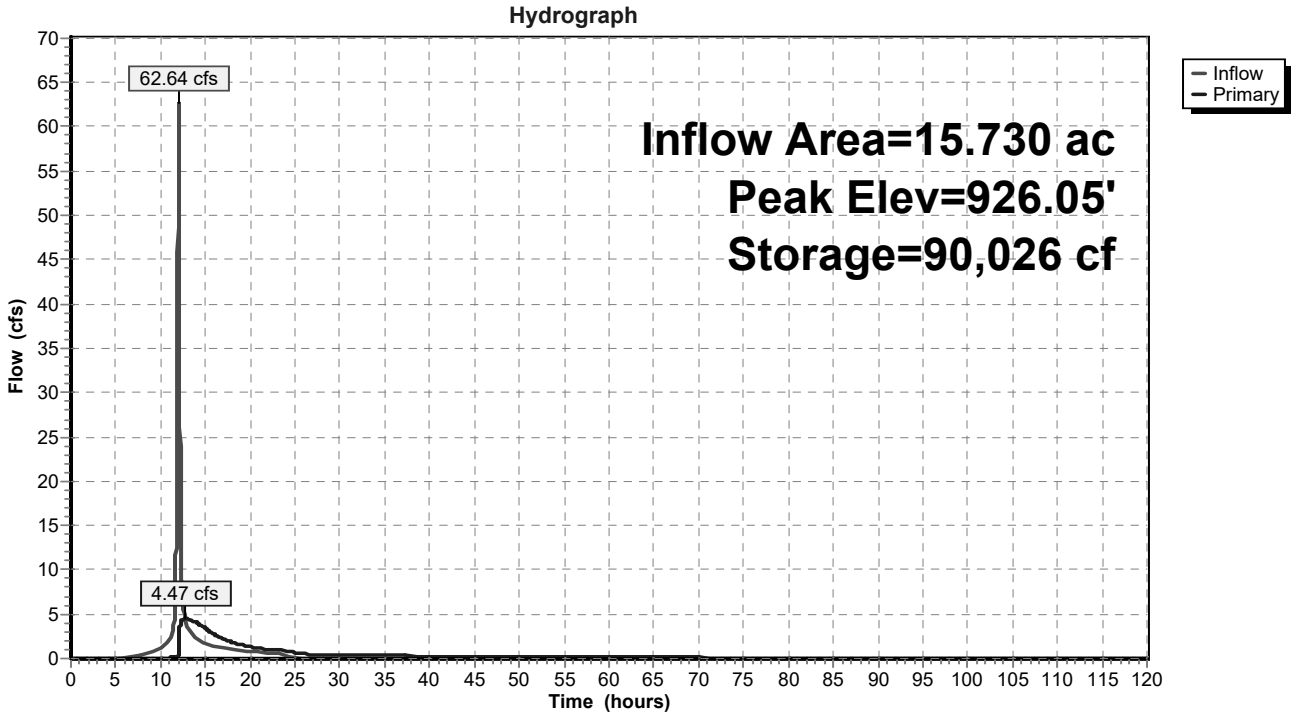
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	213,101 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	50,550	0	0
925.00	53,377	31,178	31,178
926.00	58,164	55,771	86,949
927.00	63,051	60,608	147,556
928.00	68,038	65,545	213,101

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	925.25'	**24.0" W x 7.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	926.70'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=4.47 cfs @ 12.75 hrs HW=926.05' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.51 cfs @ 5.87 fps)
- **2=Orifice/Grate** (Orifice Controls 3.96 cfs @ 3.39 fps)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 10P: Subarea B middle SWMA



Summary for Pond 12P: Subarea "A" SWMA

Inflow Area = 9.330 ac, 0.00% Impervious, Inflow Depth = 3.07" for 10-year event
Inflow = 48.21 cfs @ 11.96 hrs, Volume= 2.387 af
Outflow = 1.49 cfs @ 13.74 hrs, Volume= 2.351 af, Atten= 97%, Lag= 107.1 min
Primary = 1.49 cfs @ 13.74 hrs, Volume= 2.351 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 931.92' @ 13.74 hrs Surf.Area= 39,481 sf Storage= 68,962 cf

Plug-Flow detention time= 940.1 min calculated for 2.351 af (98% of inflow)
Center-of-Mass det. time= 930.4 min (1,708.2 - 777.8)

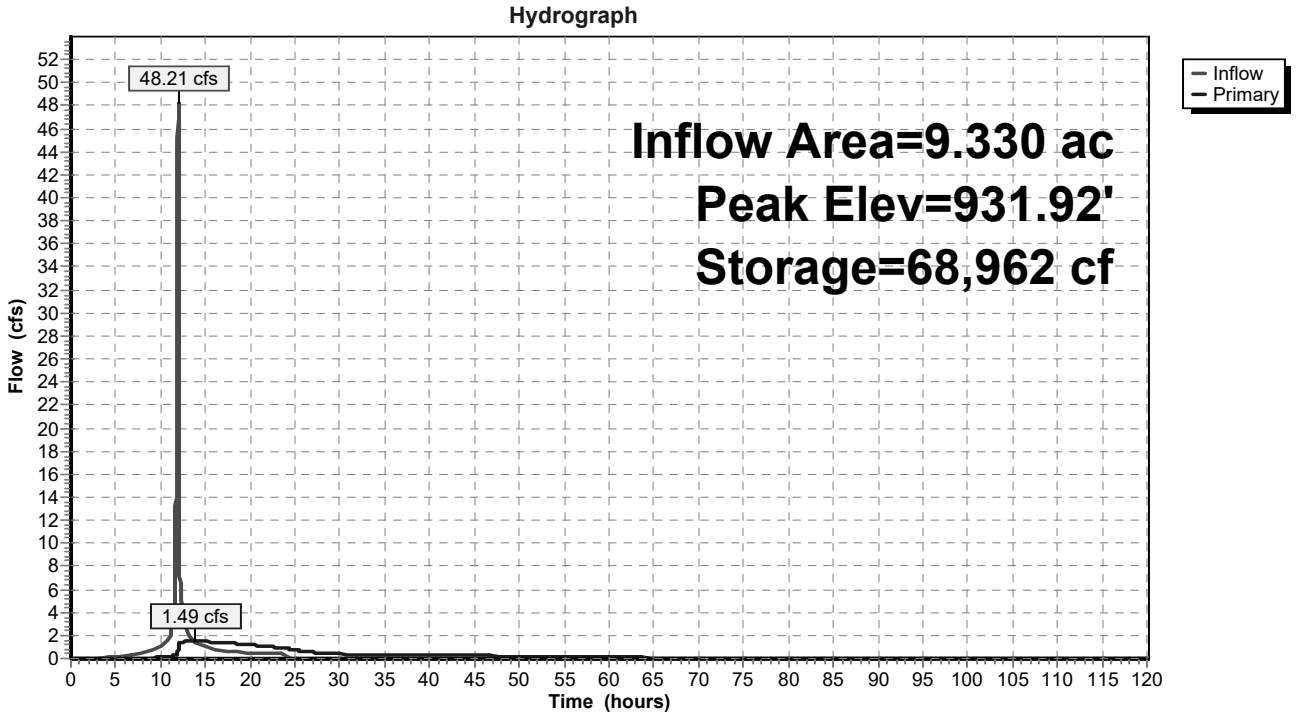
Volume	Invert	Avail.Storage	Storage Description
#1	930.00'	159,374 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
930.00	32,218	0	0
931.00	35,943	34,081	34,081
932.00	39,768	37,856	71,936
933.00	43,694	41,731	113,667
934.00	47,719	45,707	159,374

Device	Routing	Invert	Outlet Devices
#1	Primary	930.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	931.00'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	932.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=1.49 cfs @ 13.74 hrs HW=931.92' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.56 cfs @ 6.38 fps)
- **2=Orifice/Grate** (Orifice Controls 0.93 cfs @ 4.18 fps)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 12P: Subarea "A" SWMA



Summary for Subcatchment 1S: pre north

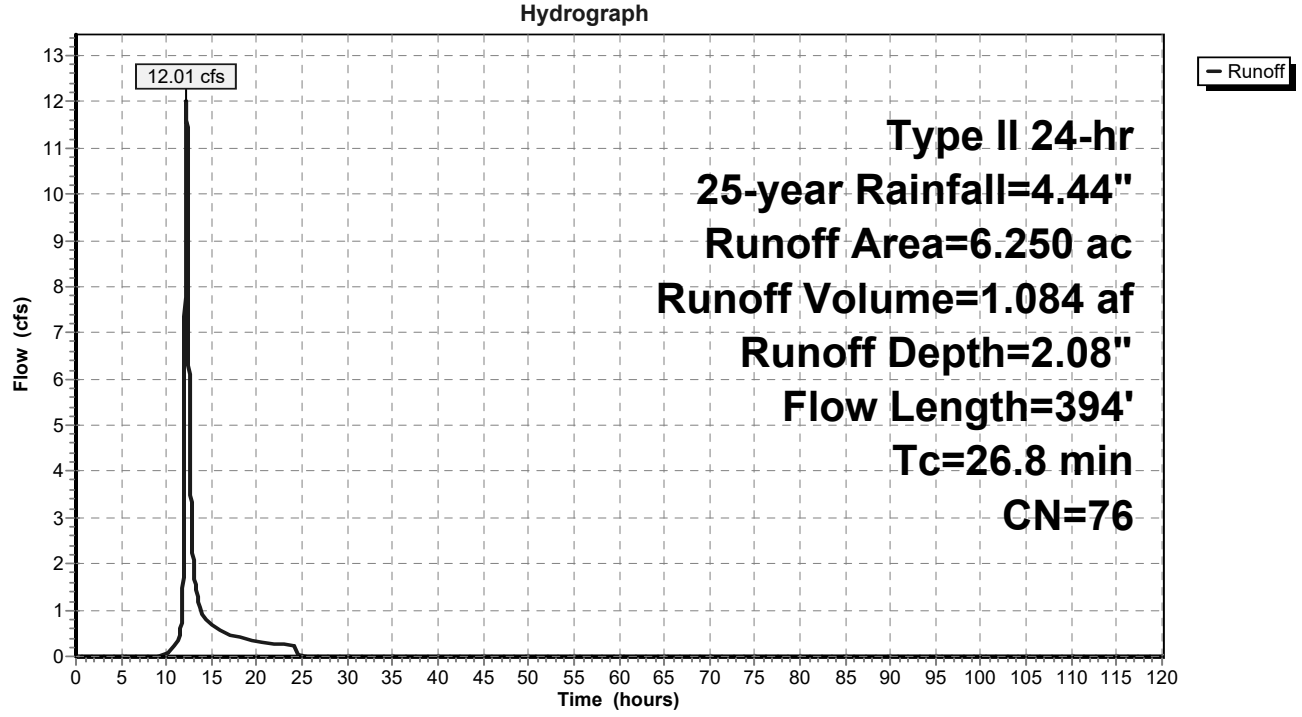
Runoff = 12.01 cfs @ 12.21 hrs, Volume= 1.084 af, Depth= 2.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-year Rainfall=4.44"

	Area (ac)	CN	Description
*	3.710	78	
*	2.540	74	
	6.250	76	Weighted Average
	6.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
6.0	294	0.0136	0.82		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
26.8	394	Total			

Subcatchment 1S: pre north



Summary for Subcatchment 2S: pre middle

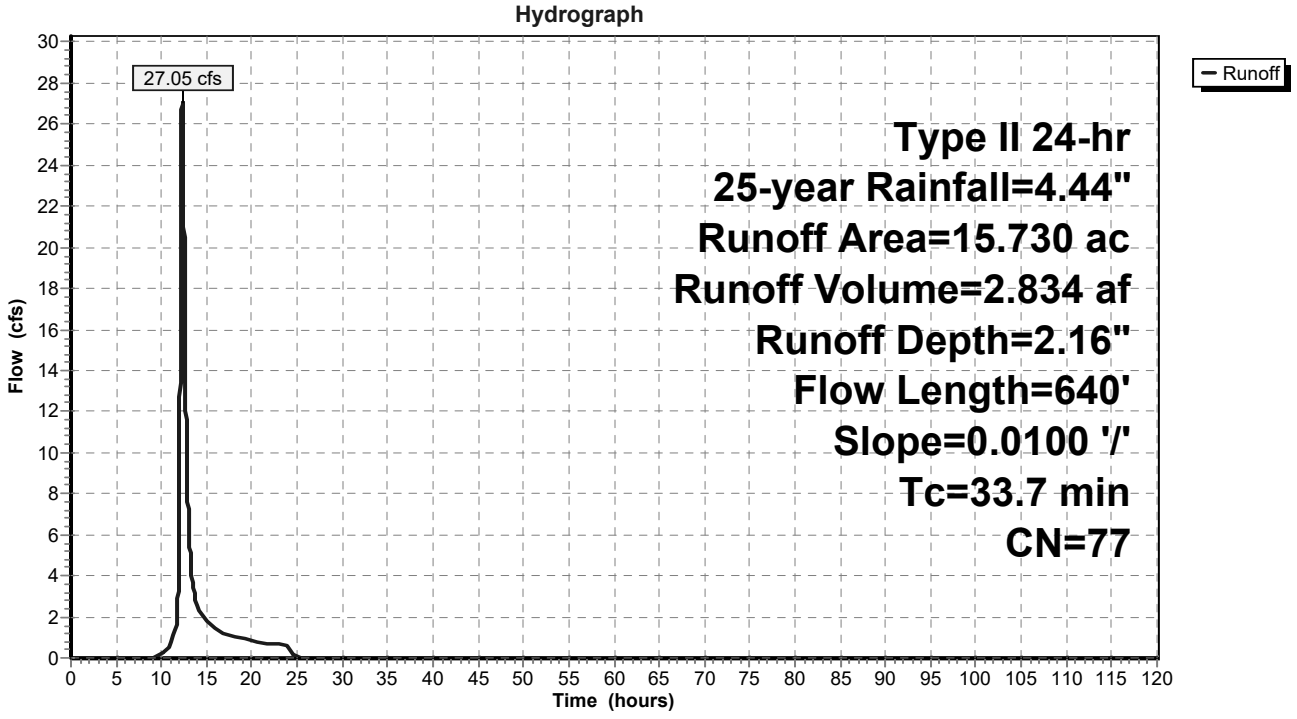
Runoff = 27.05 cfs @ 12.29 hrs, Volume= 2.834 af, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-year Rainfall=4.44"

	Area (ac)	CN	Description
*	8.860	78	
*	3.080	74	
*	3.790	78	
	15.730	77	Weighted Average
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
12.9	540	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
33.7	640	Total			

Subcatchment 2S: pre middle



Summary for Subcatchment 4S: pre Subarea "A"

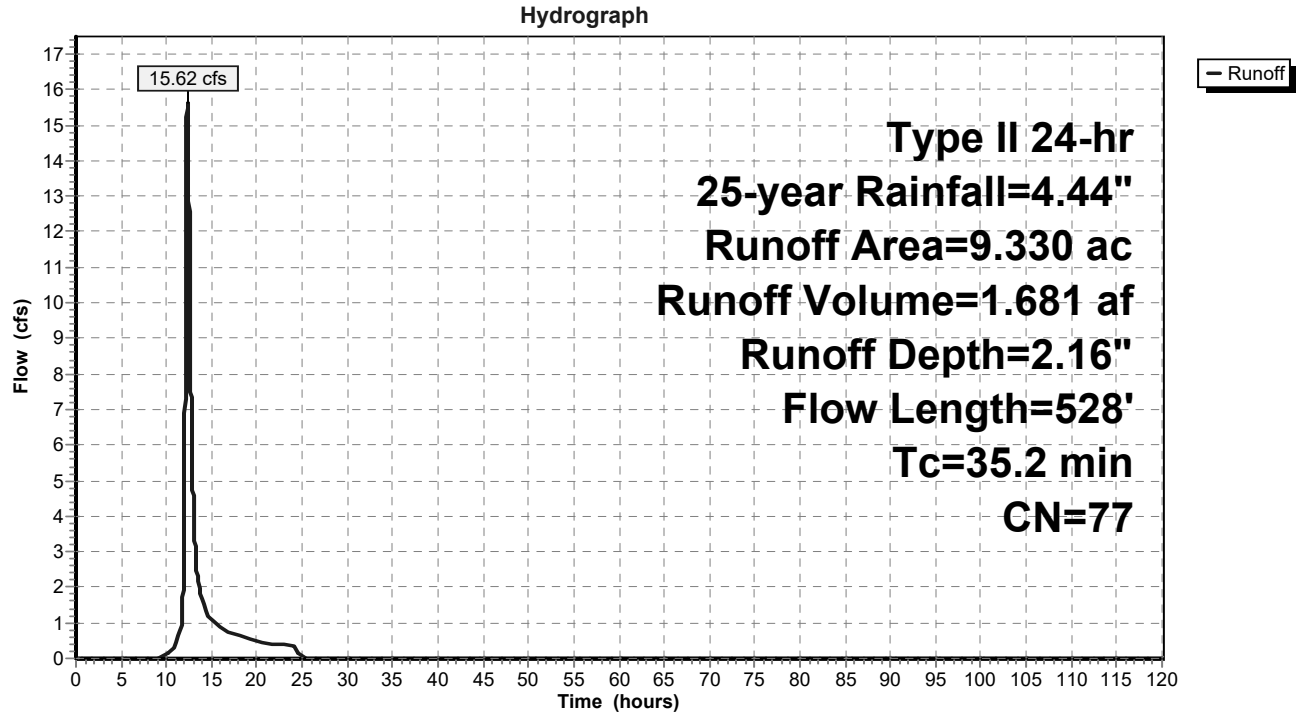
Runoff = 15.62 cfs @ 12.32 hrs, Volume= 1.681 af, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-year Rainfall=4.44"

	Area (ac)	CN	Description
*	7.180	78	
*	2.150	74	
	9.330	77	Weighted Average
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
14.4	428	0.0050	0.49		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
35.2	528	Total			

Subcatchment 4S: pre Subarea "A"



Summary for Subcatchment 5S: post north

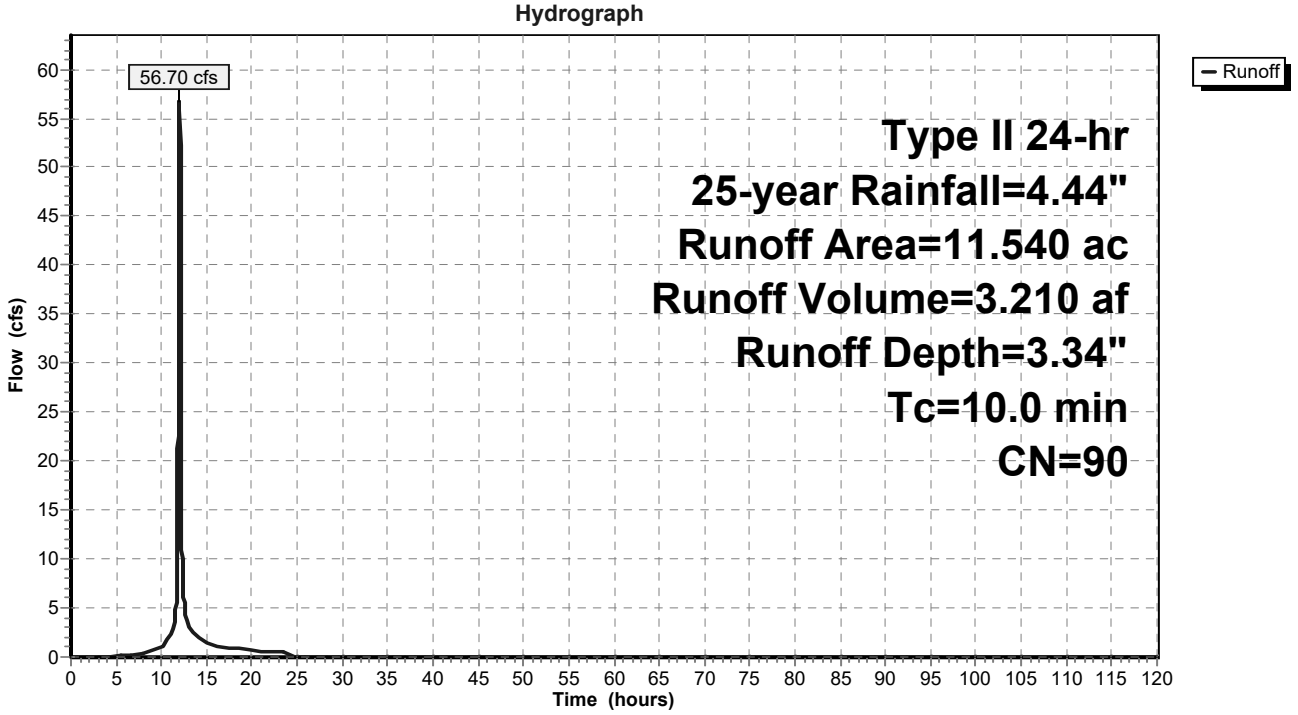
Runoff = 56.70 cfs @ 12.01 hrs, Volume= 3.210 af, Depth= 3.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-year Rainfall=4.44"

	Area (ac)	CN	Description
*	11.540	90	
	11.540		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 5S: post north



Summary for Subcatchment 6S: post middle

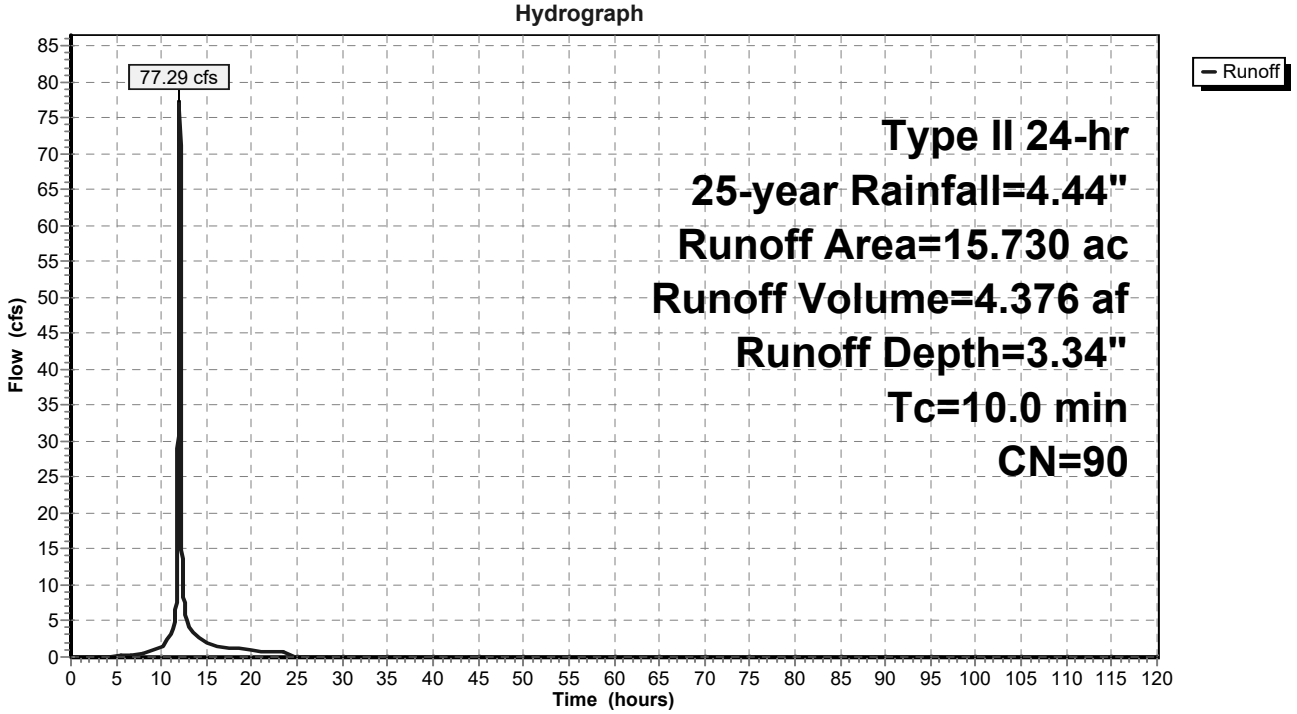
Runoff = 77.29 cfs @ 12.01 hrs, Volume= 4.376 af, Depth= 3.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-year Rainfall=4.44"

	Area (ac)	CN	Description
*	15.730	90	
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 6S: post middle



Summary for Subcatchment 8S: post Subarea "A"

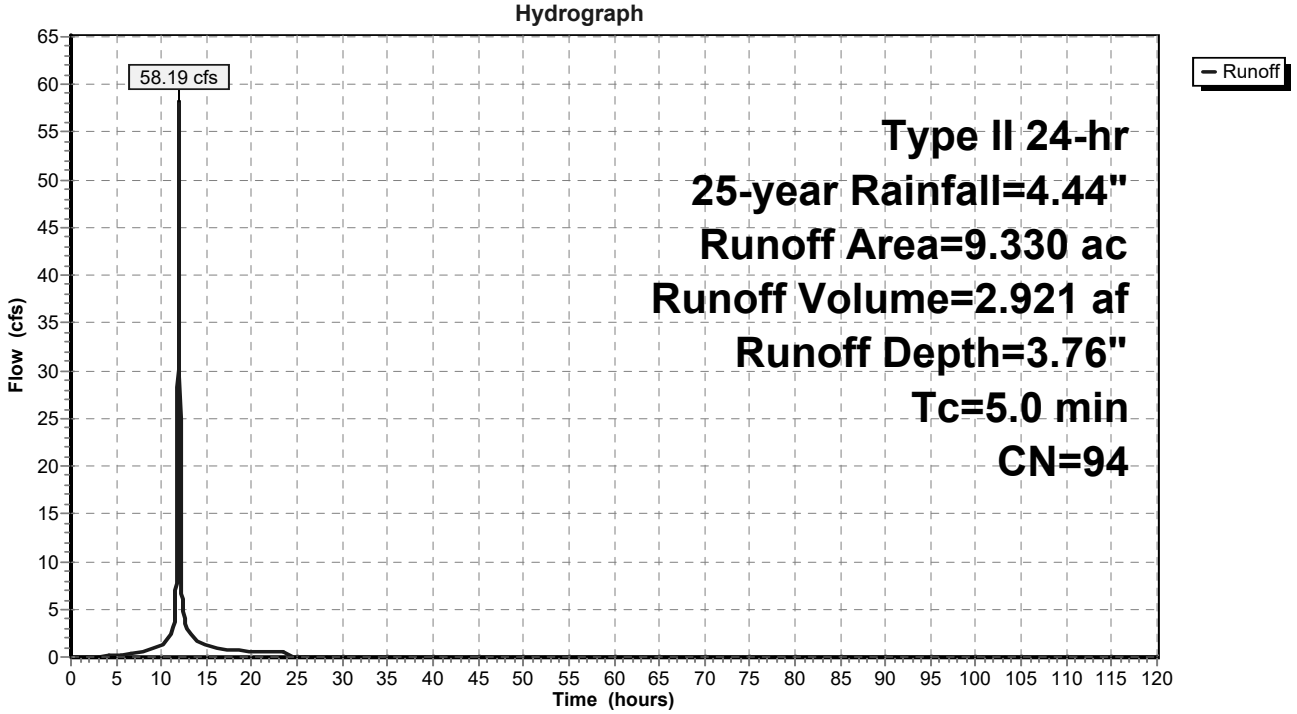
Runoff = 58.19 cfs @ 11.96 hrs, Volume= 2.921 af, Depth= 3.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-year Rainfall=4.44"

	Area (ac)	CN	Description
*	9.330	94	
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 8S: post Subarea "A"



Summary for Pond 9P: Subarea B north SWMA

Inflow Area = 11.540 ac, 0.00% Impervious, Inflow Depth = 3.34" for 25-year event
Inflow = 56.70 cfs @ 12.01 hrs, Volume= 3.210 af
Outflow = 0.98 cfs @ 17.39 hrs, Volume= 3.180 af, Atten= 98%, Lag= 322.4 min
Primary = 0.98 cfs @ 17.39 hrs, Volume= 3.180 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 926.85' @ 17.39 hrs Surf.Area= 46,064 sf Storage= 102,217 cf

Plug-Flow detention time= 1,320.7 min calculated for 3.180 af (99% of inflow)
Center-of-Mass det. time= 1,315.0 min (2,110.3 - 795.4)

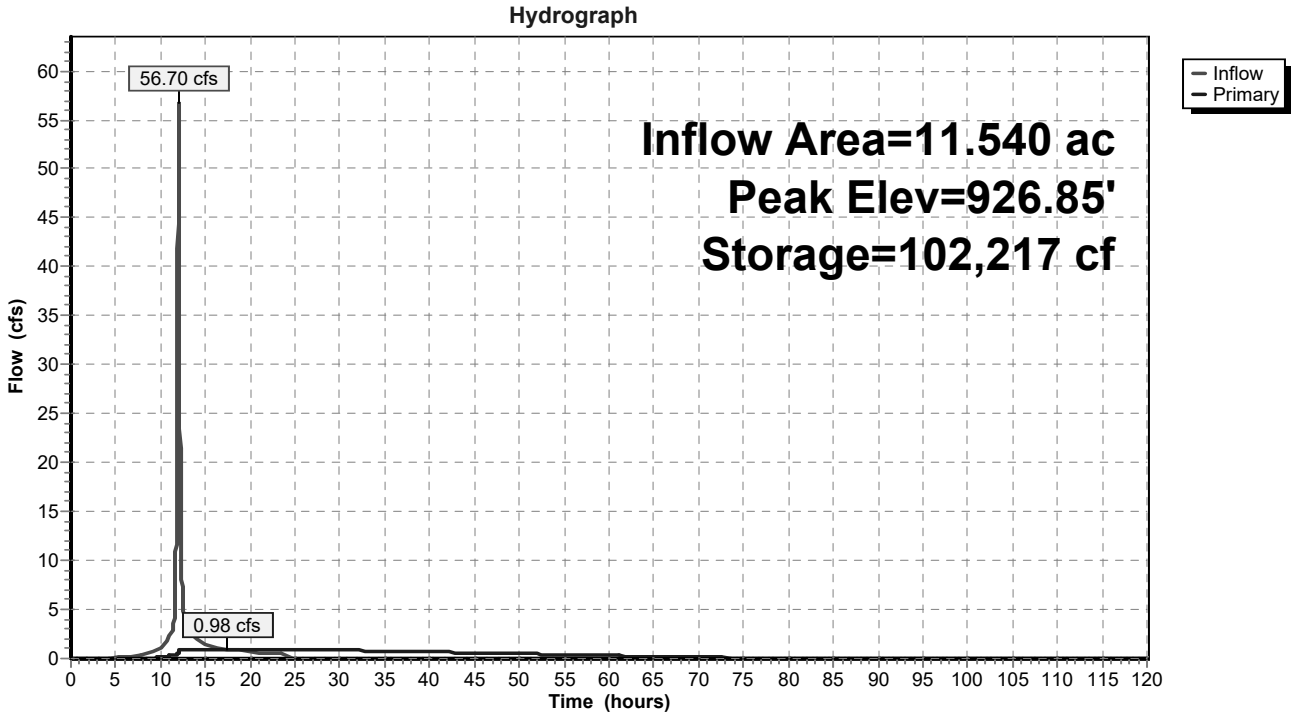
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	157,610 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	37,449	0	0
925.00	39,518	23,090	23,090
926.00	43,009	41,264	64,354
927.00	46,603	44,806	109,160
928.00	50,297	48,450	157,610

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**3.5" Vert. Orifice/Grate X 2.00** C= 0.600
#2	Primary	927.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads
#3	Primary	927.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.98 cfs @ 17.39 hrs HW=926.85' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.98 cfs @ 7.31 fps)
- **2=Orifice/Grate** (Controls 0.00 cfs)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 9P: Subarea B north SWMA



Summary for Pond 10P: Subarea B middle SWMA

Inflow Area = 15.730 ac, 0.00% Impervious, Inflow Depth = 3.34" for 25-year event
Inflow = 77.29 cfs @ 12.01 hrs, Volume= 4.376 af
Outflow = 5.84 cfs @ 12.68 hrs, Volume= 4.282 af, Atten= 92%, Lag= 39.9 min
Primary = 5.84 cfs @ 12.68 hrs, Volume= 4.282 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 926.43' @ 12.68 hrs Surf.Area= 60,265 sf Storage= 112,406 cf

Plug-Flow detention time= 720.8 min calculated for 4.282 af (98% of inflow)
Center-of-Mass det. time= 707.9 min (1,503.3 - 795.4)

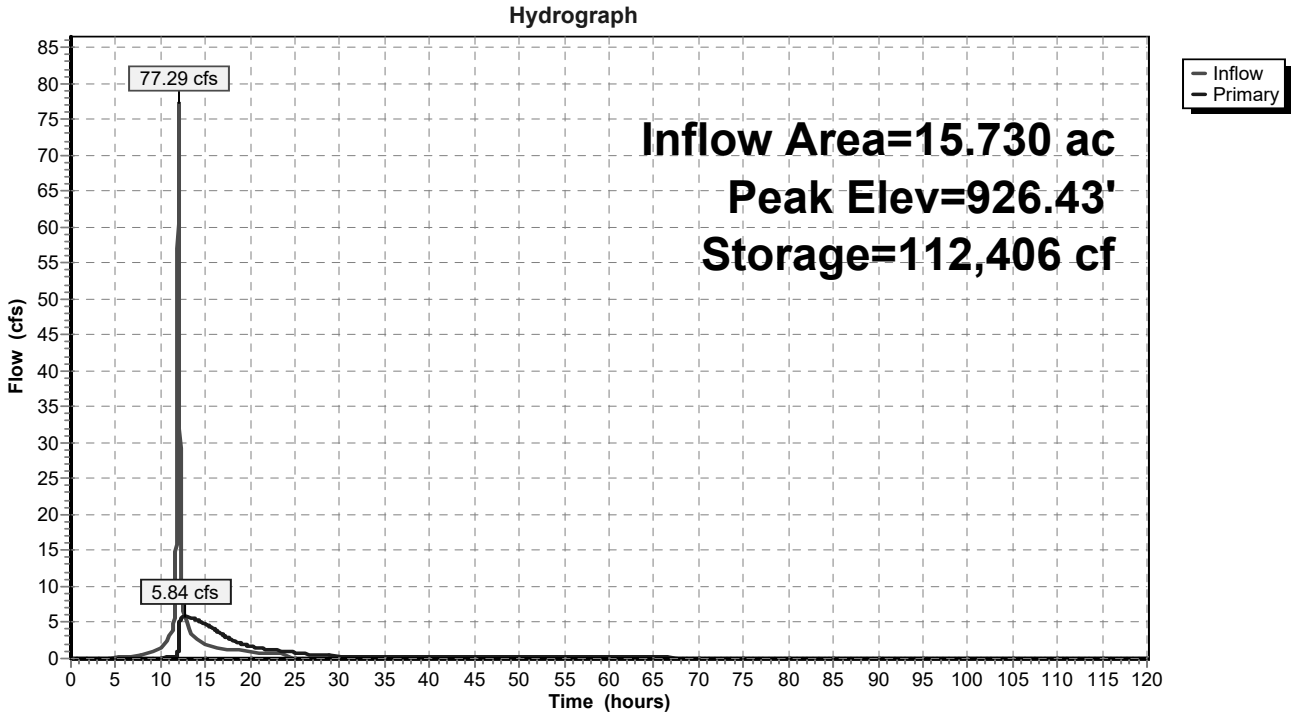
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	213,101 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	50,550	0	0
925.00	53,377	31,178	31,178
926.00	58,164	55,771	86,949
927.00	63,051	60,608	147,556
928.00	68,038	65,545	213,101

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	925.25'	**24.0" W x 7.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	926.70'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=5.84 cfs @ 12.68 hrs HW=926.43' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.57 cfs @ 6.57 fps)
- **2=Orifice/Grate** (Orifice Controls 5.27 cfs @ 4.52 fps)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 10P: Subarea B middle SWMA



Summary for Pond 12P: Subarea "A" SWMA

Inflow Area = 9.330 ac, 0.00% Impervious, Inflow Depth = 3.76" for 25-year event
Inflow = 58.19 cfs @ 11.96 hrs, Volume= 2.921 af
Outflow = 1.76 cfs @ 13.76 hrs, Volume= 2.883 af, Atten= 97%, Lag= 108.3 min
Primary = 1.76 cfs @ 13.76 hrs, Volume= 2.883 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 932.32' @ 13.76 hrs Surf.Area= 41,023 sf Storage= 84,852 cf

Plug-Flow detention time= 911.4 min calculated for 2.883 af (99% of inflow)
Center-of-Mass det. time= 903.1 min (1,675.6 - 772.5)

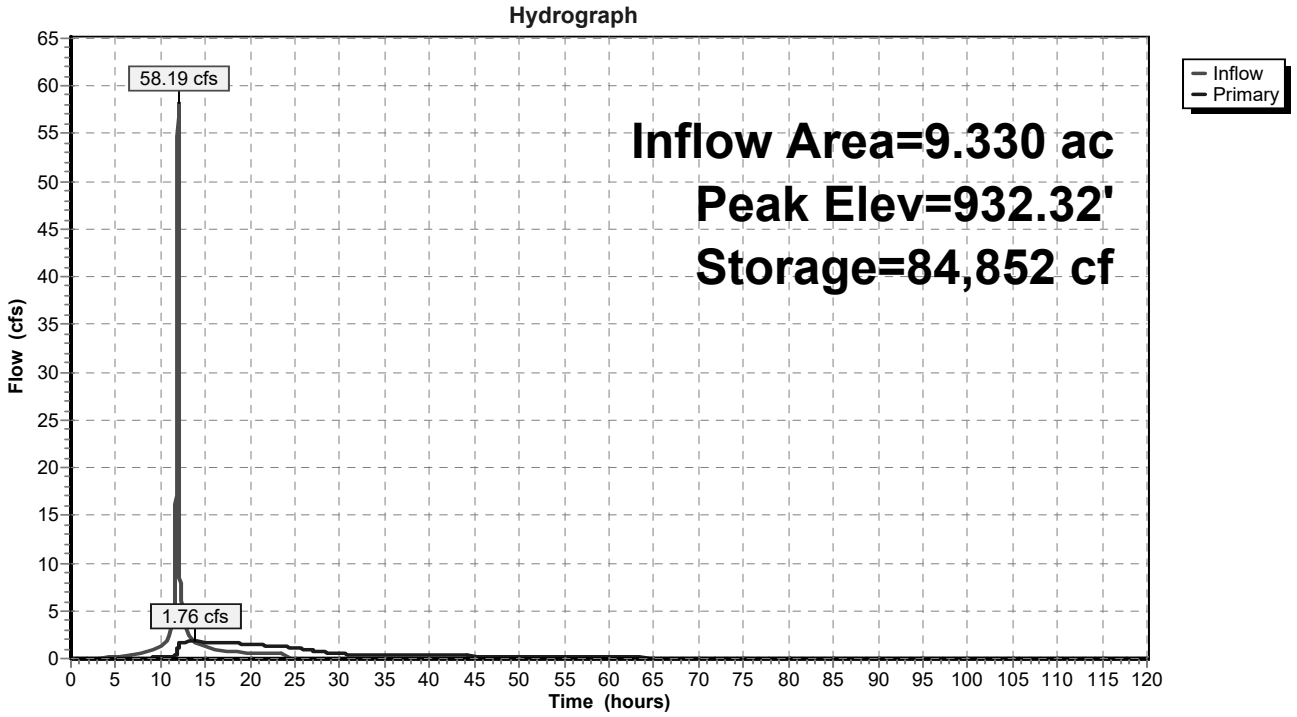
Volume	Invert	Avail.Storage	Storage Description
#1	930.00'	159,374 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
930.00	32,218	0	0
931.00	35,943	34,081	34,081
932.00	39,768	37,856	71,936
933.00	43,694	41,731	113,667
934.00	47,719	45,707	159,374

Device	Routing	Invert	Outlet Devices
#1	Primary	930.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	931.00'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	932.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=1.76 cfs @ 13.76 hrs HW=932.32' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.62 cfs @ 7.07 fps)
- **2=Orifice/Grate** (Orifice Controls 1.15 cfs @ 5.17 fps)
- **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 12P: Subarea "A" SWMA



Summary for Subcatchment 1S: pre north

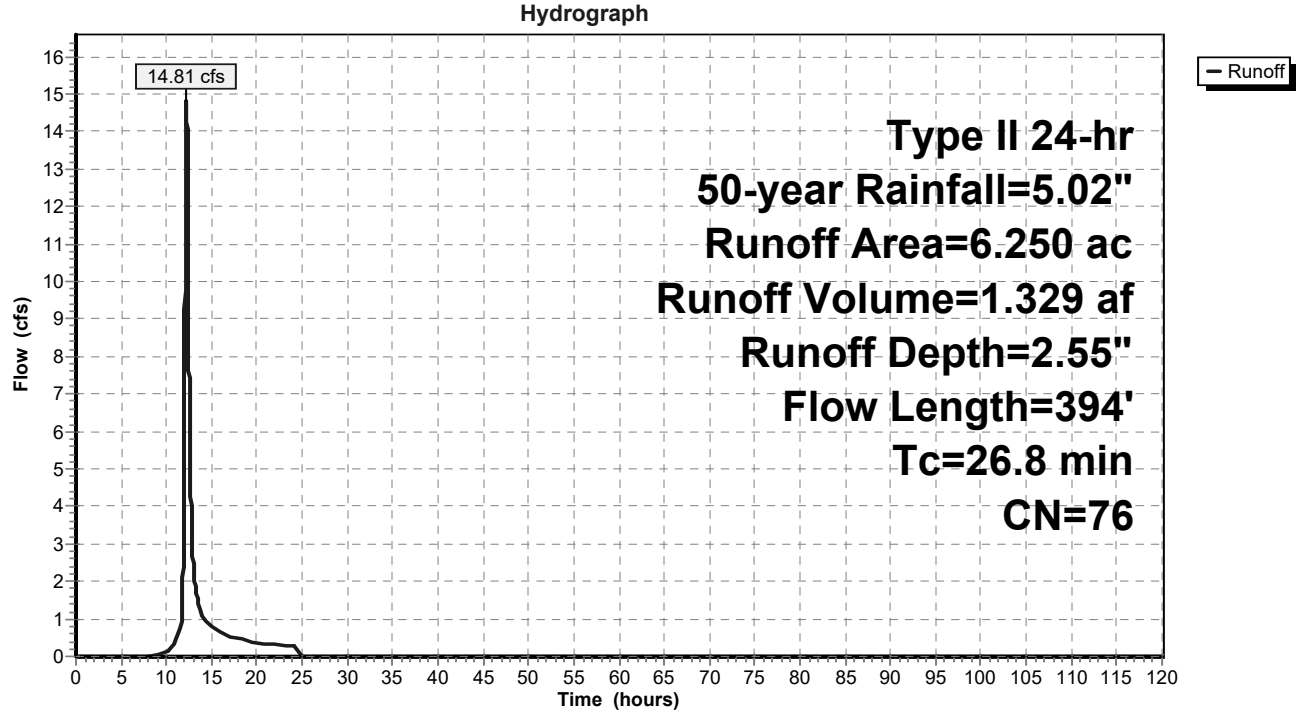
Runoff = 14.81 cfs @ 12.21 hrs, Volume= 1.329 af, Depth= 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-year Rainfall=5.02"

	Area (ac)	CN	Description
*	3.710	78	
*	2.540	74	
	6.250	76	Weighted Average
	6.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
6.0	294	0.0136	0.82		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
26.8	394	Total			

Subcatchment 1S: pre north



Summary for Subcatchment 2S: pre middle

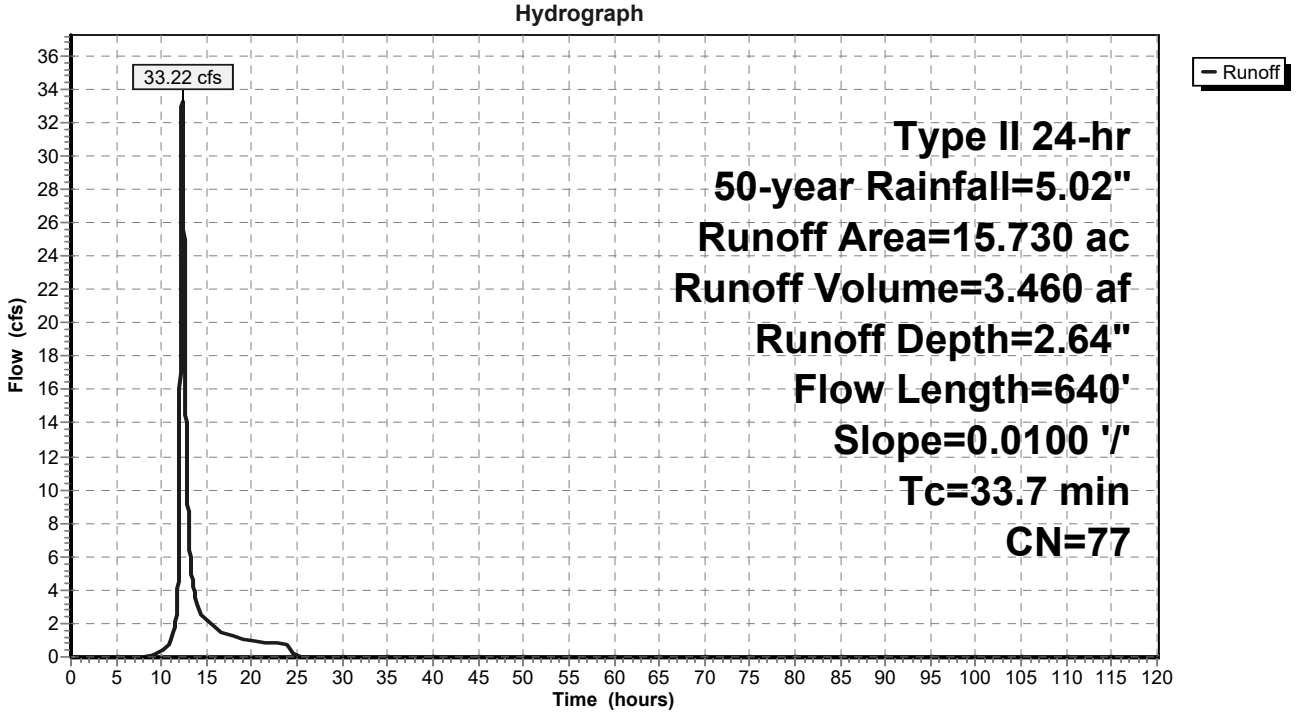
Runoff = 33.22 cfs @ 12.29 hrs, Volume= 3.460 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-year Rainfall=5.02"

	Area (ac)	CN	Description
*	8.860	78	
*	3.080	74	
*	3.790	78	
	15.730	77	Weighted Average
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
12.9	540	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
33.7	640	Total			

Subcatchment 2S: pre middle



Summary for Subcatchment 4S: pre Subarea "A"

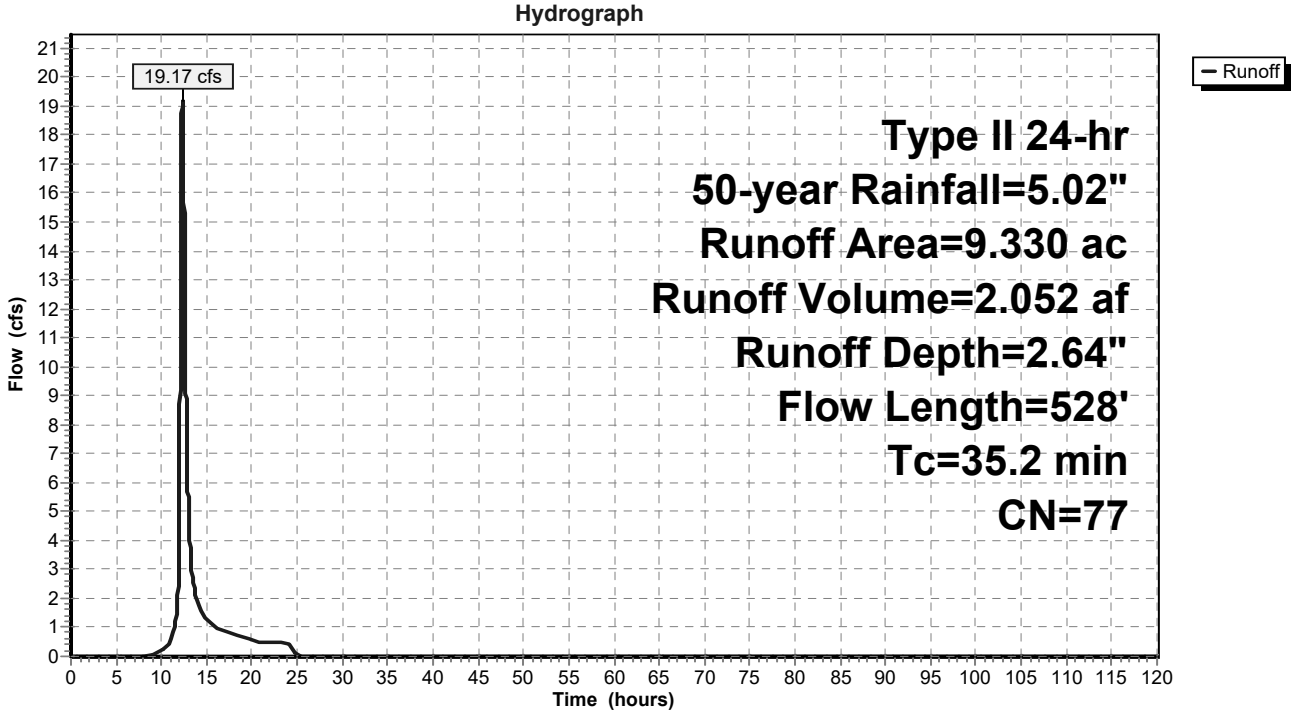
Runoff = 19.17 cfs @ 12.32 hrs, Volume= 2.052 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-year Rainfall=5.02"

	Area (ac)	CN	Description
*	7.180	78	
*	2.150	74	
	9.330	77	Weighted Average
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
14.4	428	0.0050	0.49		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
35.2	528	Total			

Subcatchment 4S: pre Subarea "A"



Summary for Subcatchment 5S: post north

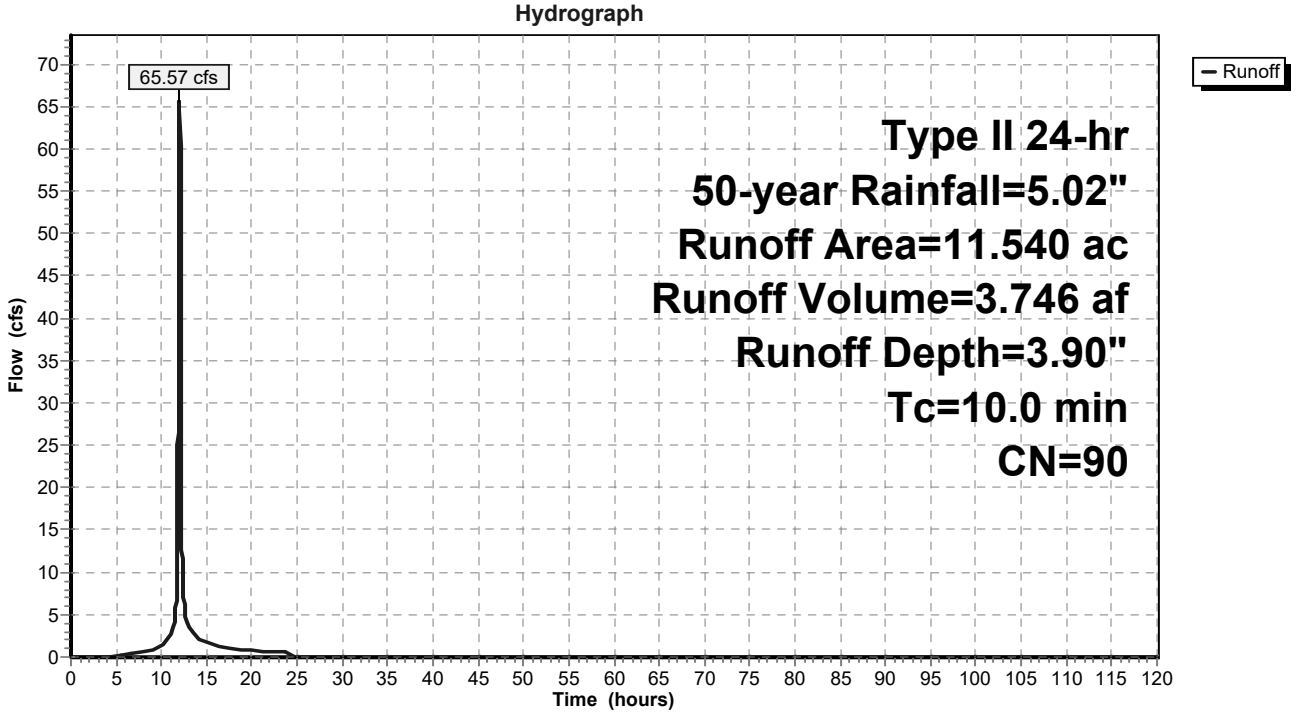
Runoff = 65.57 cfs @ 12.01 hrs, Volume= 3.746 af, Depth= 3.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-year Rainfall=5.02"

	Area (ac)	CN	Description
*	11.540	90	
	11.540		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 5S: post north



Summary for Subcatchment 6S: post middle

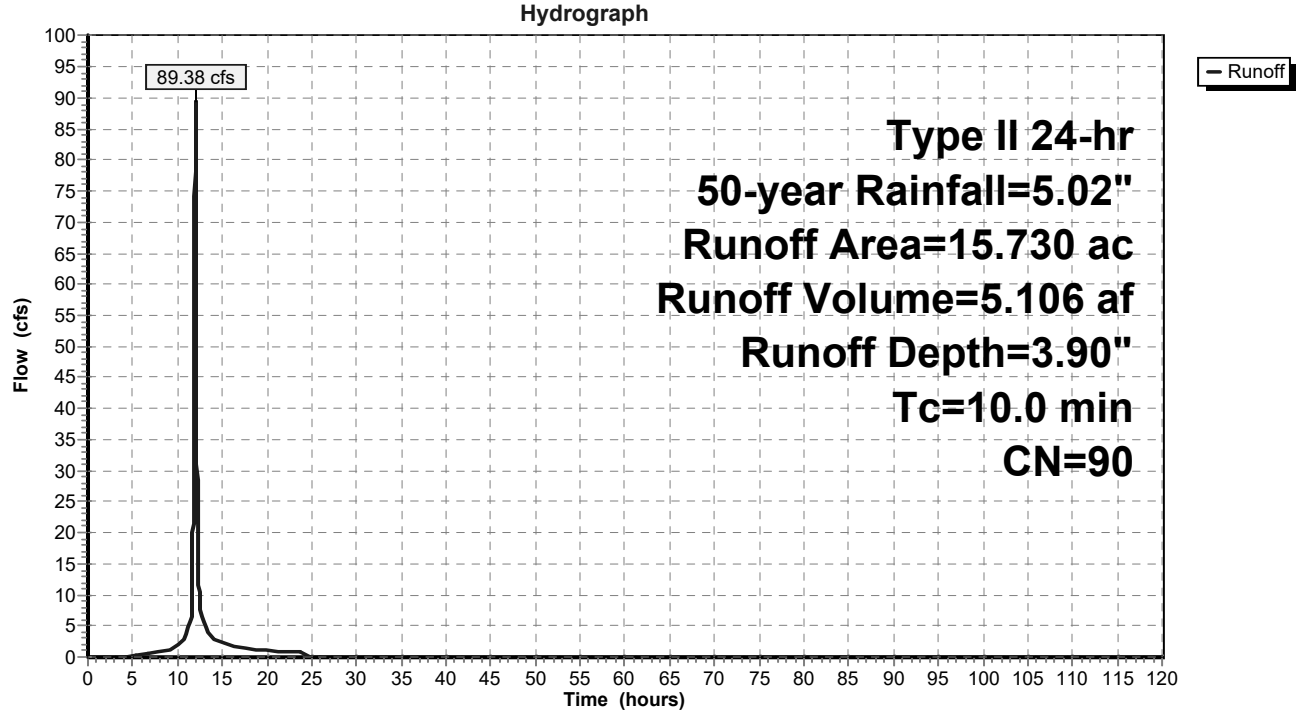
Runoff = 89.38 cfs @ 12.01 hrs, Volume= 5.106 af, Depth= 3.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-year Rainfall=5.02"

	Area (ac)	CN	Description
*	15.730	90	
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 6S: post middle



Summary for Subcatchment 8S: post Subarea "A"

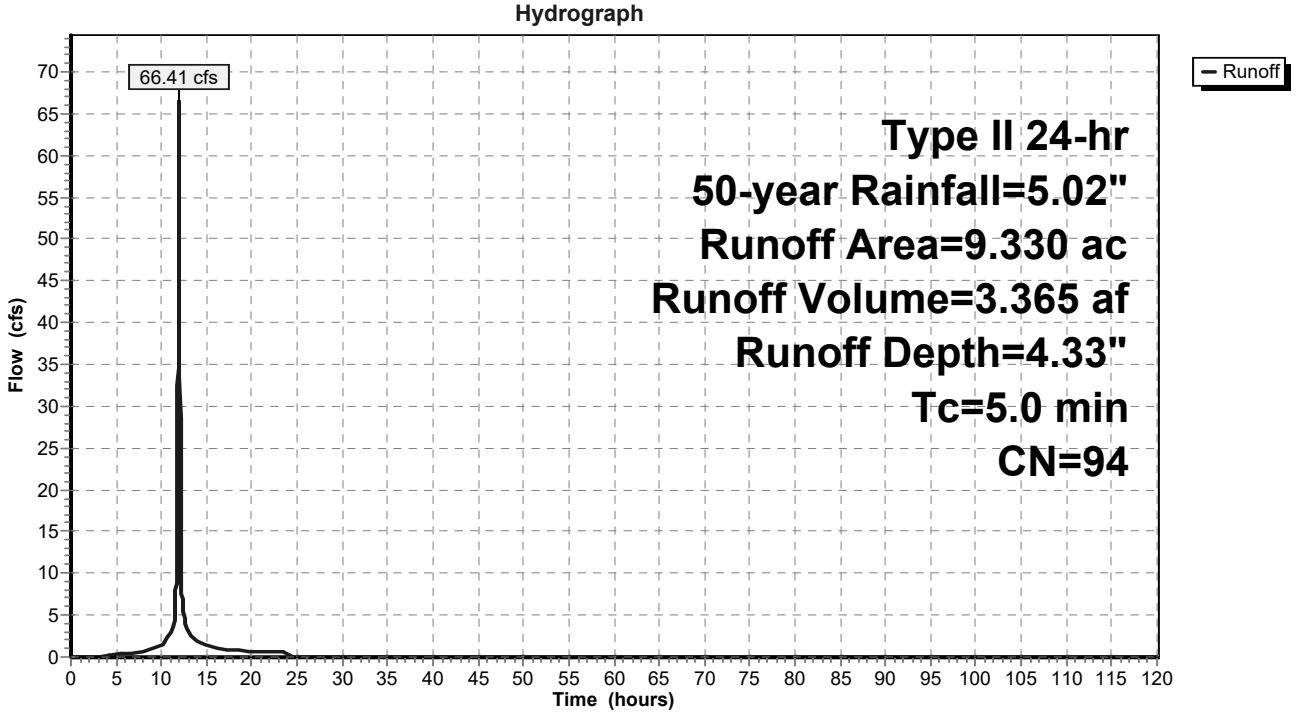
Runoff = 66.41 cfs @ 11.96 hrs, Volume= 3.365 af, Depth= 4.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-year Rainfall=5.02"

	Area (ac)	CN	Description
*	9.330	94	
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 8S: post Subarea "A"



Summary for Pond 9P: Subarea B north SWMA

Inflow Area = 11.540 ac, 0.00% Impervious, Inflow Depth = 3.90" for 50-year event
Inflow = 65.57 cfs @ 12.01 hrs, Volume= 3.746 af
Outflow = 1.06 cfs @ 17.80 hrs, Volume= 3.713 af, Atten= 98%, Lag= 347.2 min
Primary = 1.06 cfs @ 17.80 hrs, Volume= 3.713 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 927.25' @ 17.80 hrs Surf.Area= 47,529 sf Storage= 120,956 cf

Plug-Flow detention time= 1,418.3 min calculated for 3.713 af (99% of inflow)
Center-of-Mass det. time= 1,412.6 min (2,203.7 - 791.1)

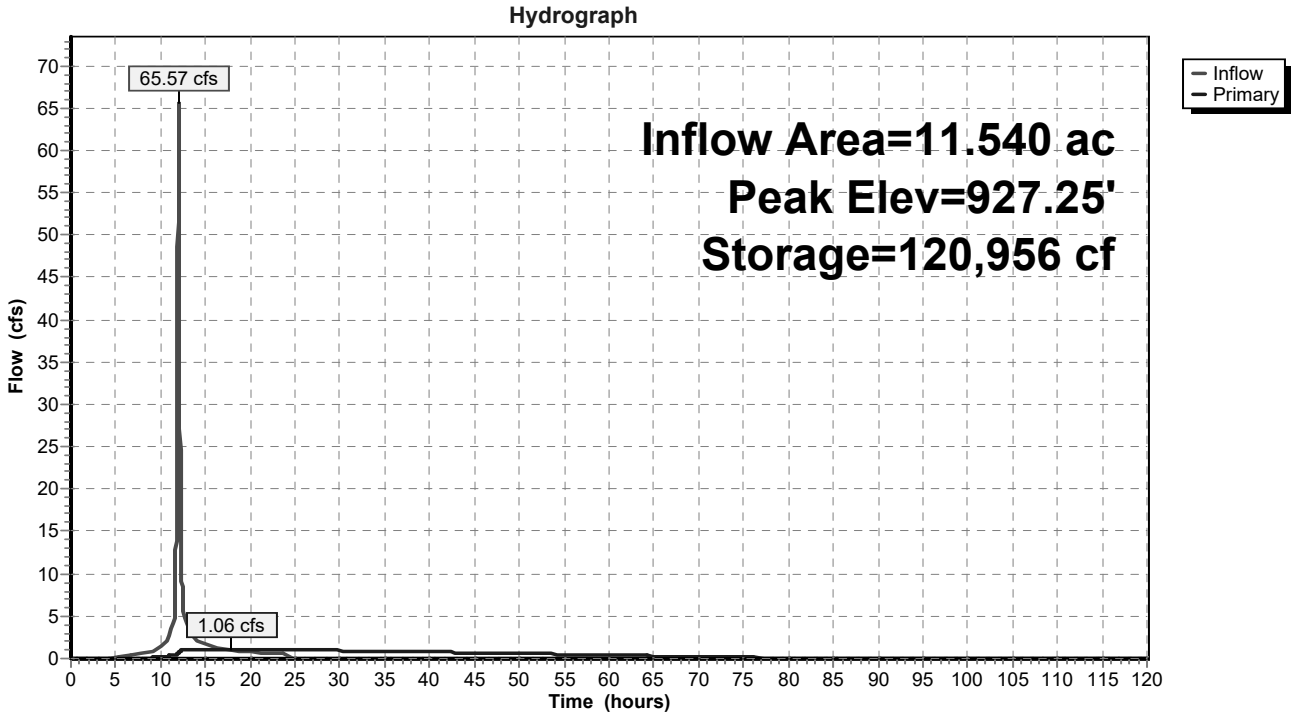
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	157,610 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	37,449	0	0
925.00	39,518	23,090	23,090
926.00	43,009	41,264	64,354
927.00	46,603	44,806	109,160
928.00	50,297	48,450	157,610

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**3.5" Vert. Orifice/Grate X 2.00** C= 0.600
#2	Primary	927.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads
#3	Primary	927.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.06 cfs @ 17.80 hrs HW=927.25' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 1.06 cfs @ 7.92 fps)
- **2=Orifice/Grate** (Controls 0.00 cfs)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 9P: Subarea B north SWMA



Summary for Pond 10P: Subarea B middle SWMA

Inflow Area = 15.730 ac, 0.00% Impervious, Inflow Depth = 3.90" for 50-year event
Inflow = 89.38 cfs @ 12.01 hrs, Volume= 5.106 af
Outflow = 7.01 cfs @ 12.64 hrs, Volume= 5.012 af, Atten= 92%, Lag= 37.9 min
Primary = 7.01 cfs @ 12.64 hrs, Volume= 5.012 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 926.74' @ 12.64 hrs Surf.Area= 61,803 sf Storage= 131,608 cf

Plug-Flow detention time= 656.9 min calculated for 5.012 af (98% of inflow)
Center-of-Mass det. time= 645.3 min (1,436.3 - 791.1)

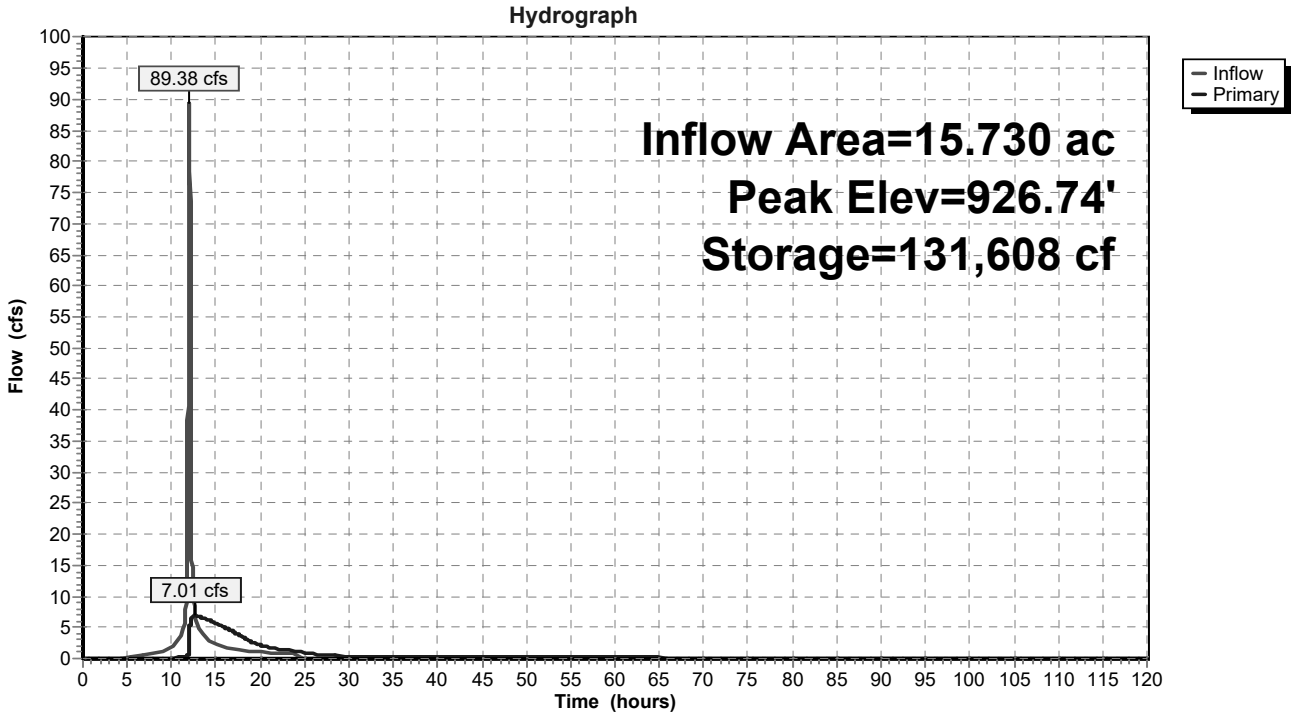
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	213,101 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	50,550	0	0
925.00	53,377	31,178	31,178
926.00	58,164	55,771	86,949
927.00	63,051	60,608	147,556
928.00	68,038	65,545	213,101

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	925.25'	**24.0" W x 7.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	926.70'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=7.00 cfs @ 12.64 hrs HW=926.74' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.62 cfs @ 7.11 fps)
- **2=Orifice/Grate** (Orifice Controls 6.15 cfs @ 5.27 fps)
- **3=Orifice/Grate** (Weir Controls 0.24 cfs @ 0.69 fps)

Pond 10P: Subarea B middle SWMA



Summary for Pond 12P: Subarea "A" SWMA

Inflow Area = 9.330 ac, 0.00% Impervious, Inflow Depth = 4.33" for 50-year event
Inflow = 66.41 cfs @ 11.96 hrs, Volume= 3.365 af
Outflow = 2.65 cfs @ 13.21 hrs, Volume= 3.327 af, Atten= 96%, Lag= 75.2 min
Primary = 2.65 cfs @ 13.21 hrs, Volume= 3.327 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 932.59' @ 13.21 hrs Surf.Area= 42,096 sf Storage= 96,205 cf

Plug-Flow detention time= 878.9 min calculated for 3.326 af (99% of inflow)
Center-of-Mass det. time= 871.9 min (1,640.8 - 768.9)

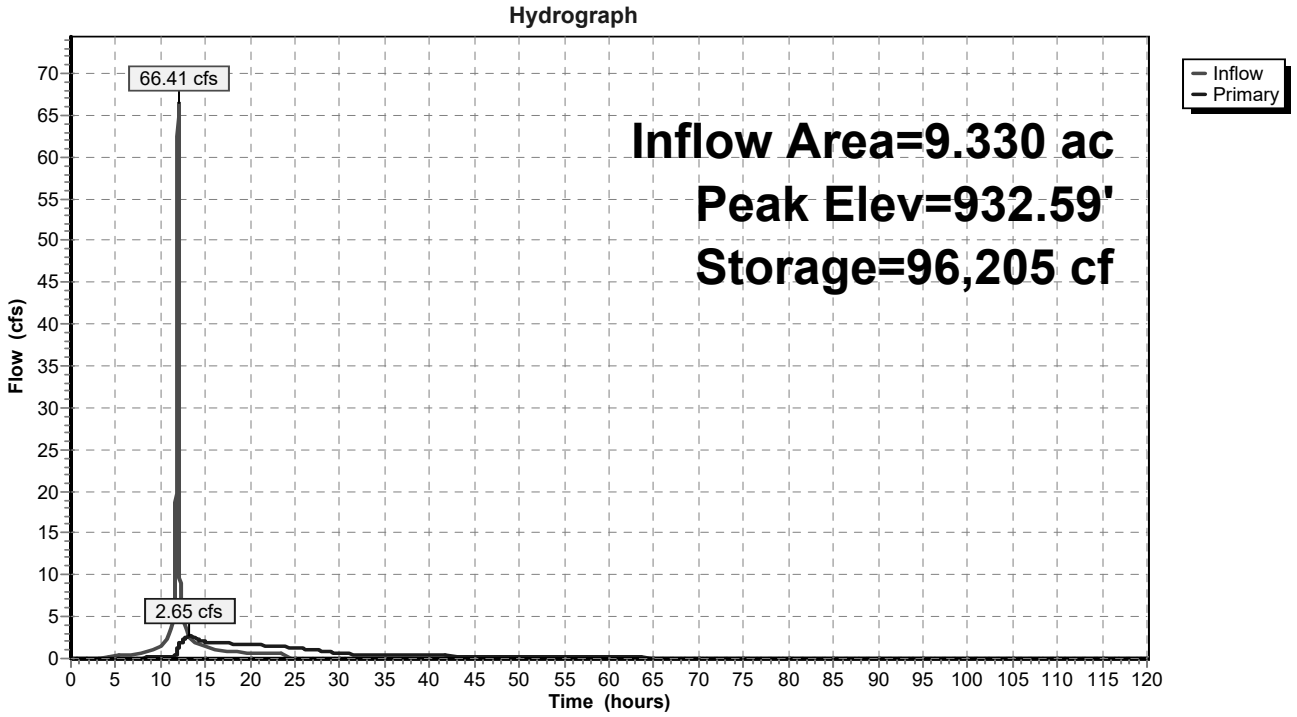
Volume	Invert	Avail.Storage	Storage Description
#1	930.00'	159,374 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
930.00	32,218	0	0
931.00	35,943	34,081	34,081
932.00	39,768	37,856	71,936
933.00	43,694	41,731	113,667
934.00	47,719	45,707	159,374

Device	Routing	Invert	Outlet Devices
#1	Primary	930.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	931.00'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	932.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=2.64 cfs @ 13.21 hrs HW=932.59' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.65 cfs @ 7.50 fps)
- **2=Orifice/Grate** (Orifice Controls 1.28 cfs @ 5.75 fps)
- **3=Orifice/Grate** (Weir Controls 0.71 cfs @ 1.00 fps)

Pond 12P: Subarea "A" SWMA



Summary for Subcatchment 1S: pre north

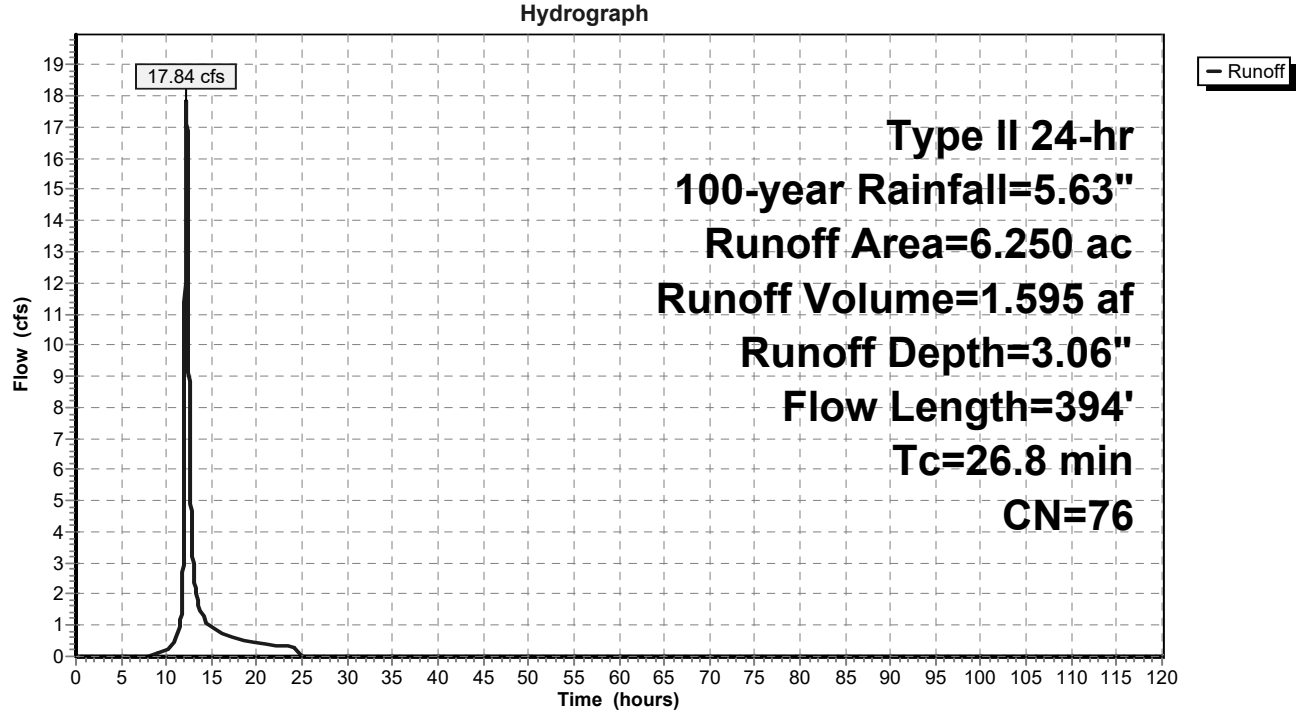
Runoff = 17.84 cfs @ 12.21 hrs, Volume= 1.595 af, Depth= 3.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-year Rainfall=5.63"

	Area (ac)	CN	Description
*	3.710	78	
*	2.540	74	
	6.250	76	Weighted Average
	6.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
6.0	294	0.0136	0.82		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
26.8	394	Total			

Subcatchment 1S: pre north



Summary for Subcatchment 2S: pre middle

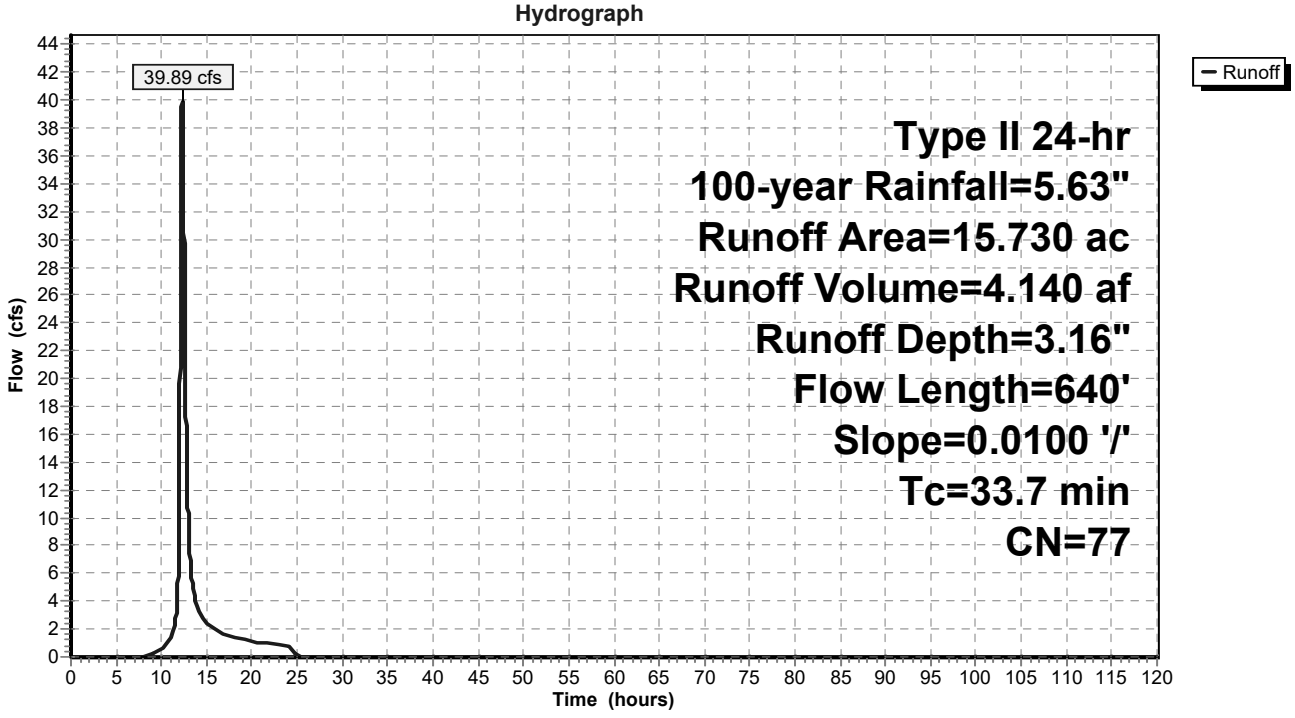
Runoff = 39.89 cfs @ 12.28 hrs, Volume= 4.140 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-year Rainfall=5.63"

	Area (ac)	CN	Description
*	8.860	78	
*	3.080	74	
*	3.790	78	
	15.730	77	Weighted Average
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
12.9	540	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
33.7	640	Total			

Subcatchment 2S: pre middle



Summary for Subcatchment 4S: pre Subarea "A"

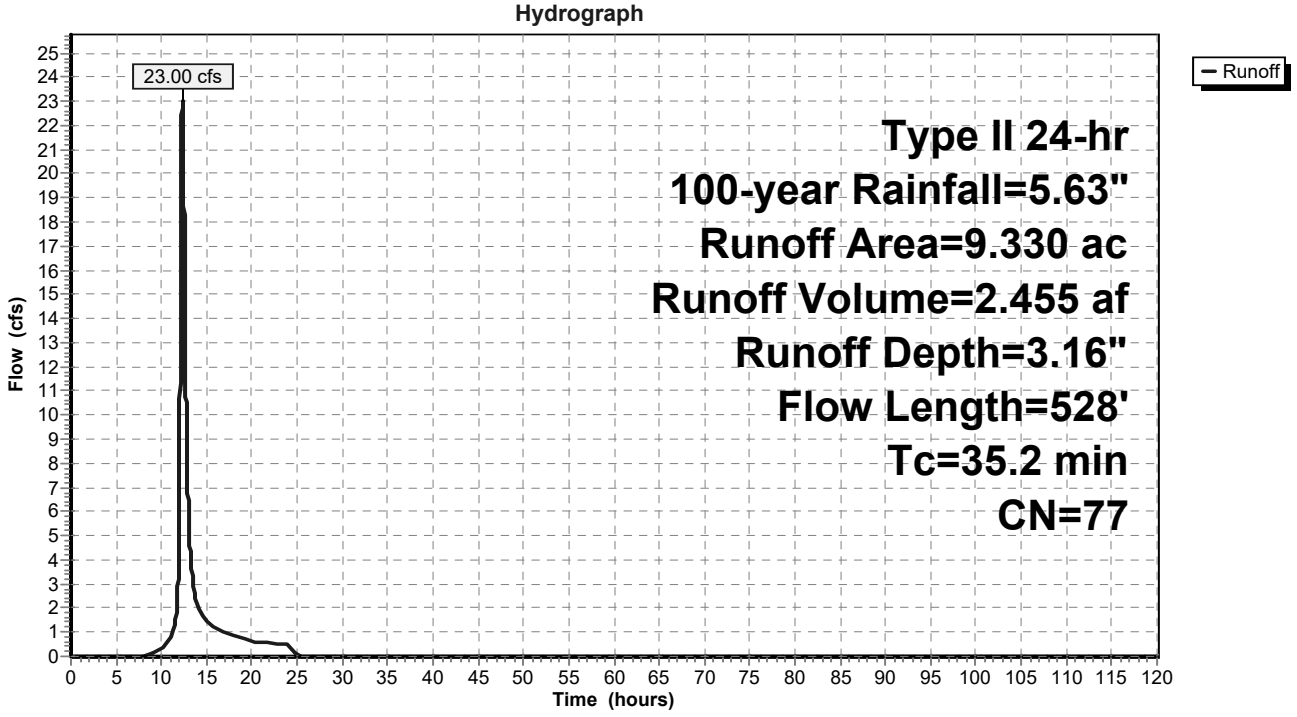
Runoff = 23.00 cfs @ 12.32 hrs, Volume= 2.455 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-year Rainfall=5.63"

	Area (ac)	CN	Description
*	7.180	78	
*	2.150	74	
	9.330	77	Weighted Average
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
14.4	428	0.0050	0.49		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
35.2	528	Total			

Subcatchment 4S: pre Subarea "A"



Summary for Subcatchment 5S: post north

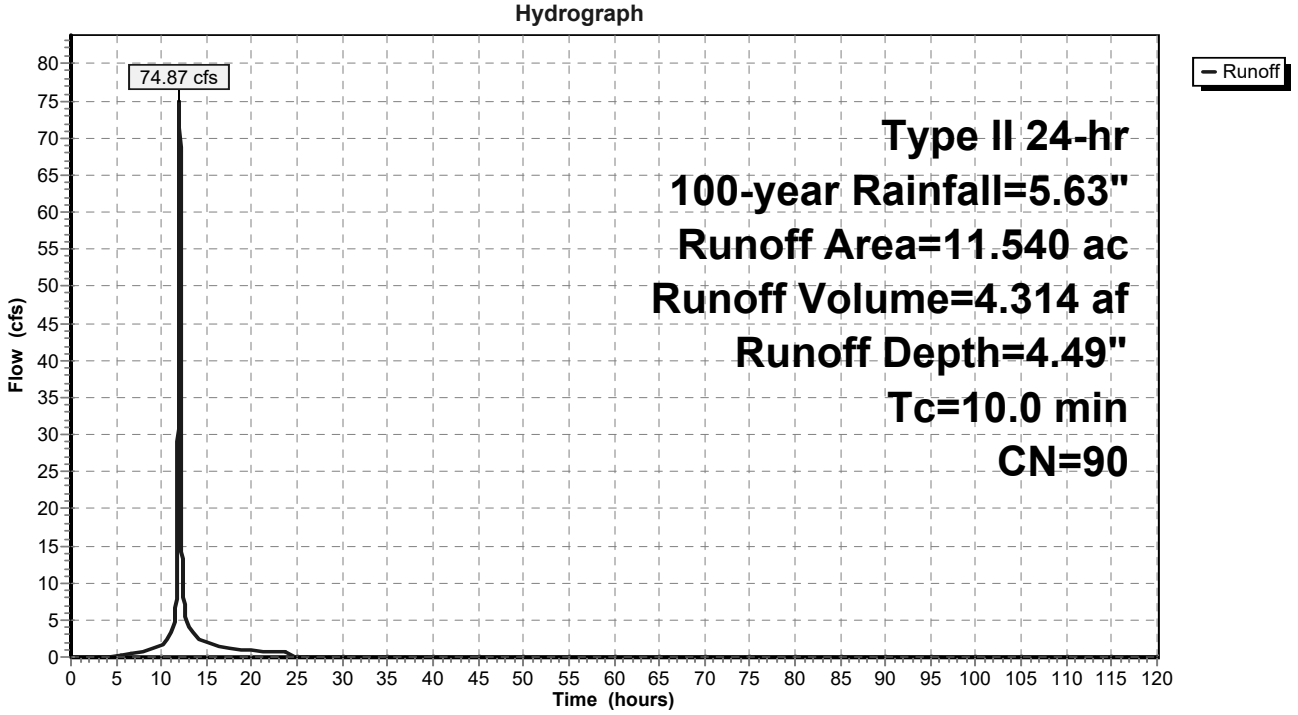
Runoff = 74.87 cfs @ 12.01 hrs, Volume= 4.314 af, Depth= 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-year Rainfall=5.63"

	Area (ac)	CN	Description
*	11.540	90	
	11.540		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 5S: post north



Summary for Subcatchment 6S: post middle

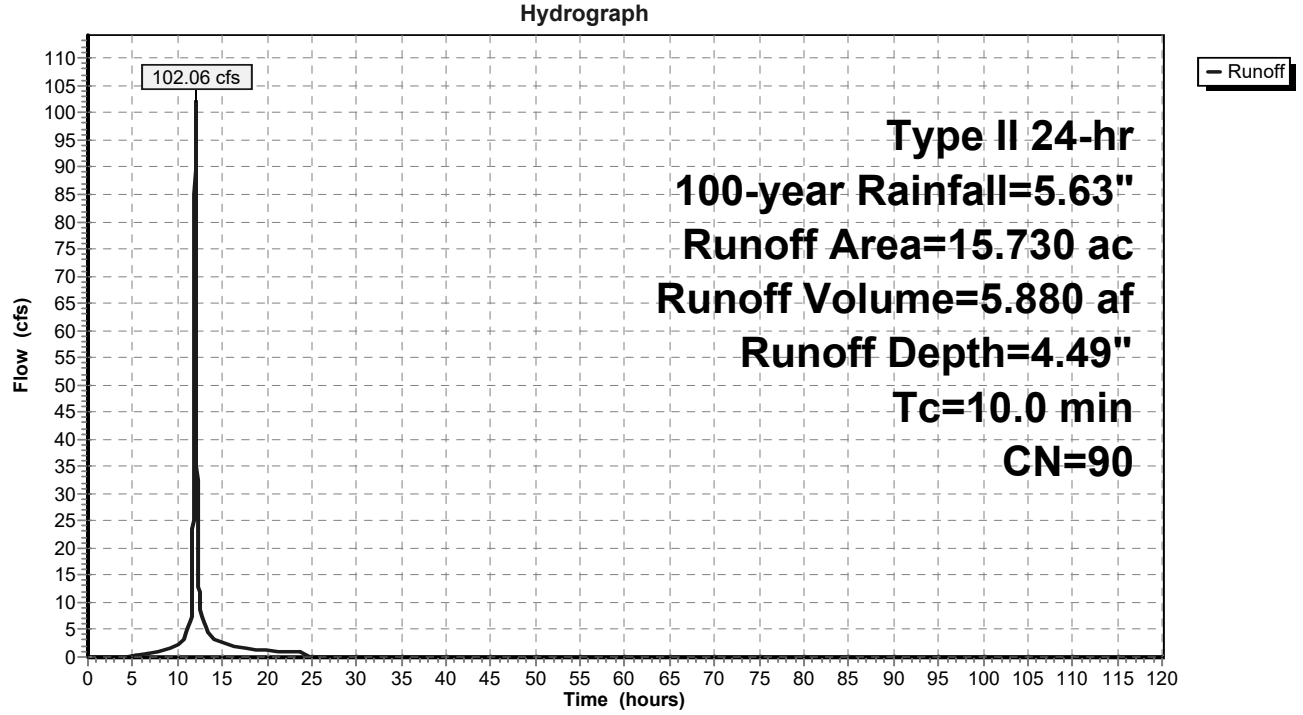
Runoff = 102.06 cfs @ 12.01 hrs, Volume= 5.880 af, Depth= 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-year Rainfall=5.63"

	Area (ac)	CN	Description
*	15.730	90	
	15.730		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 6S: post middle



Summary for Subcatchment 8S: post Subarea "A"

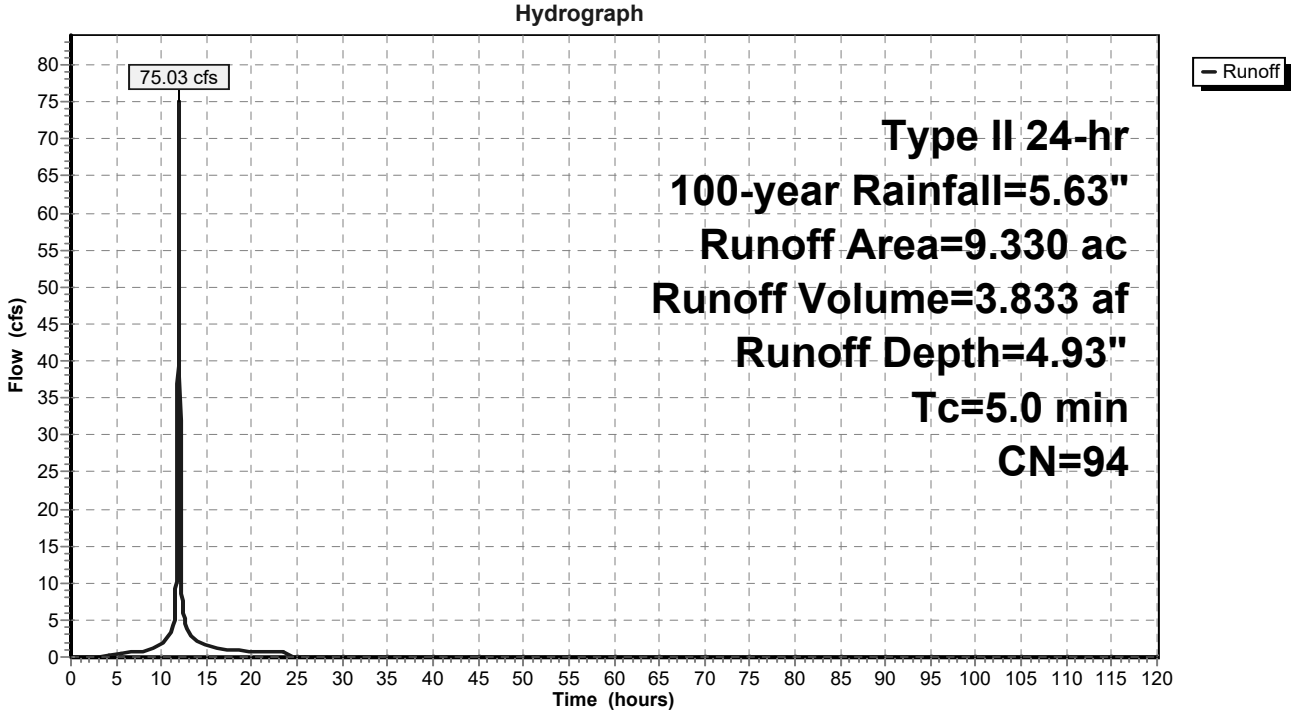
Runoff = 75.03 cfs @ 11.96 hrs, Volume= 3.833 af, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-year Rainfall=5.63"

	Area (ac)	CN	Description
*	9.330	94	
	9.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 8S: post Subarea "A"



Summary for Pond 9P: Subarea B north SWMA

Inflow Area = 11.540 ac, 0.00% Impervious, Inflow Depth = 4.49" for 100-year event
Inflow = 74.87 cfs @ 12.01 hrs, Volume= 4.314 af
Outflow = 1.95 cfs @ 15.02 hrs, Volume= 4.279 af, Atten= 97%, Lag= 180.6 min
Primary = 1.95 cfs @ 15.02 hrs, Volume= 4.279 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 927.55' @ 15.02 hrs Surf.Area= 48,628 sf Storage= 135,264 cf

Plug-Flow detention time= 1,421.0 min calculated for 4.278 af (99% of inflow)
Center-of-Mass det. time= 1,416.1 min (2,203.3 - 787.2)

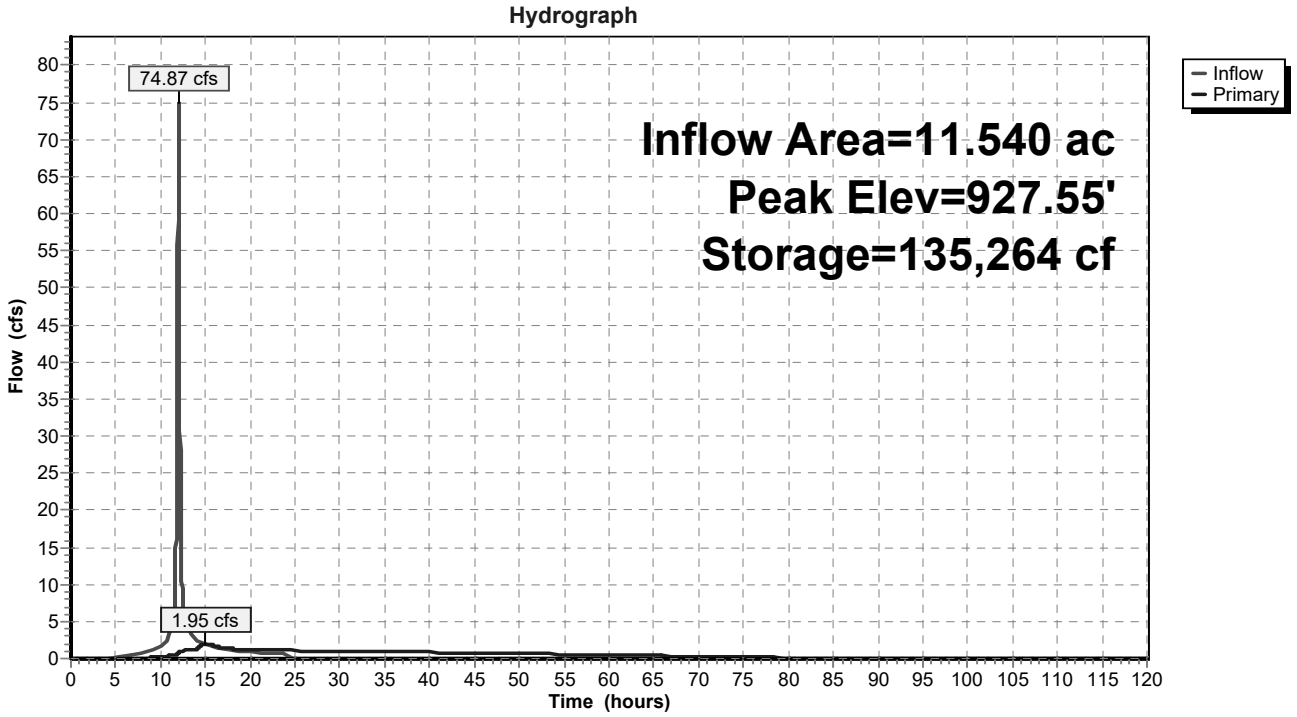
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	157,610 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	37,449	0	0
925.00	39,518	23,090	23,090
926.00	43,009	41,264	64,354
927.00	46,603	44,806	109,160
928.00	50,297	48,450	157,610

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**3.5" Vert. Orifice/Grate X 2.00** C= 0.600
#2	Primary	927.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads
#3	Primary	927.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.91 cfs @ 15.02 hrs HW=927.55' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 1.11 cfs @ 8.34 fps)
- **2=Orifice/Grate** (Weir Controls 0.27 cfs @ 0.72 fps)
- **3=Broad-Crested Rectangular Weir** (Weir Controls 0.53 cfs @ 0.55 fps)

Pond 9P: Subarea B north SWMA



Summary for Pond 10P: Subarea B middle SWMA

Inflow Area = 15.730 ac, 0.00% Impervious, Inflow Depth = 4.49" for 100-year event
Inflow = 102.06 cfs @ 12.01 hrs, Volume= 5.880 af
Outflow = 11.54 cfs @ 12.45 hrs, Volume= 5.786 af, Atten= 89%, Lag= 26.3 min
Primary = 11.54 cfs @ 12.45 hrs, Volume= 5.786 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 927.00' @ 12.45 hrs Surf.Area= 63,049 sf Storage= 147,532 cf

Plug-Flow detention time= 595.0 min calculated for 5.786 af (98% of inflow)
Center-of-Mass det. time= 584.8 min (1,371.9 - 787.2)

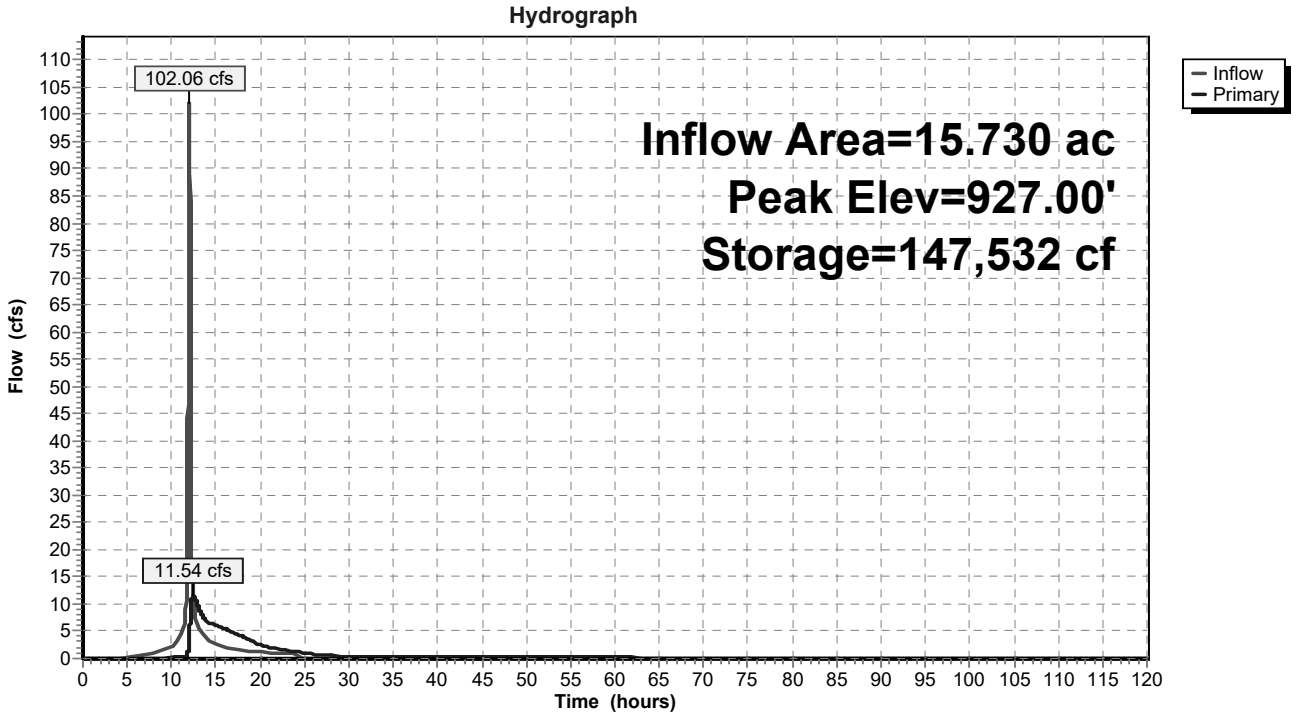
Volume	Invert	Avail.Storage	Storage Description
#1	924.40'	213,101 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
924.40	50,550	0	0
925.00	53,377	31,178	31,178
926.00	58,164	55,771	86,949
927.00	63,051	60,608	147,556
928.00	68,038	65,545	213,101

Device	Routing	Invert	Outlet Devices
#1	Primary	924.40'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	925.25'	**24.0" W x 7.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	926.70'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=11.54 cfs @ 12.45 hrs HW=927.00' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.66 cfs @ 7.51 fps)
- **2=Orifice/Grate** (Orifice Controls 6.77 cfs @ 5.80 fps)
- **3=Orifice/Grate** (Weir Controls 4.11 cfs @ 1.79 fps)

Pond 10P: Subarea B middle SWMA



Summary for Pond 12P: Subarea "A" SWMA

Inflow Area = 9.330 ac, 0.00% Impervious, Inflow Depth = 4.93" for 100-year event
Inflow = 75.03 cfs @ 11.96 hrs, Volume= 3.833 af
Outflow = 5.36 cfs @ 12.51 hrs, Volume= 3.795 af, Atten= 93%, Lag= 33.0 min
Primary = 5.36 cfs @ 12.51 hrs, Volume= 3.795 af

Routing by Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.01 hrs
Peak Elev= 932.76' @ 12.51 hrs Surf.Area= 42,753 sf Storage= 103,312 cf

Plug-Flow detention time= 801.4 min calculated for 3.794 af (99% of inflow)
Center-of-Mass det. time= 795.2 min (1,560.9 - 765.7)

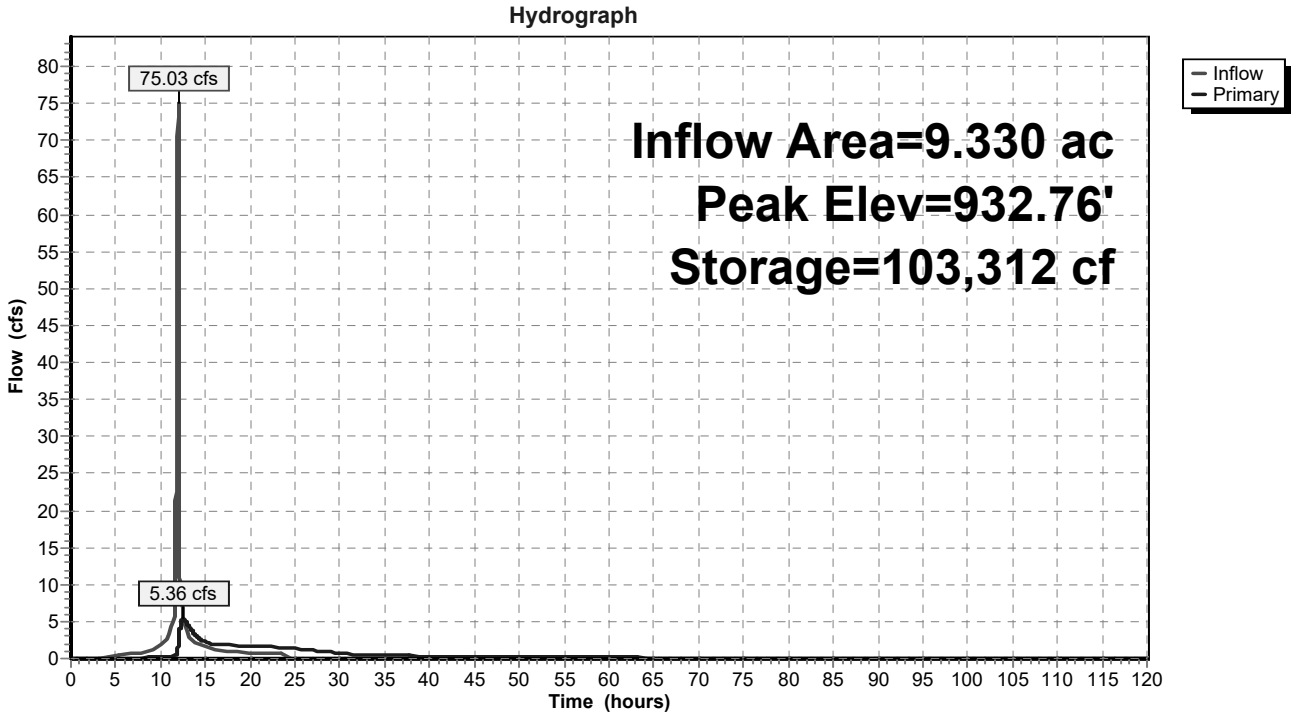
Volume	Invert	Avail.Storage	Storage Description
#1	930.00'	159,374 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
930.00	32,218	0	0
931.00	35,943	34,081	34,081
932.00	39,768	37,856	71,936
933.00	43,694	41,731	113,667
934.00	47,719	45,707	159,374

Device	Routing	Invert	Outlet Devices
#1	Primary	930.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	931.00'	**8.0" W x 4.0" H Vert. Orifice/Grate** C= 0.600
#3	Primary	932.50'	**1.9" x 24.0" Horiz. Orifice/Grate X 8.00** C= 0.600 in 23.0" x 23.0" Grate (69% open area) Limited to weir flow at low heads

Primary OutFlow Max=5.36 cfs @ 12.51 hrs HW=932.76' (Free Discharge)
- **1=Orifice/Grate** (Orifice Controls 0.68 cfs @ 7.75 fps)
- **2=Orifice/Grate** (Orifice Controls 1.35 cfs @ 6.08 fps)
- **3=Orifice/Grate** (Weir Controls 3.33 cfs @ 1.67 fps)

Pond 12P: Subarea "A" SWMA



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PARK MILL DRIVE
ROYAL PLUME DRIVE
HOLBEIN DRIVE
STILLHOUSE LANE
BLAKEMORE LANE
SPRINGVIEW LANE
POST PRESERVE BLVD
POST ROAD
HYLAND-CROY ROAD
US 33

8360
2350
2370

North Fork Indian Run
South Fork Indian Run

Existing Floodway
Existing Floodway
Stream Corridor Protection Zone
Tri-County Ditch
Tri-County Ditch

LEGEND

- Tributary Area Line
- Dublin Master Plan Boundaries

GRAPHIC SCALE

0 75 150 300

1 inch =150 feet

SHEET	JOB NO.	SCALE	DATE
1/2	2017-0464	1" = 150'	March 19, 2019

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
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CITY OF DUBLIN, UNION COUNTY, OHIO
STORMWATER MANAGEMENT PLAN
FOR
DUBLIN GATEWAY
PRE-DEVELOPED CONDITIONS WORKMAP

REVISIONS

MARK	DATE	DESCRIPTION

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PARK MILL DRIVE

ROYAL PLUME DRIVE

HOLBEIN DRIVE

STILLHOUSE LANE

BLAKEMORE LANE

SPRINGVIEW LANE

POST PRESERVE BLVD

HYLAND-CROY ROAD

POST ROAD

US 33

Subarea "B"
11.54 acres

Subarea "B"
15.73 acres

Subarea "A"
9.33 acres

Existing Floodway

Stream Corridor Protection Zone

Tri-County Ditch

Existing Floodway

Tri-County Ditch

LEGEND

Tributary Area Line

Dublin Master Plan Boundaries

GRAPHIC SCALE

0 75 150 300

1 inch =150 feet

SHEET	JOB NO.	SCALE	DATE
2/2	2017-0464	1" = 150'	March 19, 2019

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CITY OF DUBLIN, UNION COUNTY, OHIO
STORMWATER MANAGEMENT PLAN
FOR
DUBLIN GATEWAY
POST-DEVELOPED CONDITIONS WORKMAP

REVISIONS		
MARK	DATE	DESCRIPTION